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The Economic Effects of Joe Biden's Tax Plans

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Introduction

Joe Biden has proposed a comprehensive tax plan that is designed to raise $4 trillion of added federal revenues over the next decade. That plan would raise tax rates on investment and work. It also includes health insurance tax credits which would disincentivize work. This would be one of the largest tax increases in American history – especially on business income and investment.

This study addresses the impact of these tax rate changes on economic behavior – work, investment, output and growth. This study finds that the Biden tax agenda will reduce production, incomes, and employment per capita by increasing taxation of both labor and business capital. Employment will be about 3 million workers less in the long run (five to ten years). This employment effect is primarily due to the agenda's expansion of health insurance credits, which raises the average marginal tax rates on labor income by 2.4 percentage points.

Biden also plans to increase taxes on businesses and their owners by a combined 6 to 10 percentage points.[1] These taxes will reduce long-run wages, GDP per worker, and business capital per worker in the long run. By decreasing both the number of workers per capita and GDP per worker, respectively, these two key elements of Biden's agenda reinforce to significantly reduce GDP per capita and average household incomes. I estimate that, as a result of Biden's tax agenda, real GDP per capita would be 4 to 5 percent less, which is about $8,000 per household per year in the long run. The two parts of the tax agenda combine to reduce real per capita business capital by 7 to 12 percent in the long run. The table below highlights some of the results.

Impact of Biden Tax Plan

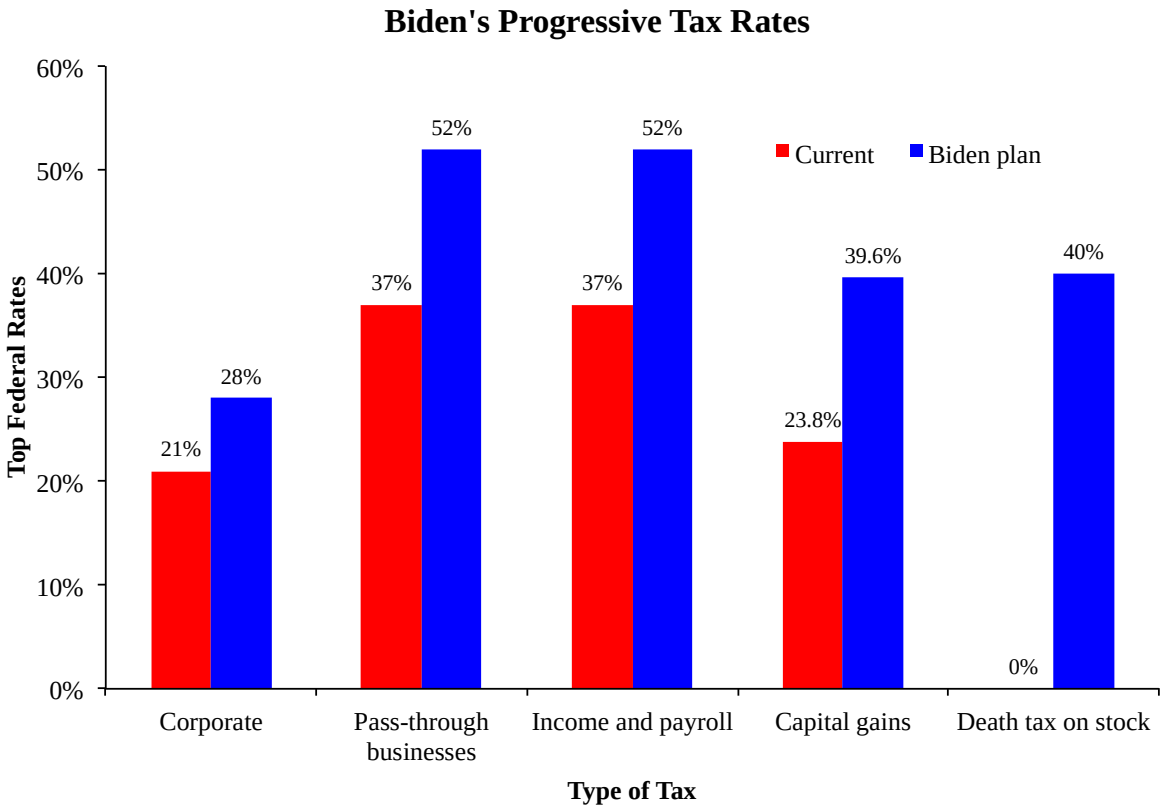
Scenario	Low Estimate	High Estimate
Jobs	- 2.9 million	- 3.2 million
Real Wage Rates, Pre-Tax	- 1.6%	- 3.2%
Real GDP %	- 3.5%	- 5.3%
National Income Per Household Per Year	- $5,265 annually	- $7,972 annually

