

*The Beacon Hill Institute
National Center for Policy Analysis*



*The Distributional Effects of the
Clinton Tax Proposals*

THE BEACON HILL INSTITUTE AT SUFFOLK UNIVERSITY

8 Ashburton Place Boston, MA 02108

Tel: 617-573-8750, Fax: 617-994-4279

Email: bhi@beaconhill.org, Web: www.beaconhill.org

NATIONAL CENTER FOR POLICY ANALYSIS

14180 Dallas Parkway, Suite 350

Dallas, TX 75254

Tel: 972-386-6272 Web: www.ncpa.org

SEPTEMBER 2016

The Distributional Effects of the Clinton Tax Proposals

Jonathan Haughton*

Paul Bachman*

Keshab Bhattarai**

David G. Tuerck*

August 2016

* Department of Economics and Beacon Hill Institute at Suffolk University, 8 Ashburton Place, Boston, MA 02108; jhaughton@suffolk.edu , pbachman@suffolk.edu , dtuerck@suffolk.edu .

** Keshab Bhattarai. The Business School, University of Hull, Cottingham Road, Hull, HU6 7SH, UK; K.R.Bhattarai@hull.ac.uk .

The Distributional Effects of the Clinton Tax Proposals

Abstract

Hillary Clinton, the Democratic candidate for President, has proposed several changes in the Federal tax code, including adding a surcharge of 4% on annual incomes above \$5 million, limiting the tax benefits of non-charitable deductions to 28% of their value, ensuring that taxpayers earning more than a million dollars a year pay at least 30% of their income in tax, increasing the tax rates on capital gains for taxpayers in the top tax bracket, expanding the base of the estate tax, and limiting some corporate deductions, most notably for fossil fuel development.

Using a tax calculator model, we estimate that the static effects of these changes would be to raise Federal tax revenue by a total of \$816 billion over a ten-year period, an increase of 1.9% over projected baseline revenue. The higher taxes would reduce incomes somewhat, and when these dynamic effects are included, revenue would rise by \$615 billion over 2017-2026, or by 1.5% relative to baseline.

Using an extended simulation model, we find that 86% of the incremental tax burden would fall on those in the top tenth of the income distribution; most other taxpayers would see only minor changes in their tax burdens. The revenue and redistributive effects of the proposed changes are thus relatively modest.

Table of Contents

0. Executive Summary	5
1. Introduction	8
2. The Proposed Tax Changes	8
Personal Income Tax	8
Corporate Income Tax	9
Estate Tax	11
Revenue Effects of the Clinton Tax Proposals	11
3. Measuring the Distributional Effects of Tax Changes	14
Constructing the Dataset	14
Measuring wellbeing	16
Attributing Tax Incidence	18
The Incidence of Federal Taxes	20
4. The Distributional Effects of the Clinton Tax Proposals	22
Personal income tax	22
Corporate income tax	23
Estate and gift tax	24
Overall Distributional Effect of the Clinton Tax Proposals	24
5. Conclusions	26
References	28

List of Tables

Table 2.1 Personal Income Tax Rates and Brackets - Currently (2016) and Under Clinton Proposal.....	10
Table 2.2 Revenue Projections: Baseline and Clinton Proposals, billions of USD	12
Table 2.3 Budgetary Projections: Baseline and Clinton Proposals, billions of USD	13
Table 3.1 The Components of Broad Income.....	17
Table 3.2 Income and Expenditure by Decile, 2009.....	18
Table 3.3 Proxies for Tax Incidence, 2009.....	20
Table 3.4 Estimated Incidence of Federal Taxes, 2017, \$ bn	21
Table 3.5 Estimated Incidence of Federal Taxes (2017), % breakdown.....	21
Table 4.1 Personal Income Tax Revenue, by Decile, 2017, \$ bn.....	23
Table 4.2 Estate and Gift Tax Revenue by Decile, 2017, \$ bn.....	24
Table 4.3 Total Federal Tax Revenue by Decile, 2017, \$ bn.....	25
Table 4.4 Changes in Taxes Paid: Clinton Proposals vs. Current Rules	25
Table 4.5 Gross and Net Income per Adult Equivalent, 2017, Estimated	26
Table 5.1 Revenue and Distributional Estimates Compared	27

