REMI

Regional Economic Models, Inc.

The National Economic Impacts of Current Legislative Proposals to Change the Capital Gains Tax

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Executive Summary

Legislative proposals, like the Sensible Taxation and Equity Promotion (STEP) Act and others like it, present a variety of changes to the long-term capital gains tax, including the repeal of the step-up in basis at death, making death a tax realization event, and increasing the tax liability of trusts commonly utilized by small businesses, family- and privately-owned enterprises, farm and ranch operations, and others. These new and additional tax liabilities would materialize in the form of capital gains taxes being applied retroactively on the accumulated value of assets such as businesses, farms, and other assets when transferred via trusts or upon an owner's death to family members or other beneficiaries of a trust. The STEP Act also treats non-grantor trust assets as being sold and therefore taxed every 21 years for living owners, and H.R. 2286 proposes a similar rule with a period of 30 years.

Regional Economic Models, Inc. (REMI) was retained by the Committee to Unleash Prosperity (CTUP) to perform a national economic impact analysis of these key proposed changes in the STEP Act during 2021 – 2030 under a top combined capital gains tax rate of 43.4%, which adds the Administration's proposed 39.6% top capital gains tax rate and the existing 3.8% net investment income tax (NIIT). This analysis does not include any applicable state capital gains, estate, or inheritance taxes which vary by state.

REMI found the following key results:

- Sustained annual job losses ranging from over 500,000 to almost 1 million
- 10-year losses in economic output and GDP of about $2 trillion and $1 trillion, respectively, with a
    - $600 billion loss in private investment, and a
    - $6 billion loss in R&D spending
- 10-year loss in personal income of about $1 trillion, which translates to
    - $8,000 – 10,000 per household

These significant negative economic impacts are driven by several key factors:

- Increased financing and tax liability costs to businesses, especially small and family-owned businesses and farms
    - Prospective businesses may choose not to open
    - Existing businesses may be forced to downsize or close
    - Costs are passed on into higher consumer prices
- Increased financing costs also specifically discourage private investment
    - R&D spending is closely tied in with private investment, so it declines as well
    - Decrease in labor productivity driven by lower private investment and R&D spending
        - May be worsened by shift away from investment in high risk, high potential start-ups
        - Raises business costs by requiring more labor to produce the same economic output
- Increased federal non-military spending of revenue generated does provide a direct boost to the economy, but the negative impacts dominate

In summary, the net economic impact of the key proposed legislative changes to the capital gains tax in the STEP Act is significantly negative.

REMI Background & Experience

Regional Economic Models, Inc. (REMI) is an independent company with offices in Amherst, MA and Washington, D.C. that provides non-partisan economic analysis and modeling software to its clients, who include federal, state, and local government agencies, non-profit organizations, universities, and private companies. With over 40 years of experience, REMI is a worldwide leader in providing dynamic regional U.S. macroeconomic and demographic models and consultative services used to evaluate tax policy as well as many other policy issues such as trade, economic development, health care, transportation, and energy.

Glossary

Economic Output: The amount of production, including all intermediate goods purchased as well as value added (compensation and profit). This can also be thought of as sales or supply.

Employment: Employment comprises estimates of the number of jobs, full-time plus part-time, by place of work for all industries.

Federal Non-Military Spending: A component of GDP. The value of services produced by the non-military portion of the federal government, measured as the purchases made by government on inputs of labor, intermediate goods and services, and investment expenditures. It is the sum of government consumption expenditures and government gross investment.

GDP: Gross Domestic Product. The market value of goods and services produced by labor and property. Also, the sum of value-added across all industries.

Personal Income: Income received by persons from all sources. It is the sum of compensation of employees, supplements to wages and salaries, proprietors' income, rental income, personal income receipts on assets, and personal current transfer receipts, less contributions for government social insurance.

Private Investment: A component of GDP. Purchases of residential and nonresidential structures and of equipment and software by private businesses and by nonprofit institutions in the United States.

R&D Spending: Value added in the scientific research and development services sector.

Value Added: The gross economic output of an industry or a sector less its intermediate inputs; the contribution of an industry or sector to gross domestic product (GDP).

Introduction

Senator Chris Van Hollen, joined by Senators Cory Booker, Bernie Sanders, Sheldon Whitehouse, and Elizabeth Warren, has proposed the Sensible Taxation and Equity Promotion (STEP) Act.[1] The legislative proposal would make a variety of changes to the federal long-term capital gains tax system, including the repeal of the step-up in basis at death, making death a tax realization event, and increasing the tax liability of trusts. Additionally, the Biden Administration has proposed raising the top capital gains tax rate to 39.6%, which would increase the top combined capital gains tax rate to 43.4% when added to the 3.8% net investment income tax (NIIT). Regional Economic Models, Inc. (REMI) was retained by the Committee to Unleash Prosperity (CTUP) to perform a national economic impact analysis of these key proposed changes.

Relying on a wealth of detailed government data and key insights from the literature, we examined the direct effects on financing costs, labor productivity, costs to small and family-owned businesses and farms, and federal non-military spending of new revenue. Then, using our detailed national PI+ economic model, we evaluated how those factors would impact employment, economic output, Gross Domestic Product (GDP), private investment, R&D spending, and personal income over the 2021 – 2030 period.

We found that the proposed changes would generate almost 1 million sustained job losses. They would also induce 10-year losses to economic output and GDP of about $2 trillion and $1 trillion respectively, as well $600 billion and $6 billion respectively in private investment and R&D spending declines. Finally, the 10-year loss in personal income could also exceed $1 trillion, translating into up to $10,000 in foregone income per household.

These large negative economic impacts are driven by several key factors. Increased costs, especially for small and family-owned businesses and farms, increase the risk of downsizing or closure, reduce new entry into the marketplace, and raise prices for consumers. Increased financing costs in particular discourage private investment, and with it, lower R&D spending and labor productivity. The decline in labor productivity, which raises costs for firms as they face a less efficient workforce, may also be exacerbated by a shift away from investment in high risk but potentially high productivity start-ups. Increased federal non-military spending of the revenue generated does provide a direct boost to the economy, but the negative impacts dominate. The key proposed legislative changes to the capital gains tax in the STEP Act have a significantly negative impact on the national economy.