Payroll and Income Tax Changes Under the Biden Plan

Candidate Biden's several proposals to increase marginal tax rates fall into four categories: payroll taxes, taxation of personal capital income, health insurance tax credits, and business taxes. All of these are part of my estimates of Biden's tax agenda.

The payroll tax in America finances the Social Security system and Medicare benefits. The tax is levied half on employees and half on employers at a rate of 6.2% for Social Security (OASDI) and 1.45% for Medicare. The Social Security payroll tax is paid on annual wages and salaries of up to $137,700, with no exemptions, deductions, or credits. Candidate Biden proposes to levy the 6.2 percent on both employer and employee for annual wages and salaries above $400,000.[2]

The personal income tax, which is separate from payroll taxes, goes toward general revenue. It includes a range of deductions and credits. Candidate Biden proposes to increase the top statutory rate from 37 percent to 39.6 percent, to tax dividends and capital gains as ordinary income, increase capital gains taxes at death, and to limit deductions for high-income filers. All of these changes are part of the estimates that follow.



The 2010 Affordable Care Act (ACA) created what is now the most important credit against the personal income tax: credits for premiums paid for individual health insurance plans sold on the ACA "exchanges." The rules determining eligibility and amounts for the credits create two

kinds of implicit taxes on work.[3] The most important, but often forgotten, is an implicit tax on full-time work created by the ACA rule prohibiting the large majority of full-time workers from receiving credits because of their employment status (regardless of how much or little that job pays). These workers become eligible for the credits if (and because) they cease employment, or switch to part-time employment. The second implicit tax applies to the comparatively few workers who purchase health insurance on the ACA exchanges: their credit is phased out with their income. Candidate Biden proposes to increase the amount of the credit, to expand eligibility for the credit, and provide a public plan option on the exchanges.

Take Mike Smith, who in 2010 was working long hours in California as a district manager for a national auto parts retailer. Despite wanting to help care for his grandchild and elderly in-laws, Mr. Smith kept the manager job into his 60s because he and his wife wanted the health insurance that came with it. According to National Public Radio, they both retired in 2014 because the ACA gave them heavily subsidized health insurance, for which they would have been ineligible if Mr. Smith had remained in his district manager job.[4] Why spend their own money on health insurance when taxpayers would now pay most for them? In other instances, workers at many schools, restaurants and municipal offices were having their hours cut so that the new law does not recognize them as full-time workers.

Biden would increase these work disincentives. All three of Biden's changes to the ACA increase the implicit tax on full-time employment by increasing the amount and value of the credit foregone while engaged in full-time work and by increasing the number of full-time workers who would be eligible for the credit by changing their employment status. Increasing the amount of the credit also increases the implicit income tax.[5] Altogether, I estimate that Biden's changes to the ACA would add 2.4 percentage points to the person-weighted average marginal tax rate on work. Biden's other personal income tax changes increase the person-weighted average marginal tax rate on work, but less than 0.1 percentage points because few workers are affected.[6] Note that these averages already include zeros for people whose marginal rates are unaffected by the Biden plan.