List of Figures

Figure 2.1 Marginal Personal Income Tax Rates: Current and Clinton Proposal	10
Figure 3.1 Distribution of Federal Taxes Compared with Income	22

0. Executive Summary

The Democratic candidate for President, Hillary Clinton, has set forth a number of changes that she would like to make to the Federal tax code: these include raising the personal income tax rate on very high-income tax payers, and levying the Estate (i.e. Inheritance) Tax on a wider base.

In this study we examine the distributional effects of the proposed tax changes, identifying who would gain or lose, and by how much, if the changes were put into place.

Clinton would alter the **personal income tax** in a number of ways. The most important proposed changes are these:

1. Add a surcharge of 4% on adjusted gross annual income above \$5 million.
2. Limit the value of deductions (except for contributions to charity) to no more than 28% of their value.
3. Ensure that all taxpayers with a modified adjusted gross income of \$1 million or more would pay at least 30% of their income in taxes (the “Buffett Rule”).
4. Increase the tax rates applicable to capital gains for those in the top income tax bracket, by applying the standard tax rate to capital gains on assets held less than two years (rather than the current one year), and phasing in the preferential capital gains rates gradually so that they would apply completely only to assets held for six or more years.
5. Repeal carried interest, which is a provision that allows general partners in some businesses to book most of their earnings as (low-taxed) capital gains rather than earned income.

The Clinton proposal would make modest changes to the tax code that applies to **corporations** – eliminating some tax incentives for fossil fuels, and making it harder to avoid U.S. taxes by holding profits overseas.

The Clinton proposals call for a reduction of the threshold of the **estate tax** to \$3.5 million, and a new top statutory rate of 45%, which would return the tax structure to the one in effect in 2009.

The Congressional Budget Office forecasts that Federal revenue will total \$42.1 trillion over the period 2017-2026, of which just over half is attributable to individual income taxes, and a further 32% to payroll taxes. Based mainly on our tax calculator model, we estimate that Federal revenue under the Clinton taxes would be 1.8% above the CBO projections, representing an increase of \$816 billion over a ten-year period, under a static projection. However, if the “dynamic” effects of the taxes on economic growth are taken into account – which we do using a large computable general equilibrium (CGE) model – then we find that Federal revenues would rise by 1.5% above CBO projections, representing an increase of \$615 billion over ten years. Almost nine-tenths of the additional revenue would come from the changes in the personal income tax.

With no offsetting increases in spending, the tax changes outlined here would reduce the average Federal budget deficit from 3.9% to 3.5% of GDP over the 2017-2026 period; by 2026, publicly-held government debt would be 82% of GDP, instead of the 86% currently projected by the Congressional Budget Office.

To measure the distributional effects of the Clinton tax proposals, we construct a database that has, as its core, the IRS Individual Public-Use Micro-Data files for a sample of 152,526 tax filers in 2009 (the most recent year for which such data are available). We exclude tax returns filed by dependents and by married couples filing separately. We then add non-filers (from the Current Population Survey); and synthetically match this dataset with information from the Consumer Expenditure Survey to create a dataset that has detailed information from tax filings as well as imputed information on expenditure, and on some additional components of income.

We are then able to construct a measure of wellbeing that we call *broad income*, which begins with adjusted gross income and then adds some tax-exempt sources of income, and employer contributions to health insurance, among other adjustments. We divide this by the square root of the number of household members to arrive at a measure of *broad income per adult equivalent*, and then divide the individuals in our dataset into ten equal-sized deciles based on this measure.