[1] In the House of Representatives, Rep. Bill Pascrell, Jr. has introduced H.R. 2286, which makes a very similar proposal.

Methodology

In order to assess the economic impacts of the key proposed changes to the long-term capital gains tax in the STEP Act, REMI uses a national, 160-industry PI+ v2.5 model of the United States. PI+ is a sophisticated dynamic regional macroeconomic and demographic policy model that simulates the year-by-year effects of public policy initiatives, and is widely used by national, state, and local entities, legislatures, universities, and many other organizations and experts across the country. More detailed information is available about the model in the Appendix.

The analysis covers the 10-year period from 2021 – 2030. REMI considers the direct impacts of repealing the step-up in basis at death, making death a tax realization event, and increasing the tax liability of trusts on households, small businesses, and farms. The analysis also incorporates the direct impact of the federal government spending the additional revenue generated by the tax changes. We examine these impacts under a top combined capital gains tax rate (hereafter, "top tax rate") of 43.4%, which adds together the Administration's proposed 39.6% top capital gains tax rate and the existing 3.8% NIIT.

Households & Trusts

This section describes how we analyze the impacts on households and trusts. Since the proposed changes in policy are unprecedented, there is no literature that addresses their empirical macroeconomic effects. However, there is a more robust literature on the impact of changes in the capital gains tax rate, so we construct our analysis in order to take advantage of it. Specifically, we calculate the total increase in capital gains tax liability across all proposed changes and convert that into a change in what we call an "effective capital gains tax rate" by comparing it to the original level of taxable income. We then utilize this "effective rate" change to estimate the implied increase in capital (or financing) costs and the implied decrease in labor productivity based on evidence from a pair of academic papers.

Depending on filing status, households with total taxable income above $441,450 – 496,600 face the top tax rate. Given the income brackets available in Internal Revenue Service (IRS) Statistics of Income (SOI) data[2], we apply the 43.4% top tax rate to taxable capital gains income for households with total taxable income above $500,000, calculating the increase in tax liability relative to the current 23.8% top tax rate (i.e., a 20% top capital gains tax rate). Using SOI data[3], we also apply the 43.4% top tax rate to taxable capital gains income in trusts above the $13,250 threshold, calculating the increase in tax liability relative to the current 23.8% top tax rate.

Using Survey of Consumer Finances (SCF) data from the Federal Reserve Board of Governors[4], we estimate the total amount of annual unrealized capital gains that become taxable at death with no step-up in basis, accounting for the $1,000,000 exemption on any unrealized gains and $250,000 exemption

[2] https://www.irs.gov/statistics/soi-tax-stats-individual-statistical-tables-by-size-of-adjusted-gross-income. Returns with Income or Loss from Sales of Capital Assets. Table 1.4A. 2018.
[3] https://www.irs.gov/statistics/soi-tax-stats-fiduciary-returns-sources-of-income-deductions-and-tax-liability-tax-status-and-size-of-gross-income and https://www.irs.gov/statistics/soi-tax-stats-fiduciary-returns-sources-of-income-deductions-and-tax-liability-by-type-of-entity. Fiduciary Income Tax Returns. Tables 1-2. 2014.
[4] https://www.federalreserve.gov/econres/scfindex.htm.

on unrealized gains on primary houses. As the SCF excludes the Forbes 400, we generate separate estimates for this group using relationships between net worth and relevant variables for billionaires and add them to the total. Since we treat the impact on businesses separately, we exclude any unrealized capital gains from business-related assets. This data is paired with mortality statistics from the Center for Disease Control and Prevention (CDC) National Center for Health Statistics (NCHS) to calculate the expected increase in taxable capital gains income based on households' death probability[5] in a given year. Finally, we apply the 43.4% top tax rate to calculate the total increase in tax liability.

A 15-year fixed-rate payment plan is allowed for the tax on appreciated illiquid assets transferred at death. As such, we categorize the tax liability into liquid and illiquid asset categories. The liquid assets, including stocks and mutual funds, are estimated to account for 19% of the total, and illiquid assets such as real estate account for 54% of the total, with the excluded business assets accounting for the remaining 27% (we assume that the Forbes 400 also follow this breakout). We assume that all households take advantage of the payment plan. Specifically, starting in each year, we spread the newly generated tax liability associated with the 54% of illiquid assets evenly over the following 15 years. This means that in 2021, only 1/15 of this part of the tax liability is paid; in 2022, 2/15 is paid (i.e., 2 cohorts each paying 1/15 of their tax liability); and so on up to 2030, in which 2/3 (i.e., 10/15) of this part of the tax liability is paid.

We estimate total trust assets in the economy using SCF data[6]. To calculate the total potential tax base, we assume that the top tax rate is applied for trust assets over $13,250. In the STEP Act, non-grantor trust assets, which make up about 80% of total trust assets[7], are treated as sold every 21 years for living owners, starting with those established before 2006. We assume a trust life span of 42 years. Thus, in 2026, we assume that half of trust assets (i.e., those established during 1985 – 2005) are taxed, while during 2027 – 2030, exactly 1/42 of trust assets are taxed (corresponding to the single establishment years of 2006 – 2009, respectively). Finally, we apply the 43.4% top tax rate to calculate the total increase in tax liability.

After summing the increases in tax liability and calculating the "effective rate" change, we draw upon two academic papers to estimate the impacts on capital costs and labor productivity. Specifically, Harry Huizinga, et al. (2018)[8] find that a top capital gains tax rate of 22.43% raises the cost of equity capital by 7.01%. We use the ratio of total debt to equity (90.41%)[9] in the 4th quarter of 2020 to convert this relationship of the top capital gains tax rate with the cost of equity capital into one with overall capital costs. Also, we utilize the Joseph E. McPhail, et al. (2012)[10] estimate that a 1% increase in the top capital gains tax rate will result in a 0.03% loss in labor productivity.