Aside from personal income, business income is also taxed. As of 2018 the corporate rate is 21 percent of income after various deductions. Biden proposes to increase the rate to 28 percent and to limit deductions. Here I take Pomerleau's (2020) summary of the capital-income tax elements of Biden's proposals for personal and corporate income taxation, which is that they would increase the federal marginal effective tax rate on corporate income to 38.8 percent from a baseline of 26.5 percent.[7] My first specification assumes no change in noncorporate rates. As an alternative specification, I assume that Biden would apply the same 12 percentage point increase to noncorporate business as he applies to corporate business, thereby bringing the average marginal rate to 48.3 from a baseline of 37.9, including tariffs (see below) and state rates.[8]

Universal Health Coverage Comes with Disincentives

As an empirical matter, significantly higher tax rates on labor income have been a consequence of expanding health insurance coverage to those who will not or cannot purchase on their own. Western European countries were rather explicit about their labor disincentives by financing their public health insurance programs with a medical-benefits payroll tax at about a 7 percent rate.[9] As the U.S. has expanded coverage, its disincentives have been hidden as "implicit" taxes but without escaping the Western European arithmetic. Indeed, unless the U.S. also spends less per person on subsidized plans, more than 7 percentage points would be necessary for universal coverage here. The Council of Economic Advisers found that, with the 2010 Affordable Care Act as part of the baseline, implementing "Medicare for All" in the U.S. would add 14 percentage points to the average marginal tax rate on labor income.[10]

Because an important purpose of Biden's healthcare agenda is to further expand health insurance coverage,[11] it should be no surprise that it would add a couple of percentage points to the average marginal tax rate on labor income. By that metric, Biden's health insurance plans are just one-sixth of the way toward "Medicare for All."[12]

Trump vs. Biden on Tariffs

The Trump Administration imposed new tariffs on imported goods during 2018 and 2019. Like other taxes on consumer goods, tariffs on consumer goods add to the labor wedge.[13] Tariffs on investment goods add to the cost of capital. My model of the economic impact of the Biden agenda reflects these facts, including more tariffs in the baseline (Trump) than under Biden's agenda.

As with other taxes, the contribution of tariffs to labor and capital tax wedges depends on the statutory rate and the size of the tax base. In 2019, the trade-weighted average tariff rate was 1.4 percentage points above its average from 2001-17.[14] With imports only fifteen percent of national spending, the contribution of new tariffs to the 2019 wedges is small by comparison with several of the tax policies examined elsewhere in this paper. Moreover, according to the President's Budget, the tariffs will return to the pre-2018 average in the long run and therefore not contribute to tax wedges in the long run.

To be conservative as to the impact of Biden's agenda, I assume that half (rather than none) of the additional tariffs present in 2019 will remain in the long run in the baseline. I further assume that the breakdown of tariffs between consumption and investment goods is roughly in line with spending generally so that they add the same number of percentage points to both the marginal tax rate on labor and on capital. Based on the statutory rates cited above, that addition is 0.12 percentage points, which corresponds to about $20 billion of static revenue annually.[15]

The tariff contributions to tax wedges are one or two orders of magnitude less than Biden's main proposals for changing business and personal taxes. The Trump Administration's tariffs apparently contribute in greater proportion to policy discussions than to the tax wedges that affect the aggregate employment of labor and capital in the economy.

Effects of the Taxes on Economic Activity

The estimates above show how much Biden's plans would change marginal tax rates. The next step is to translate these incentive changes to changes in market outcomes. Simply put, taxing labor and capital will reduce the amounts of labor and capital in the economy and thereby reduce production and incomes. Not only do the owners of labor and capital get a smaller slice of the economic pie, but also the pie gets smaller. The purpose of this section is to estimate the magnitude of these effects based on the magnitude of the additional disincentives created by the Biden plan.

The Capital Stock and Wages are Reduced by the Taxation of Capital Income

Any empirically-grounded estimate of the effects of taxes (or business regulation) must confront the fact that national average after-tax returns on real capital have been fairly constant over long periods of time and across a broad cross section of countries despite large differences in rates of capital taxation.[16] This is strong evidence that, in the long run, the owners of capital have close substitutes to investment in the businesses of a specific country. Faced with a high tax rate on their capital income, eventually they reduce investment in the jurisdiction until pre-tax profits are high enough to compensate for the high tax rate. In effect, workers and consumers eventually pay for capital-income taxes rather than the capital owners who are legally liable for the tax.