To determine tax incidence, we need to make some additional assumptions – that the personal income tax is borne by the income earner, that estate and gift taxes fall on persons with large amounts of income from capital, that the payroll tax weighs on wage and salary earners, that the corporate income tax falls in equal measure on labor and capital income, and that the burden of excises and other federal taxes is in proportion to spending. By this measure, those in the top decile receive 37.3% of all income (per adult equivalent), but pay 52.7% of all Federal taxes (Table 0.1). The bottom half of the population accounts for 18.3% of all broad income per adult equivalent, but pay just 7.5% of Federal taxes.

Table 0.1. Selected Measures of the Distributional Effects of the Clinton Tax Proposals, 2017

	CBO: forecast revenue	Share of Federal tax paid	Share of income per adult equivalent	Clinton: forecast revenue (dynamic)	Clinton: tax change per capita	Clinton: broad net income per adult equivalent	Change in broad net income per adult equivalent
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	\$bn	%	%	\$bn	%	\$ p.a.	%
Deciles							
1 (poor)	9.5	0.3	1.2	10.3	11.2	6,897	-0.70
2	5.4	0.2	2.6	5.2	-2.7	16,600	0.06
3	43.1	1.2	3.7	43.0	-0.9	21,627	-0.01
4	78.2	2.2	4.8	78.3	0.5	26,298	-0.07
5	127.6	3.6	6.0	127.9	11.0	31,271	-0.10
6	190.8	5.4	7.5	191.2	13.2	37,011	-0.15
7	270.3	7.7	9.4	271.1	22.6	44,054	-0.21
8	386.0	11.0	11.8	387.1	26.1	52,888	-0.22
9	547.8	15.6	15.7	549.3	35.1	68,354	-0.24
10 (rich)	1,849.3	52.7	37.3	1,884.5	714.7	129,568	-1.91
Total/Avg	3,508.1	100.0	100.0	3,547.9	83.1	44,076	-0.71

Sources: See Tables 4.3, 4.4, and 4.5.

Total tax revenue in 2017 would rise from \$3,508 billion to \$3,548 billion under the Clinton proposals (see Table 0.1). Those in the top decile would pay on average an additional \$715 per person per year in Federal taxes; in all other deciles, the additional tax burden would be \$35 per person or less. Including

the dynamic effects, net after-tax broad income per adult equivalent would fall by an average of 0.7% in 2017: by 1.9% for those in the top decile, but by less than a quarter of a percent for most of the other deciles.

Our revenue estimates are lower than those of the Tax Policy Center, which presents only static estimates, but are higher than those of the Tax Foundation, which finds remarkably big dynamic effects. Our results have the virtue that they are based on an extensive tax calculator model, married with an elaborate CGE simulation.

Our key conclusions are clear: Hillary Clinton's proposed changes in Federal tax rules would boost tax revenue by a modest 1.5% over the coming decade, and even though six-sevenths of the incremental tax burden would fall on those in the top decile, it would change the after-tax distribution of income only slightly.

1. Introduction

The Democratic candidate for President, Hillary Clinton, has set forth a number of changes that she would like to make to the Federal tax code: these include raising the personal income tax rate on very high-income tax payers and levying the Estate (i.e. Inheritance) Tax on a wider base.

In a companion study, we estimate that these changes would eventually lower real GDP by about 0.8 percent relative to what it would otherwise have been. In this study, we examine the distributional effects of the proposed tax changes, examining who would gain or lose, and by how much, if the changes were put into place.

The tax changes would have little impact on the poorest nine-tenths of the population. Households in the top ten percent of the income distribution, who currently pay 53% of all Federal taxes, would pay 80% of the additional tax collected.

Our study is organized as follows: the details of Clinton's proposed tax changes are set out in Section 2, including an estimate of their revenue effects. We explain the methodology for measuring the distributional effects in Section 3, present the results tax by tax in Section 4, and combine the results in order to measure the overall impact in Section 5.

2. The Proposed Tax Changes

The Clinton tax proposals envisage changes in the personal income tax, corporate income tax, and estate and gift tax. We consider each in turn.