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[5] https://www.cdc.gov/nchs/data/databriefs/db355_tables-508.pdf#page=3. CDC NCHS. Data Brief 355. "Mortality in the United States, 2018". Page 3. 2018. For married households, the mortality rate is adjusted to account for the likelihood that both people die. Age of reference person in SCF is used for matching mortality rates.

[6] https://www.federalreserve.gov/econres/scfindex.htm. Again, we also add estimates for the Forbes 400 to this data.

[7] https://www.irs.gov/statistics/soi-tax-stats-individual-income-tax-returns-line-item-estimates and https://www.irs.gov/statistics/soi-tax-stats-fiduciary-returns-sources-of-income-deductions-and-tax-liability-by-type-of-entity. Link 1: Grantor (Form 1040 Schedule E Part III Amount). Link 2: Non-grantor (Form 1041).

[8] Huizinga, Harry, et al. "Capital Gains Taxation and the Cost of Capital: Evidence from Unanticipated Cross-Border Transfers of Tax Base." Journal of Financial Economics, 129. 2018. 306–328.

[9] https://fred.stlouisfed.org/graph/?id=TOTDTEUSQ163N. Total Debt to Equity for United States.

[10] McPhail, Joseph E., et al. "The poverty of states: do state tax policies affect state labor productivity?" Economics Working Papers, 115. 2012. http://lib.dr.iastate.edu/econ_las_workingpapers/11.

Finally, using SOI data[11], we scale the implied changes in capital costs and labor productivity by the share of capital gains income tax filers (7.9%) with a total taxable income above $500,000 (i.e., those that face the top tax rate). Table 1.1 displays the increase in capital costs and decrease in labor productivity in each year, whose values we enter into our corresponding variables.

Table 1.1: Changes in Capital Costs & Labor Productivity

Category	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Average
Capital Costs	0.403	0.407	0.412	0.416	0.420	1.076	0.453	0.455	0.458	0.462	0.496
Labor Productivity	-0.063	-0.063	-0.064	-0.065	-0.065	-0.147	-0.070	-0.070	-0.071	-0.071	-0.075

Note: Units in Percent. Components may not sum to totals due to rounding.

Small Businesses

Based on the proportion found in SOI data[12], we assume that 75% of active corporations are pass-through entities, whose owners are subject to capital gains taxation. Also, according to the United States Small Business Administration (SBA)[13], small businesses comprise 99.9% of all U.S. businesses, so we exclude the 0.1% of pass-through entities with the largest size of total assets. We use these factors to discount the aggregate taxable capital gains income found in the SOI data,[14] which we then convert into a per-return basis.

Further, drawing upon a United States Treasury Department and National Bureau of Economic Research (NBER) paper by Michael Cooper, et al. (2016)[15], we additionally assume that 66.9% of the pass-through corporate income accrues to the top 1% of individuals who earn such income (i.e., business owners). We restrict our focus to those owners by discounting the per-return taxable capital gains income by that percentage. Since their individual and not the per-return taxable capital gains income determines the tax rate they face[16], we estimate the number of owners associated with each return in order to make the conversion. We do so by assuming that owners comprise 1% of all employees and approximating the number of employees by dividing the wages and salaries reported per return by the economy-wide average annual wages and salaries. Across all corporate asset brackets whose owners face the top tax rate, we apply the 43.4% rate to their combined total taxable capital gains income in order to calculate their total increase in tax liability relative to the current top tax rate of 23.8%.

Also, using SCF data[17], we estimate the total amount of annual business-related unrealized capital gains that become taxable at death to be the 27% excluded from the Households analysis. This data is paired

[11] https://www.irs.gov/statistics/soi-tax-stats-individual-statistical-tables-by-size-of-adjusted-gross-income. Returns with Income or Loss from Sales of Capital Assets. Table 1.4A. 2018.
[12] https://www.irs.gov/pub/irs-pdf/p16.pdf and https://www.irs.gov/statistics/soi-tax-stats-integrated-business-data. Link 1: Corporation Income Tax Returns Complete Report 2017. Link 2: Table 1: Selected financial data on businesses.
[13] https://cdn.advocacy.sba.gov/wp-content/uploads/2019/04/23142719/2019-Small-Business-Profiles-US.pdf. 2019 Small Business Profile.
[14] https://www.irs.gov/pub/irs-pdf/p16.pdf.
[15] Cooper, Michael, et al. "Business in the United States: Who Owns It, and How Much Tax Do They Pay?". NBER, 2016. https://eml.berkeley.edu/~yagan/BusinessOwnersTaxes.pdf.
[16] Precisely, their total taxable income determines the capital gains tax rate they face. As such, these calculations are conservative in assuming that the pass-through income is their only source of income.
[17] https://www.federalreserve.gov/econres/scfindex.htm.

with mortality statistics to calculate the expected increase in taxable capital gains income based on business owners' death probability[18] in a given year. Finally, we apply the 43.4% top tax rate to calculate the total increase in tax liability.

We assume that all small businesses will take advantage of the 15-year fixed-rate payment plan allowed for the tax on appreciated illiquid assets transferred at death. Specifically, starting in each year, we spread the full tax liability for the expected newly liable businesses evenly over the following 15 years. This means that in 2021, 1/15 of a given cohort's aggregate tax liability is paid; in 2022, 2/15 is paid (i.e., 2 cohorts each paying 1/15 of their aggregate tax liability); and so on up to 2030, in which 2/3 (i.e., 10/15) of a given cohort's aggregate tax liability is paid. Table 1.2 displays the combined increase in tax liability costs to small businesses in each year. We model their impacts using our Production Cost variable.

Table 1.2: Increase in Small Business Costs

Category	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
Small Business Costs	5.2	5.7	6.3	6.9	7.4	8.0	8.6	9.1	9.7	10.3	77.0

Note: Units in Billions of 2020 Dollars. Components may not sum to totals due to rounding.