Following much of the literature on capital-income taxation, I forecast effects of capital taxes using a version of the neoclassical growth model with a constant rate of time preference.[17] Capital-income taxation reduces after-tax capital returns in the short run, but not in the long run.[18] Instead, the long-run burden of the tax falls on labor as the tax reduces business investment and thereby productive opportunities for employment. That is, capital-income taxation reduces wages in the long run, even more than the amount of the revenue obtained from the tax.[19]

Interestingly, the magnitude of the long-run wage effect of capital taxation can be calculated with just a small bit of arithmetic, even though the neoclassical growth model can be quite complicated for other purposes. Specifically, the percentage wage decrease is about half of the percentage increase in the (gross) user cost of capital required to keep constant the after-tax return.[20] Because Biden's plan reduces capital owner's after-tax share by at least 9 percent, and the net after-tax return is about 40 percent of the gross after-tax return, the capital taxation in Biden's agenda alone will reduce wages 2 percent or more.[21]

Implicit Taxes on Work Reduce Employment, and Further Reduce the Capital Stock

The labor-income taxes in Biden's agenda, which primarily derive from its modification of the ACA, reduce the after-tax share of labor income by about 5 percent. The magnitude of the effect on full-time equivalent employment depends primarily on the wage elasticity of labor supply. I therefore forecast that Biden's plan would reduce full-time equivalent labor per capita by about 2 percent, with further details shown in the appendix.

Capital investment responds to labor supply as well as the capital tax rates noted above. There is no point for a business to build office or factory space for people who will not be working. Therefore labor-tax parts of the Biden plan reduce the long-run capital stock by another 2 percent, for a total of 7 to 12 percent, depending on what his plan does with noncorporate business. The combined effects are shown in Table 1 below. Each column represents a different assumption as to how Biden would change marginal tax rates on noncorporate income (such as pass-through businesses).[22]

Table 1. Long-run effects of Biden's Tax Plans on per Capita Economic Activity

	Impact	
	Noncorp rate constant	Noncorp rate increased with corp
After-tax shares		
Labor	-4.7%	-4.7%
Capital	-9.1%	-16.8%
Labor market		
FTEs		
percent	-1.9%	-2.1%
jobs	-2.9 million	-3.2 million
Real wage rates, pre-tax	-1.6%	-3.2%
Labor income	-3.5%	-5.3%
Capital market		
Capital stock	-7.2%	-12.3%
Capital intensity	-5.4%	-10.4%
Gross marginal product	4.0%	8.0%
Net marginal product	-10.0%	20.2%
Aggregates		
Real consumption	-2.6%	-3.7%
Real GDP		
percent	-3.5%	-5.3%
per household	-$6,176 annually	-$9,353 annually
National income		
percent	-3.5%	-5.3%
per household	-$5,265 annually	-$7,972 annually

Discussion of Loopholes and the Short Run

Candidate Biden pledges to close tax loopholes, which is a pledge I have taken literally in preparing the estimates above. With few enough loopholes, the primary way that market participants have to avoid higher marginal tax rates on labor and capital income is to supply less labor and capital. With these assumptions, the supply effects by themselves are not enough to put the U.S. economy on the wrong side of the Laffer curve where higher rates result in less revenue. I estimate that broad-based taxation of labor income increases tax revenue from labor-income taxes, reduces tax revenue from capital-income taxes, with the former dominating the latter. I estimate that broad-based taxation of capital income increases tax revenue from capital-income taxes, reduces tax revenue from labor-income taxes, with the former dominating the latter.

Arguably Biden's plans would not sufficiently close loopholes, or foresee the creation of new ones, in order to keep the U.S. economy off the wrong side of the Laffer curve. In this case, the primary effect of higher taxes would be less productivity rather than reduced supply of labor. Either way, higher taxes would reduce the size of the economic pie by a magnitude similar to those indicated in Table 1.

This paper estimates long-run effects on employment, capital, wages, and incomes. If the higher tax rates were implemented simultaneously and immediately, employment would fall more than three million in the short run as investment activity was particularly low on the path to a lower capital stock. The capital stock and wages would fall less in the short run than they would in the long run. The short-run effect of the new taxes on GDP and incomes could be roughly the same as the long-run effect.