Personal Income Tax

The current Federal personal income tax has seven distinct non-zero tax rates, ranging from 10% to 39.6%. Income from labor and capital is adjusted for certain expenses to give adjusted gross income, which is then reduced by subtracting personal exemptions as well as deductions (either at a standard rate, or itemized) to give taxable income. The tax rates and brackets that are applied to taxable income are shown in the top panel of Table 2.1. Somewhat lower tax rates (shown in square brackets) are applicable to capital gains. And for relatively high-income taxpayers – with modified adjusted gross income of over \$250,000 per year for married taxpayers filing jointly – there is an additional 3.8% tax on investment income (which includes dividends and royalties as well as capital gains).

The amount of tax payable may then be further reduced if the taxpayer is eligible to claim tax credits, such as the earned income credit.¹ In practice, as we document in Section 4 below, low-income

¹ Kelly Phillips Erb. IRS Announces 2016 Tax Rates, Standard Deductions, Exemption Amounts and More. *Forbes*, October 21, 2015. <http://www.forbes.com/sites/kellyphillipserb/2015/10/21/irs-announces-2016-tax-rates-standard-deductions-exemption-amounts-and-more/2/#20029a871e5d>

households on average are net beneficiaries under the personal income tax, while high-income households are net payers.

Clinton would alter the personal income tax in a number of ways. The most important proposed changes are these:

1. Add a surcharge of 4% on adjusted gross annual income above \$5 million.
2. Limit the value of deductions (except for contributions to charity) to no more than 28% of their value.²
3. Ensure that all taxpayers with a modified adjusted gross income of \$1 million or more would pay at least 30% of their income in taxes (the “Buffett Rule”).
4. Increase the tax rates applicable to capital gains for those in the top income tax bracket, by applying the standard tax rate to capital gains on assets held less than two years (rather than the current one year), and phasing in the preferential capital gains rates gradually so that they would only apply completely to assets held for six or more years.
5. Repeal carried interest, which is a provision that allows general partners in some businesses to book most of their earnings as (low-taxed) capital gains rather than labor income.

The bottom panel of Table 2.1 summarizes the relevant changes. And Figure 2.1 shows the current marginal personal income tax rates for a four-person family filing jointly; Clinton’s proposed tax rates are shown by the dashed line; and the tax rate on long-term capital gains is shown by the dotted line. Her proposed rates on medium- and short-run capital gains fall between these two extremes.

To determine the revenue and distributional effects of the Clinton proposals, it is necessary to simulate the impact using information on U.S. households, which differ widely in the amount and nature of their incomes, composition, and spending. In Section 3 we explain in more detail how our tax calculator model works.

Corporate Income Tax

Under current rules, the income of C corporations is taxed on a sliding scale that rises from 15% (for taxable income below \$50,000 per year) and eventually levels off at 35% (for corporate income above \$18.3 million annually). Most of the taxable income is earned by large firms, so in 2013 the average tax rate was 34.8% (IRS-SOI 2016, Table 5). When state and local corporation income taxes are included, the U.S. has, on paper, one of the highest tax rates in the world, and this has led to widespread calls for reforming the tax (Angelini and Tuerck 2015). The Clinton proposal would make modest changes to the tax code that applies to corporations – eliminating some tax incentives for fossil fuels, and making it harder to avoid U.S. taxes by holding profits overseas.