Farms

Based on a recent analysis[19] by the Agricultural and Food Policy Center (AFPC) at Texas A&M University, we assume that 98% of the full-time, commercial-scale family farms are impacted by the repeal of the step-up in basis at death and making death a tax realization event, and that the additional tax liability incurred averages $726,104 per farm under the current top capital gains tax rate of 20% plus the 3.8% NIIT. We scale up the liability to match a top tax rate of 43.4%.

Based on United States Department of Agriculture (USDA) data[20], we estimate the number of potentially impacted farms by adding the number of farming-occupation farms in small family farms to the number of midsize and large-scale family farms. We then calculate the expected number of farms facing additional tax liability in a given year by multiplying the number of potentially impacted farms by the death probability[21] (0.85%) at the average age of a farm owner (59.8)[22] and by the probability of being impacted conditional upon the death of the farm owner (98%).

We assume that all farms will take advantage of the 15-year fixed-rate payment plan allowed for the tax on appreciated illiquid assets transferred at death. Specifically, starting in each year, we spread the full

[18] https://www.cdc.gov/nchs/data/databriefs/db355_tables-508.pdf#page=3. CDC NCHS. Data Brief 355. "Mortality in the United States, 2018". Page 3. 2018. For married households, the mortality rate is adjusted to account for the likelihood that both people die. Age of reference person in SCF is used for matching mortality rates.

[19] Outlaw, Joe L., et al. "Economic Impacts of the *Sensible Taxation and Equity Promotion Act* and the *For the 99.5 Percent Act* on AFPC's Representative Farms and Ranches". June 15, 2021. https://afpc.tamu.edu/research/publications/files/708/RR-21-01.pdf. We utilize Scenario 3 from the report, which only depends on the provisions of the STEP Act and not on any provisions of the For the 99.5 Percent Act, the latter of which we do not consider in this report.

[20] https://www.ers.usda.gov/webdocs/publications/95547/eib-214.pdf?v=2766.6. Economic Research Service, USDA. Economic Information Bulletin 214. "America's Diverse Family Farms: 2019 Edition". December 2019.

[21] https://www.cdc.gov/nchs/data/databriefs/db355_tables-508.pdf#page=3.

[22] Economic Research Service and National Agricultural Statistics Service, USDA. 2016 Agricultural Resource Management Survey. Data as of November 2019.

tax liability for the expected newly liable farms evenly over the following 15 years. This means that in 2021, 1/15 of a given cohort's aggregate tax liability is paid; in 2022, 2/15 is paid (i.e., 2 cohorts each paying 1/15 of their aggregate tax liability); and so on up to 2030, in which 2/3 (i.e., 10/15) of a given cohort's aggregate tax liability is paid. Table 1.3 displays the increase in tax liability costs to farms in each year. We model their impacts by lowering our Farm Output variable commensurately.

Table 1.3: Increase in Farm Costs

Category	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
Farm Costs	0.7	1.4	2.1	2.7	3.4	4.1	4.8	5.5	6.2	6.9	37.7

Note: Units in Billions of 2020 Dollars. Components may not sum to totals due to rounding.

Federal Government Spending

REMI assumes that the federal government spends the revenue generated by the tax changes described above. To determine this revenue, we first calculate the combined increase in static tax liability across all the above entities, to which we then apply a discount factor of 39% from Harry Huizinga, et al. (2018)[23] that captures the "effective tax on capital gains"[24] after accounting for tax avoidance strategies that leverage "allowed exemptions, deductions ... and the fact that taxed investors pay taxes only when they realize their capital gains".[25]

We remain agnostic regarding the specific uses of the revenue, modeling the increase using our default Federal Civilian Government Spending variable, which captures the historical pattern of federal non-military spending across industries. Given the uncertainty about how the revenue will be allocated, we generate a range of estimates by varying the intensity of the public sector employment response. We report the results for the cases in which the direct public sector employment response is: (1) equal to the historical response (i.e., using our default variable); (2) zero (i.e., shutting off the historical response); and (3) the midpoint of the first two cases. Table 1.4 displays the increase in federal non-military spending in each year.

Table 1.4: Increase in Federal Non-Military Spending

Category	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
Federal Non-Military Spending	53.3	55.6	58.0	60.4	62.8	217.8	74.1	75.9	77.9	80.1	815.9

Note: Units in Billions of 2020 Dollars. Components may not sum to totals due to rounding.

[23] Huizinga, Harry, et al. "Capital Gains Taxation and the Cost of Capital: Evidence from Unanticipated Cross-Border Transfers of Tax Base." Journal of Financial Economics, 129. 2018. 306–328.
[24] This is a separate concept from the "effective capital gains tax rate" that we introduced in the Households & Trusts analysis.
[25] We only apply the discount factor when entities would be reasonably able to lawfully avoid the tax liability.

Results

This section reports the national economic impacts of the key proposed changes to the long-term capital gains tax in the STEP Act over the period 2021 – 2030, specifically on employment, economic output, GDP, private investment, R&D spending, and personal income. The results are followed by a discussion section.

The case with direct public sector employment response equal to the historical response is labeled as the low case, as it generates the smallest negative impacts. On the other hand, the case with zero direct public sector employment response is labeled as the high case, as it generates the largest negative impacts. Finally, the case with the midpoint of the direct public sector employment responses is labeled as the midpoint case.

Employment

Table 2.1 displays the annual employment impacts for each of the three cases, as well as the average impacts, which may be interpreted as the level of sustained employment loss relative to a business as usual scenario in which the capital gains tax system remains unchanged. The average employment impact ranges from a loss of 537,000 – 949,000 jobs, with a midpoint estimate of 745,000 jobs lost.