Conclusions

Biden makes several broad assertions in selling his tax plan: 1) that it will only affect higher income Americans, 2) that it will reward work, and 3) that the higher tax rates will have no negative impact on the economy.

This study shows that all of these claims are false. First, the legal obligation for the tax may fall on "the wealthy" making more than $400,000, but the tax will negatively affect the incomes of all workers across the income scale. The reduction in jobs and output will negatively affect incomes of middle- and lower-income workers as well. Real GDP will be about $8,000 per household per year less in the long run. Annual income per household would be about $5,000 less.

The plan does not "reward" work, but is likely to retard it. The tax credits for health insurance disincentivize work, as we saw with the original Affordable Care Act (ObamaCare).

The plan will slow the economy—perhaps substantially. The tax components of Biden's agenda increase average marginal tax rates on both labor and capital income. I estimate the long-run result to be about 2 percent less full-time equivalent employment (3 million employees), 7 to 12 percent less business capital, and 4 to 5 percent less real GDP and national income.

Biden claims that this tax plan will bring jobs back to the United States. He calls it a Made in America plan. But the higher tax rates on capital are likely to have negative cross-border effects. Trump's lower tax rates on capital brought some $1 trillion of capital back into the United States through repatriation, which helped the U.S. labor market to surpass expectations in 2018 and 2019. The Biden marginal tax rate hikes are likely to reverse this process due to the higher tax rates in the U.S. versus competitor nations, and that is likely to contribute to the wage losses that this paper predicts. Taxing the income and investment of companies domiciled in the United States will lead to some businesses moving out of the U.S.

The Biden agenda has an important regulatory component, which this paper does not assess. Other work suggests that the regulatory components of the agenda by themselves would have important productivity and tax-like effects.[23] Low-income households may find his regulatory agenda to be especially expensive because they spend large shares of their budgets on energy and transportation.[24] I leave it to future research to determine whether the sum total of environmental, fairness, and other social benefits are worth shrinking the economic pie to this degree.

Appendix

I estimate the long-run economic impact of tax changes by comparing two steady states of (an extended version of) the neoclassical growth model: one with Biden's tax policy and the other with the baseline tax policy. For the purposes of steady-state analysis, this extended neoclassical growth model is a system of one algebraic equation and two differential equations.

One of the differential equations by itself yields quantitative conclusions for the effect of capital-income taxation on wages and output per worker. That differential equation equates the marginal rate of substitution in preferences over time (IMRS) to the marginal product of capital net of depreciation and taxes:

$$IMRS = (1 - \tau_k)\left(\frac{\partial}{\partial k}F(k,n) - \delta\right)$$

where τ_k denotes the marginal tax rate on (net) capital income, k denotes capital, n denotes labor, and δ denotes the constant rate of capital depreciation. F denotes GDP, which is produced as a homogeneous function of capital and labor. In the steady state, the *IMRS* is merely the constant rate of time preference, which means that any reduction in the after-tax share $(1-\tau_k)$ must increase the net marginal product of capital in the equal and opposite proportion. This means less capital per worker and lower wage rates. Marginal increases in the after-tax share, increase the marginal product of labor according to:

$$d\ln\left[\frac{\partial}{\partial n}F(k,n)\right] = \frac{1-\alpha}{\alpha}s\, d\ln(1-\tau_k)$$

where α is the elasticity of production with respect to labor (often taken as labor's share of GDP) and s is the share of the cost of capital in the user cost of capital. Given that the Biden plan reduces the after-tax share of capital income between 9 and 17 percent and pre-tax wages change in proportion to the marginal product of labor, the capital-tax elements of Biden's plan reduce long-run wages by these percentages times the coefficient shown above, which I assume to be about one-sixth.[25] This is why I predict that the tax components of Biden's plan would reduce pre-tax wages by about two percent.

The effect of either type of tax on GDP per FTE workers is proportional to its effect on the marginal product of labor, with factor of proportionality equal to the elasticity of substitution in production. This is why I predict that GDP per FTE worker and capital per FTE worker fall in greater percentages than the number of FTEs does. The effect on the level of GDP is the sum of the effect on GDP per FTE worker and the effect on FTEs.