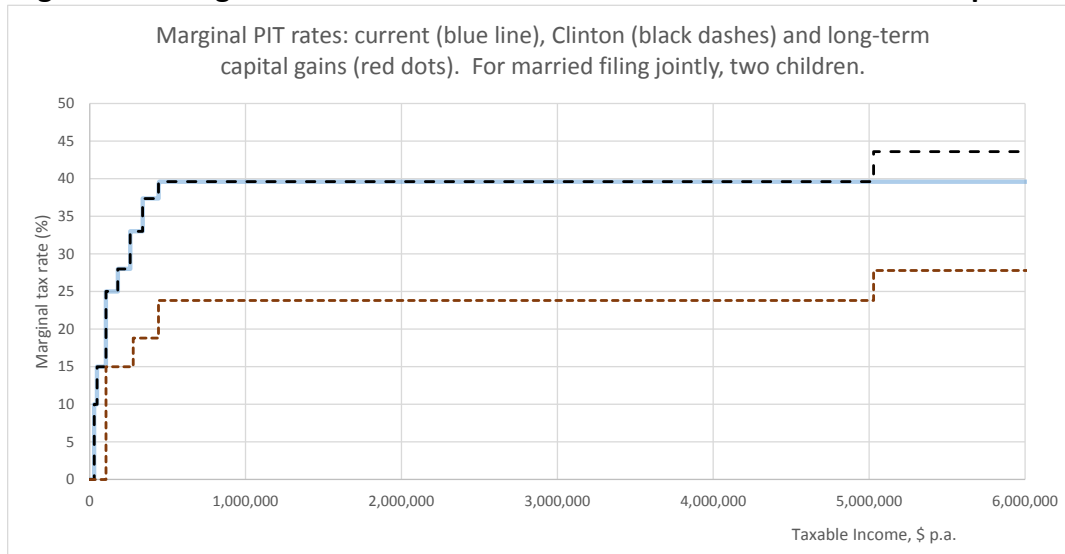
² Consider a household that pays \$20,000 annually in interest on a mortgage. If the household itemizes its deductions, this would effectively save \$5,000 in taxes for someone whose top tax bracket is 25%. But if the top tax bracket were 39.6%, this person might save as much as \$7,920 in taxes. Clinton would limit the benefit of the deduction to a maximum of \$5,600 (= 28% of \$20,000).

Table 2.1 Personal Income Tax Rates and Brackets - Currently (2016) and Under Clinton Proposal

	Tax brackets (\$ of taxable income per year)			
	Single	Married filing jointly	Married filing separately	Head of household
Current rates/brackets				
10% [0%]	0 -	0 -	0 -	0 -
15% [0%]	9,275 -	18,550 -	9,275 -	13,250 -
25% [15%]	37,650 -	75,300 -	37,650 -	50,400 -
28% [15%]	91,150 -	151,900 -	75,950 -	130,150 -
33% [15%]	190,150 -	231,450 -	115,725 -	210,800 -
35% [15%]	413,350 -	413,350 -	206,675 -	413,350 -
39.6% [20%]	415,050 -	466,950 -	233,475 -	441,000 -
<i>Memo items</i>				
Standard deduction	6,300	12,600	6,300	9,300
Personal exemption	4,050	4,050	4,050	4,050
Proposed changes & additions				
Top tax bracket				
43.6%	2,500,000	5,000,000	2,500,000	2,500,000
Minimum 30% average rate	1,000,000	1,000,000	1,000,000	1,000,000
Capital gains for top tax bracket		<i>Applicable tax rate</i>		
Asset held up to 2 years		47.4%		
Asset held 2-3 years		39.8%		
Asset held 3-4 years		35.8%		
Asset held 4-5 years		31.8%		
Asset held 5-6 years		27.8%		
Asset held 6+ years		23.8%		

Notes: Figures in square brackets refer to rate applicable to capital gains. Investment income is subject to an additional tax of 3.8% if the married taxpayer filing jointly has a modified adjusted gross income exceeding \$250,000 (\$150,000 for married filing separately, \$200,000 for others).

Figure 2.1 Marginal Personal Income Tax Rates: Current and Clinton Proposal



Estate Tax

Upon death, the estate of the deceased may be subject to an estate tax if the amount exceeds \$5.45 million. The tax rate begins at 18% but the statutory rates rise fairly quickly, reaching 40% on the value of estates in excess of \$6.45 million. There are numerous ways to avoid all or most of the tax, so that only an estimated 0.2% of estates pay this tax (Huang and Debot 2015). The Clinton proposals call for a reduction of the threshold to \$3.5 million, and a new top statutory rate of 45%, which would return the tax structure to the one in effect in 2009.