Table 2.1: Employment Impacts

Case	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Average
Low	-406	-584	-653	-654	-617	-225	-800	-554	-470	-404	-537
Midpoint	-576	-759	-831	-829	-784	-862	-942	-709	-611	-544	-745
High	-742	-930	-1,005	-999	-948	-1,494	-1,080	-861	-749	-682	-949

Note: Units in Thousands of Jobs. Components may not sum to totals due to rounding.

Economic Output, Gross Domestic Product, Private Investment, and R&D Spending

Table 2.2 displays the annual economic output and GDP impacts, as well as the impacts on the private investment and R&D spending components of GDP. The 10-year total impacts[26] are also reported. The total economic output and GDP impacts range from a loss of $1,517 – 1,635 billion and $781 – 862 billion respectively, with midpoint estimates of $1,581 billion and $824 billion lost. The total private investment and R&D spending impacts range from a loss of $578 – 644 billion and $6,090 – 6,308 million respectively, with midpoint estimates of $612 billion and $6,210 million lost.

[26] These are the undiscounted sums of the annual impacts.

Table 2.2: Economic Output, Gross Domestic Product, Private Investment, and R&D Spending Impacts

Result	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
Low Case											
Economic Output	-96	-139	-158	-163	-161	-102	-220	-172	-158	-149	-1,517
GDP	-49	-73	-83	-86	-84	-40	-117	-90	-82	-77	-781
Private Investment	-33	-50	-57	-59	-57	-84	-74	-61	-53	-49	-578
R&D Spending	-122	-235	-338	-436	-524	-732	-827	-898	-960	-1,018	-6,090
Midpoint Case											
Economic Output	-106	-149	-168	-172	-167	-138	-216	-170	-152	-142	-1,581
GDP	-56	-79	-89	-91	-89	-62	-115	-89	-80	-74	-824
Private Investment	-36	-54	-61	-63	-60	-95	-78	-63	-54	-48	-612
R&D Spending	-126	-243	-348	-447	-536	-755	-844	-912	-971	-1,028	-6,210
High Case											
Economic Output	-116	-159	-178	-179	-173	-172	-211	-167	-146	-134	-1,635
GDP	-62	-85	-95	-96	-92	-84	-113	-88	-77	-70	-862
Private Investment	-39	-58	-65	-66	-63	-106	-82	-64	-54	-48	-644
R&D Spending	-130	-250	-356	-456	-545	-776	-859	-923	-979	-1,034	-6,308

Note: Units for Economic Output, GDP, and Private Investment in Billions of 2021 Dollars. Units for R&D Spending in Millions of 2021 Dollars. Components may not sum to totals due to rounding.

Personal Income

Table 2.3 displays the annual aggregate and per household personal income impacts. The 10-year total impacts[27] are also reported. The total aggregate personal income impact ranges from a loss of $981 – 1,297 billion, with a midpoint estimate of $1,141 billion lost. The total per household personal income impact ranges from a loss of $7,519 – 9,946, with a midpoint estimate of $8,748 lost.

[27] These are the undiscounted sums of the annual impacts.

Table 2.3: Personal Income Impacts

Result	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
Low Case											
Aggregate	-84	-86	-89	-90	-90	-142	-115	-95	-95	-95	-981
Per Household	-660	-673	-692	-694	-689	-1,090	-878	-715	-715	-713	-7,519
Midpoint Case											
Aggregate	-97	-99	-102	-102	-102	-195	-122	-107	-107	-108	-1,141
Per Household	-768	-773	-794	-794	-786	-1,491	-925	-810	-804	-804	-8,748
High Case											
Aggregate	-111	-111	-114	-115	-114	-247	-128	-119	-119	-120	-1,297
Per Household	-872	-870	-888	-888	-878	-1,886	-972	-904	-891	-896	-9,946

Note: Units for Aggregate in Billions of 2021 Dollars. Units for Per Household in 2021 Dollars. Components may not sum to totals due to rounding.

Discussion

The significant negative economic impacts described above are driven by several factors. First, capital and tax liability costs faced by businesses and farms rise. These cost increases translate into higher prices for consumer goods and services and makes the domestic private sector less hospitable for new and existing businesses, especially small and family-owned businesses and farms that are often less resilient to economic shocks.

Higher prices mean that consumers are able to make fewer purchases, slowing demand throughout the economy from retailers to manufacturers to service providers. A less hospitable private sector means that prospective businesses may choose not to open, existing businesses may be forced to downsize or close altogether, and export-focused businesses lose market share to international competitors.

Both of these forces reduce the level of economic output and GDP, and consequently also decrease the need for businesses to hire employees. In turn, the decline in employment demand lowers personal income, both directly and through a decrease in annual wages and salaries.

Second, the increase in capital costs also specifically discourages private investment by making financing more expensive, which further lowers GDP directly. Additionally, since intellectual property (IP; mostly software) makes up over a quarter of total private investment nationally and about one-sixth of IP investments go to R&D spending, the decline in private investment also translates into notable decreases in R&D spending.

We also capture the decrease in labor productivity. This is driven in large part by the lower level of private investment and R&D spending, which are major contributors to innovation and technological progress. This effect may also be exaggerated by the incentive to shift portfolios towards safer returns over financing high risk but high upside start-ups as a result of repealing the step-up in basis at death and making death a tax realization event, which limit the upside and therefore accentuate the downside of such investments.

In turn, less productive workers add costs for businesses, who need to hire more labor in order to produce the same level of economic output. As described above, this raises prices and negatively impacts the business environment.

Finally, the increase in federal non-military spending does provide a direct boost to GDP, and the increase in government demand grows economic output and employment in the private sector, which is paired with public sector government employment growth in the low and midpoint cases. In turn, this raises aggregate personal income as well. The federal government also contributes significantly to R&D spending, so the declines there are partially offset by federal investment. However, these positive impacts are swamped by the negative impacts described above, so the net economic impact of the key proposed legislative changes to the capital gains tax is significantly negative.