Predicting quantitative effects on long-run FTEs with the neoclassical growth model requires the two additional equations of the model as well as quantitative assumptions about those equations. Those equations are the evolution equation for the capital stock and the labor-market equilibrium equation:

$$\dot{k} = F(k,n) - \delta k - c$$

$$(1-\tau_L)\frac{\partial}{\partial n}F(k,n) = MRS(c,n)$$

where c and $\dot{k}$ denote consumption and the increase in the capital stock, respectively. τ_L denotes the marginal tax rate on labor income. *MRS* denotes with willingness of households to supply labor to the market, which reflects both a normal income effect through consumption and a substitution effect.

From these equations it follows that higher marginal tax rates on labor reduce the amounts of labor and capital in the long run. The size of these effects is estimated by additionally assuming constant elasticities for the production and *MRS* functions. The elasticity of production to labor ("labor's share") is assumed to be α = 0.7. The elasticity of the *MRS* with respect to consumption is assumed to be one, which means an exact cancelation of the income and substitution effects on labor supply from changes in total factor productivity. The Frisch wage elasticity of labor supply is assumed to be η = 0.5. Up to a scale factor that is common to the Biden agenda and the baseline, the formula for steady state capital is therefore:

$$k_{ss} = \left(\delta + \frac{\rho}{1-\tau_k}\right)^{-\frac{1}{1+\eta}\frac{1+(1-\alpha)\eta}{\alpha}} \left(\alpha\delta + \frac{\rho}{1-\tau_k}\right)^{-\frac{\eta}{1+\eta}} (1-\tau_L)^{\frac{\eta}{1+\eta}}$$

where ρ is the required long-run after-tax rate of return (2.95 percent per year) and the depreciation rate δ is estimated to be 7.25 percent per year. The percentage impact of the Biden tax plan on the capital stock is obtained by evaluating this formula with the Biden tax rates and the baseline tax rates.

Because the first of the neoclassical growth model's three equations provides quantitative estimates of the effect of taxes on the capital-labor ratio, the results for the capital stock immediately translate into results for the amount of labor.