Revenue Effects of the Clinton Tax Proposals

Before turning to the distributional implications of the Clinton tax proposals, it is useful to estimate the budgetary effects. As our baseline, we use the most recent CBO revenue forecasts, published in March 2016, which are reproduced in the top panel of Table 2.2. Over the decade that spans 2017-2026, total Federal revenue is expected to total \$42.1 trillion, of which just over half is attributable to individual income taxes and a further 32% to payroll taxes.

The effects of any tax change proposal can be divided into “static” and “dynamic” effects. Static effects are calculated on the assumption that the tax change leads to no change in behavior by taxpayers. Suppose that taxable income equals \$1 trillion. Then, if government taxes income at 25%, an increase the in tax rate to 50% will double the amount of revenue government collected, from \$250 billion to \$500 billion. A “dynamic” estimate would show that the same doubling of the tax rate would yield a smaller increase in revenue as taxpayers reduced the amount of income they were willing to earn and report. If, for example, taxable income contracted to \$900 billion, tax revenue would rise by only 80% to \$450 million.

The middle panel of Table 2.2 simulates the static effects of the Clinton tax proposals on revenue. Revenue from payroll and “other” taxes would not be affected, while revenue from the personal income tax, and from estate and gift taxes, would rise.

The calculation of individual income tax revenue under the Clinton proposals is somewhat complicated. Using data from the IRS public use sample – the most recent data available are for 2009 – we simulate the revenue collected under the current tax regime, and under the Clinton proposals. Further details of the technique are given in Section 3 below. We then take the revenue under the Clinton tax rules as a proportion of revenue under current tax rules, and apply this to current “baseline” CBO projections of individual income tax revenue. By this measure, individual income tax revenue would rise by 3.2% under the Clinton proposals, relative to current rules (or by 2.5% in the “dynamic” scenario: more details below). Overall, Federal revenue under the Clinton taxes would be 1.8% above the CBO projections, representing an increase of \$816 billion over a ten-year period, under a static projection, and 1.5% above CBO projections, representing an increase of \$615 million, under a dynamic projection.

Table 2.2 Revenue Projections: Baseline and Clinton Proposals, \$ billions

Source of Revenue	Est.	Projections										Total 2017-26	% of CBO
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026		
CBO projections													
Individual income taxes	1,626	1,744	1,835	1,913	1,998	2,092	2,191	2,297	2,412	2,536	2,664	21,682	100.0
Corporate income taxes	329	357	366	372	400	395	401	407	417	429	444	3,988	100.0
Estate and gift taxes	20	21	21	23	23	24	25	26	27	29	30	249	100.0
Payroll taxes	1,099	1,140	1,180	1,223	1,266	1,316	1,366	1,419	1,473	1,532	1,592	13,508	100.0
Other taxes	289	246	243	241	243	254	264	275	286	300	312	2,663	100.0
So: Total tax revenue	3,364	3,508	3,645	3,772	3,931	4,082	4,247	4,423	4,615	4,825	5,042	42,089	100.0
Clinton proposal, static analysis													
Individual income taxes	1,626	1,783	1,879	1,961	2,055	2,160	2,269	2,380	2,499	2,628	2,760	22,375	103.2
Corporate income taxes	329	360	369	376	404	400	405	412	421	433	449	4,030	101.1
Estate and gift taxes	20	27	28	29	31	32	33	35	37	39	41	330	132.5
Payroll taxes	1,099	1,140	1,180	1,223	1,266	1,316	1,366	1,419	1,473	1,532	1,592	13,508	100.0
Other taxes	289	246	243	241	243	254	264	275	286	300	312	2,663	100.0
So: Total tax revenue	3,364	3,553	3,695	3,826	3,996	4,158	4,334	4,515	4,711	4,927	5,149	42,906	101.9
Clinton proposal, dynamic analysis													
Individual income taxes	1,626	1,780	1,874	1,956	2,044	2,143	2,246	2,358	2,478	2,608	2,742	22,230	102.5
Corporate income taxes	329	360	369	376	404	400	406	412	422	434	449	4,031	101.1
Estate and gift taxes	20	26	27	29	30	31	33	34	36	38	40	325	130.2
Payroll taxes	1,099	1,138	1,177	1,219	1,262	1,312	1,361	1,413	1,467	1,526	1,585	13,460	99.6
Other taxes	289	246	242	240	243	254	263	274	286	299	311	2,659	99.8
So: Total tax revenue	3,364	3,550	3,690	3,820	3,984	4,139	4,309	4,491	4,688	4,905	5,128	42,705	101.5

Notes and sources: Top panel from CBO (March 2016).