Conclusion

On behalf of CTUP, REMI analyzed the national economic impacts during 2021 – 2030 of the legislative proposals to repeal the step-up in basis at death, make death a tax realization event, and increase the tax liability of trusts laid out in the STEP Act under the Administration's proposed 39.6% top capital gains tax rate and the existing 3.8% NIIT. Driven by an increased burden on small and family-owned businesses and farms, higher financing costs, and lower labor productivity, we found that they generated significant negative effects on a variety of key economic indicators, including almost 1 million sustained job losses, decreases in economic output and GDP of about $2 trillion and $1 trillion respectively, declines of over $600 billion and $6 billion respectively in private investment and R&D spending, and about $1 trillion in foregone personal income, or up to $10,000 per household.

Appendix: REMI Model Framework

PI+ is a structural economic, demographic, and policy analysis model. The following core framework applies to all REMI model builds. The model integrates input-output, computable general equilibrium, econometric and economic geography methodologies. The model is dynamic, with forecasts and simulations generated on an annual basis and behavioral responses to compensation, price, and other economic factors.

The model consists of thousands of simultaneous equations with a structure that is relatively straightforward. The exact number of equations used varies depending on the extent of industry, demographic, demand, and other detail in the specific model being used. The overall structure of the model can be summarized in five major blocks: (1) Output and Demand, (2) Labor and Capital Demand, (3) Population and Labor Supply, (4) Compensation, Prices, and Costs, and (5) Market Shares. The blocks and their key interactions are shown in Figures 1 and 2.

Figure A1.1: REMI Model Linkages

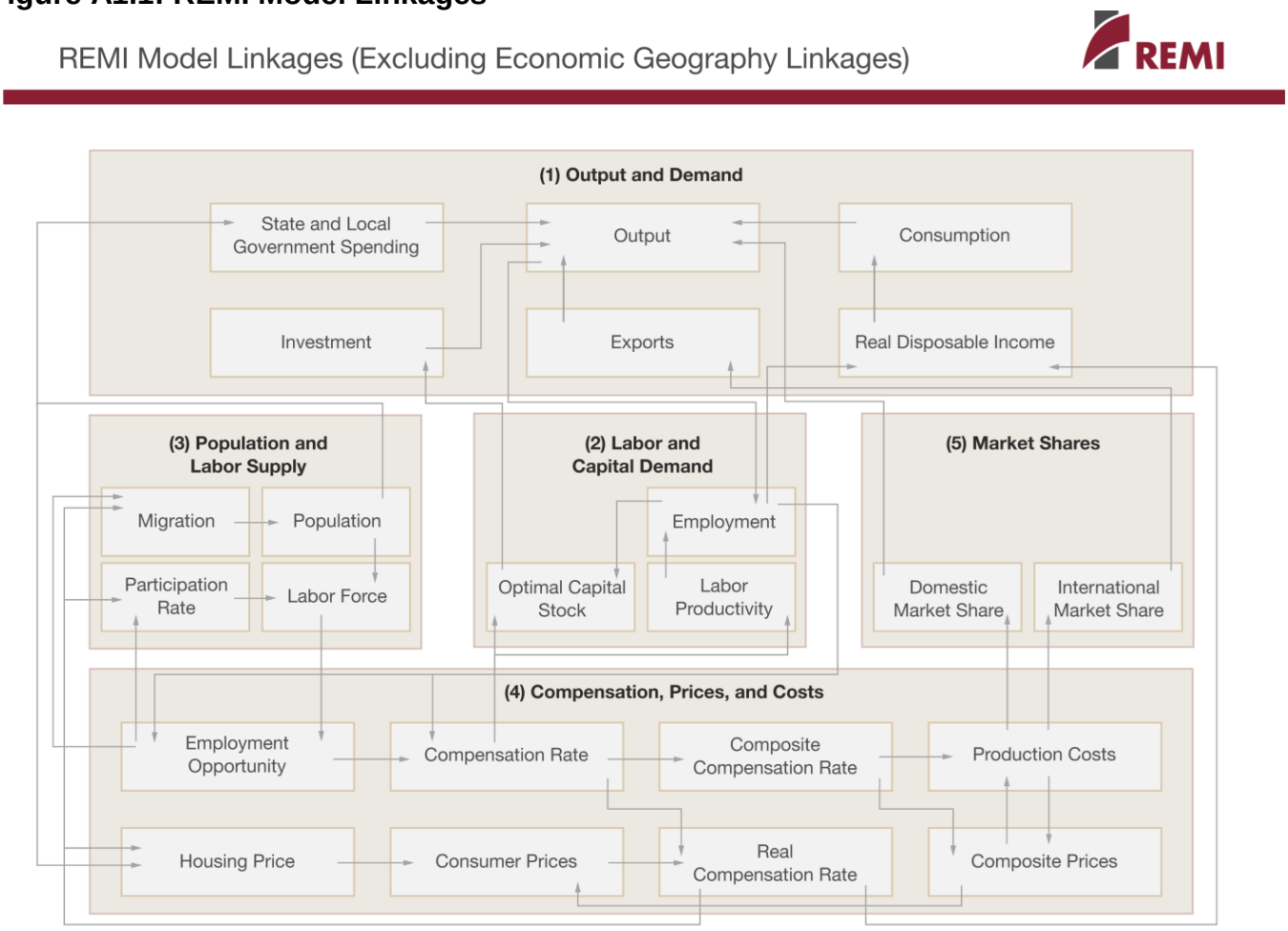
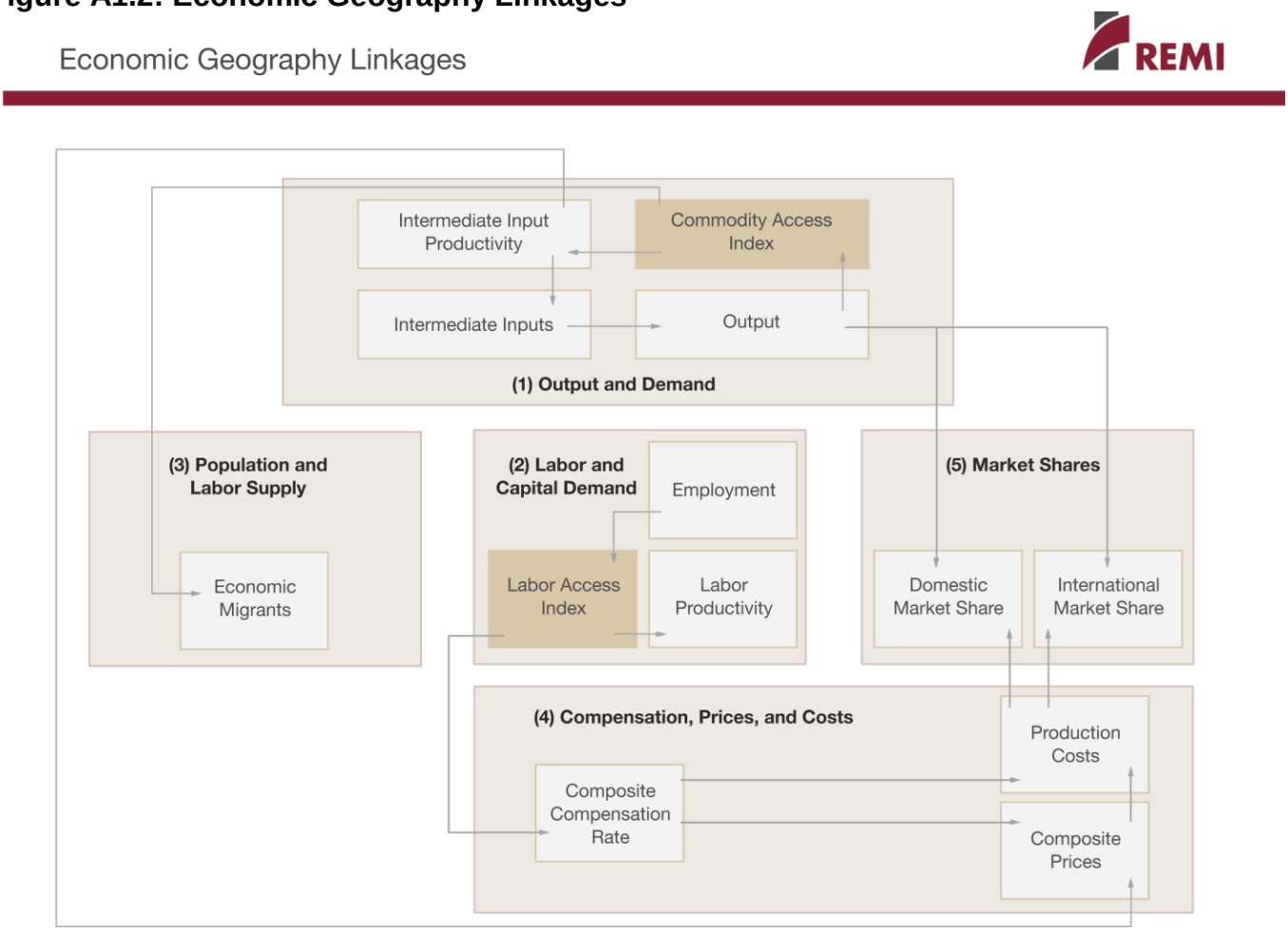