Notes

[1] Pomerleau, Kyle. "The Tax Burden on Business Investment under Joe Biden's Tax Proposals," American Enterprise Institute, September 2020. These estimates of average marginal tax rates on business investment reflect changes in: the statutory corporate tax rate, the top marginal tax rate on personal income, personal income and estate tax rates on dividends and capital gains, deductions from business and personal income taxes.
[2] Because employer payroll taxes are not part of the base for employee payroll taxes, the combination of employer and employee OASDI levies creates the same tax wedge as would a 11.5% tax on employees by itself.
[3] Mulligan, Casey B. *Side Effects and Complications: The Economic Consequences of Health-care Reform*. Chicago: University of Chicago Press, 2015.
[4] National Public Radio et al. "Obamacare Enrollees Emboldened to Leave Jobs, Start Businesses." Health News Florida. April 30, 2014. https://health.wusf.usf.edu/post/obamacare-enrollees-emboldened-leave-jobs-start-businesses
[5] One of the eligibility expansions involves removing the "cliff" at 400 percent of the federal poverty line. This reduces the implicit income tax for persons affected by the cliff but increases the implicit income tax for unaffected persons above the cliff. I treat these two effects as exactly offsetting.
[6] Some of Biden's personal income tax provisions increase the income-weighted average marginal tax rate more, and others less, than the person-weighted average. The net result is a small reduction in the "quality" of labor (as the concept is used by Jorgenson, Dale W. *The Economics of Productivity*. Cheltenham, UK: Edward Elgar, 2009), which I model as a 0.05 percent (i.e., small) reduction in total factor productivity.
[7] A forthcoming paper is quantifying additional Biden capital-tax provisions, examining alternative tax-rate metrics to the marginal effective tax rate, and estimating the productivity and tax-like effects of Biden's regulatory agenda (Fitzgerald, Hassett, Kallen, and Mulligan. "An Analysis of Vice President Biden's Economic Agenda: The Long Run Impacts of Its Regulation, Taxes, and Spending," manuscript, Hoover Institution, October 2020).
[8] Allowing the qualified business income deduction to expire would be one way to add approximately the same number of percentage points to noncorporate marginal effective tax rates as to corporate rates. I take the national average state rate as 15.4 percent, fully deductible for federal purposes, as the sum of 4.8 percent personal capital income taxation (NBER's marginal rate estimate) and the 10.6 percent average rate for state and local business income and property taxes. That average rate has revenues as numerator and non-labor national income as the denominator.
[9] Mulligan (2015).
[10] Council of Economic Advisers. *Economic Report of the President*. 2019, p. 423. Note that Medicare for All is not only designed to provide universal coverage, but also to eliminate copayments and private health insurance, which remain in European countries.
[11] https://joebiden.com/healthcare/#
[12] I assume that the "public option" to be added to ACA exchanges does not receive substantial subsidies in addition to the subsidies received by other ACA plans. Such subsidies would further add to the marginal tax rate as they are financed and/or phased out on the basis of the insured's income and employment status.
[13] The labor wedge refers to the gap between what a worker produces and what he or she is able to purchase with the earnings from the job. Taxes on consumption (such as sales taxes or tariffs on imported consumer goods) contribute to this gap in much the same way that taxes on wages do.
[14] Ikenson, Daniel J. "Who Is Paying for Trump's Tariffs?" *cato.org*. February 27, 2020. https://www.cato.org/blog/whos-bearing-burden-tariff-boom.
[15] This rate is calculated as the extra statutory tariff rate times 2017 imports of goods and services divided by national income.
[16] For example, my calculations of after-tax capital-rental rates for the twentieth-century U.S. find rates of about 8 percent per year at the beginning of the century – when corporate and personal income taxes were unconstitutional – and also about 8 percent at the end of the century (Mulligan, Casey B. "Capital, Interest and Aggregate Intertemporal Substitution," NBER working paper no. 9373, December 2002). For cross-country patterns, see Caselli and Feyer, "The Marginal Product of Capital," *Quarterly Journal of Economics*, May 2007.
[17] A recent and similar application of the neoclassical growth model is Barro and Furman, "The Macroeconomic Effects of the 2017 Tax Reform," *Brookings Papers on Economic Activity*, Spring 2018. Jaffe, Minton, Mulligan, and Murphy, *Chicago Price Theory*, Princeton, NJ: Princeton University Press, 2019 has a recent textbook presentation, including extensions of tax-incidence results that include multiple sectors and imperfect competition. See also the appendix of this paper.

[18] If the rate of time preference were increasing in wealth, then capital income taxation would *increase* the after-tax return in the long run (Jaffe, Minton, Mulligan, and Murphy, 2019).
[19] As with many instances of capital-income taxation, Biden's taxes are not uniform across industries, types of capital, or forms of business organization. Pomerleau (2020) finds that Biden's plan increases the cross-section inequality of after-tax shares by asset type. In these instances, more of the wage reduction may derive from the (in)efficiency with which capital is deployed rather than reductions in the total amount of investment. For simplicity I limit the effects to the latter. For a well-known analysis of the former, see Ballard, Shoven, and Whalley, "General Equilibrium Computations of the Marginal Welfare Costs of Taxes in the United States." *American Economic Review*, March 1985.
[20]The wage elasticity (cited as ½ in the text) depends only on labor's share of GDP and would be larger if labor's share were smaller. In particular, the elasticity of long-run wages to capital taxation is independent of the elasticity of substitution in production or the wage elasticity of labor supply (Jaffe, Minton, Mulligan and Murphy, 2019, p. 184).
[21] The arithmetic is 0.02 = 0.09*(1/2)*0.40.
[22] The table shows effects on economic outcomes measured in per capita terms. Aggregate outcomes are the product of per capita outcomes and the U.S. population, which may itself be affected by federal policy but are not estimated in this paper.
[23] Council of Economic Advisers. *Economic Report of the President*. 2020, Chapter 3.
[24] Mulligan, Casey B. "The Real Cost of Biden's Plans," *Wall Street Journal*, September 17, 2020.
[25] Furthermore, labor-income taxes have no effect on the long-run marginal product of labor in the neoclassical growth model.

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