Figure A1.2: Economic Geography Linkages

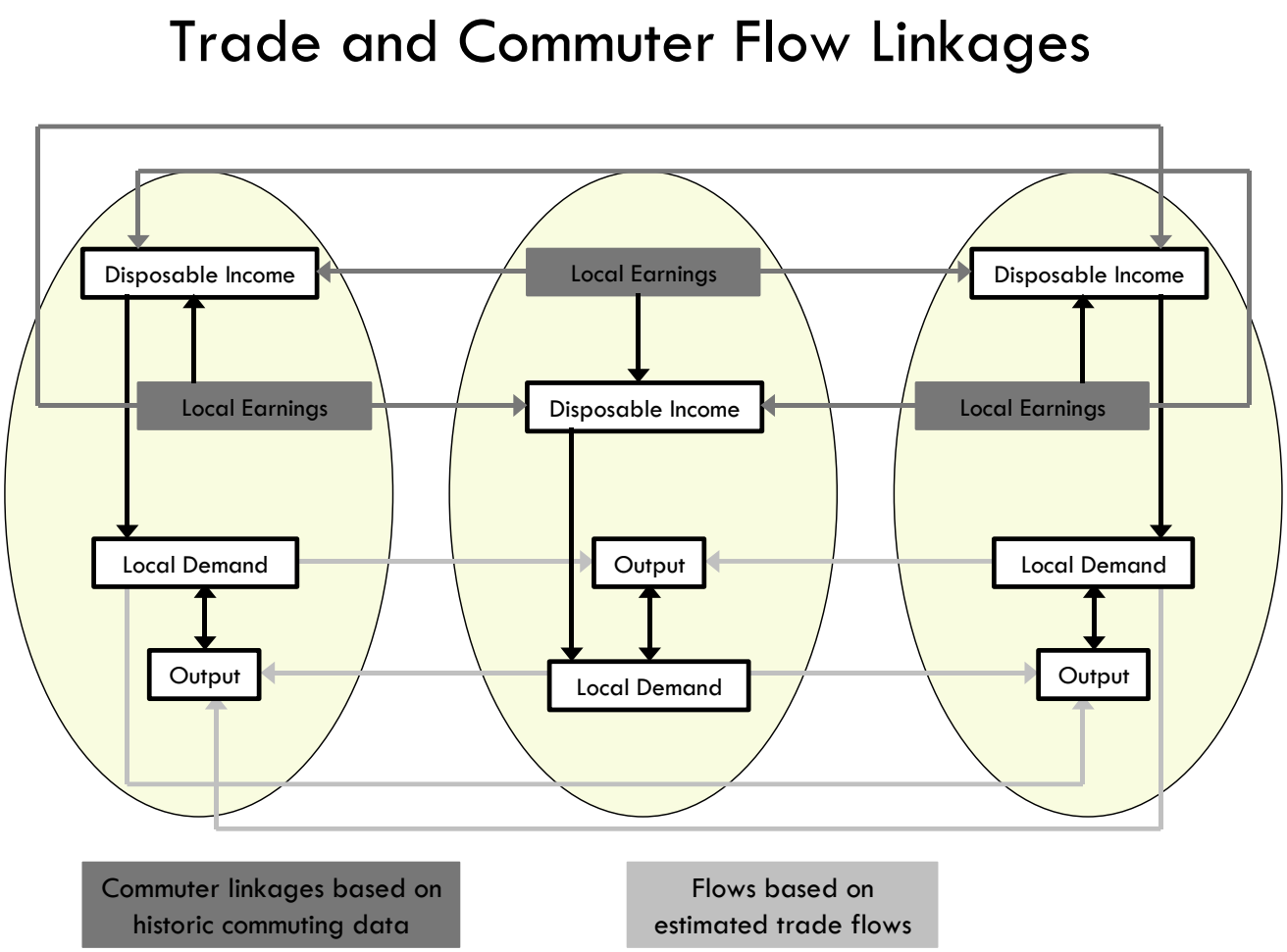


The Output and Demand block consists of output, demand, consumption, investment, government spending, exports, and imports, as well as feedback from output change due to the change in the productivity of intermediate inputs. The Labor and Capital Demand block includes labor intensity and productivity as well as demand for labor and capital. Labor force participation rate and migration equations are in the Population and Labor Supply block. The Compensation, Prices, and Costs block includes composite prices, determinants of production costs, the consumption price deflator, housing prices, and the compensation equations. The proportion of local, inter-regional, and export markets captured by each region is included in the Market Shares block.

Models can be built as single region, multi-region, or multi-region national models. A region is defined broadly as a sub-national area, and could consist of a state, province, county, or city, or any combination of sub-national areas.

Single-region models consist of an individual region, called the home region. The rest of the nation is also represented in the model. However, since the home region is only a small part of the total nation, the changes in the region do not have an endogenous effect on the variables in the rest of the nation.
Multi-regional models have interactions among regions, such as trade and commuting flows. These interactions include trade flows from each region to each of the other regions. These flows are illustrated for a three-region model in Figure 3.

Figure A1.3: Trade and Commuter Flow Linkages



Multiregional national models also include a central bank monetary response that constrains labor markets. Models that only encompass a relatively small portion of a nation are not endogenously constrained by changes in exchange rates or monetary responses.

Block 1. Output and Demand

This block includes output, demand, consumption, investment, government spending, import, commodity access, and export concepts. Output for each industry in the home region is determined by industry demand in all regions in the nation, the home region's share of each market, and international exports from the region.

For each industry, demand is determined by the amount of output, consumption, investment, and capital demand on that industry. Consumption depends on real disposable income per capita, relative prices, differential income elasticities, and population. Input productivity depends on access to inputs because a larger choice set of inputs means it is more likely that the input with the specific characteristics required for the job will be found. In the capital stock adjustment process, investment occurs to fill the difference between optimal and actual capital stock for residential, non-residential, and equipment investment. Government spending changes are determined by changes in the population.

Block 2. Labor and Capital Demand

The Labor and Capital Demand block includes the determination of labor productivity, labor intensity, and the optimal capital stocks. Industry-specific labor productivity depends on the availability of workers with differentiated skills for the occupations used in each industry. The occupational labor supply and commuting costs determine firms' access to a specialized labor force.

Labor intensity is determined by the cost of labor relative to the other factor inputs, capital and fuel. Demand for capital is driven by the optimal capital stock equation for both non-residential capital and equipment. Optimal capital stock for each industry depends on the relative cost of labor and capital, and the employment weighted by capital use for each industry. Employment in private industries is determined by the value added and employment per unit of value added in each industry.

Block 3. Population and Labor Supply

The Population and Labor Supply block includes detailed demographic information about the region. Population data is given for age, gender, and race, with birth and survival rates for each group. The size and labor force participation rate of each group determines the labor supply. These participation rates respond to changes in employment relative to the potential labor force and to changes in the real after-tax compensation rate. Migration includes retirement, military, international, and economic migration. Economic migration is determined by the relative real after-tax compensation rate, relative employment opportunity, and consumer access to variety.

Block 4. Compensation, Prices and Costs

This block includes delivered prices, production costs, equipment cost, the consumption deflator, consumer prices, the price of housing, and the compensation equation. Economic geography concepts account for the productivity and price effects of access to specialized labor, goods, and services.

These prices measure the price of the industry output, taking into account the access to production locations. This access is important due to the specialization of production that takes place within each industry, and because transportation and transaction costs of distance are significant. Composite prices for each industry are then calculated based on the production costs of supplying regions, the effective distance to these regions, and the index of access to the variety of outputs in the industry relative to the access by other uses of the product.

The cost of production for each industry is determined by the cost of labor, capital, fuel, and intermediate inputs. Labor costs reflect a productivity adjustment to account for access to specialized labor, as well as underlying compensation rates. Capital costs include costs of non-residential structures and equipment, while fuel costs incorporate electricity, natural gas, and residual fuels.

The consumption deflator converts industry prices to prices for consumption commodities. For potential migrants, the consumer price is additionally calculated to include housing prices. Housing prices change from their initial level depending on changes in income and population density.

Compensation changes are due to changes in labor demand and supply conditions and changes in the national compensation rate. Changes in employment opportunities relative to the labor force and occupational demand change determine compensation rates by industry.

Block 5. Market Shares

The market shares equations measure the proportion of local and export markets that are captured by each industry. These depend on relative production costs, the estimated price elasticity of demand, and the effective distance between the home region and each of the other regions. The change in share of a specific area in any region depends on changes in its delivered price and the quantity it produces compared with the same factors for competitors in that market. The share of local and external markets then drives the exports from and imports to the home economy.