Table 2.3 Budgetary Projections: Baseline and Clinton Proposals, \$ billions

	Est. 2016	2017	2018	2019	2020	Projections						Total or avg. 2017-26
						2021	2022	2023	2024	2025	2026	
CBO projections												
Total spending	3,897	4,058	4,194	4,482	4,729	4,972	5,290	5,504	5,709	6,051	6,385	51,373
<i>of which: interest</i>	253	306	365	437	501	557	613	673	728	782	839	5,801
Total revenue	3,364	3,508	3,645	3,772	3,931	4,082	4,247	4,423	4,615	4,825	5,042	42,089
<i>Memo items:</i>												
Deficit	-534	-550	-549	-710	-798	-890	-1,043	-1,080	-1,094	-1,226	-1,343	-9,283
Debt	13,951	14,572	15,177	15,934	16,771	17,692	18,766	19,880	21,012	22,280	23,672	
GDP	18,494	19,297	20,127	20,906	21,710	22,593	23,528	24,497	25,506	26,559	27,660	
Deficit as % of GDP	2.9	2.8	2.7	3.4	3.7	3.9	4.4	4.4	4.3	4.6	4.9	3.9
Debt as % of GDP	75.4	75.5	75.4	76.2	77.2	78.3	79.8	81.2	82.4	83.9	85.6	79.5
Clinton proposal, static analysis												
Total spending	3,897	4,058	4,191	4,475	4,718	4,957	5,269	5,478	5,676	6,012	6,338	51,171
<i>of which: interest</i>	253	306	362	431	490	542	592	647	696	742	792	5,600
Total revenue	3,364	3,557	3,698	3,829	3,999	4,162	4,338	4,520	4,716	4,932	5,154	42,906
<i>Memo items:</i>												
Deficit	-534	-501	-492	-646	-718	-795	-931	-958	-960	-1,079	-1,184	-8,265
Debt	13,951	14,572	14,944	15,590	16,308	17,103	18,035	18,993	19,953	21,032	22,216	
GDP	18,494	19,297	20,127	20,906	21,710	22,593	23,528	24,497	25,506	26,559	27,660	
Deficit as % of GDP	2.9	2.6	2.4	3.1	3.3	3.5	4.0	3.9	3.8	4.1	4.3	3.5
Debt as % of GDP	75.4	74.9	74.2	74.6	75.1	75.7	76.7	77.5	78.2	79.2	80.3	76.6
Clinton proposal, dynamic analysis												
Total spending	3,897	4,058	4,191	4,476	4,719	4,958	5,272	5,481	5,681	6,018	6,345	51,198
<i>of which: interest</i>	253	306	363	431	490	543	595	651	700	748	799	5,626
Total revenue	3,364	3,550	3,690	3,820	3,984	4,139	4,309	4,491	4,688	4,905	5,128	42,705
<i>Memo items:</i>												
Deficit	-534	-508	-501	-655	-735	-819	-962	-990	-993	-1,113	-1,217	-8,493
Debt	13,951	14,459	14,959	15,615	16,350	17,169	18,131	19,121	20,114	21,227	22,444	
GDP	18,494	19,183	19,998	20,762	21,553	22,424	23,344	24,301	25,294	26,333	27,419	
Deficit as % of GDP	2.9	2.6	2.5	3.2	3.4	3.7	4.1	4.1	3.9	4.2	4.4	3.6
Debt as % of GDP	75.4	75.4	74.8	75.2	75.9	76.6	77.7	78.7	79.5	80.6	81.9	

Notes and sources: Top panel from CBO (March 2016). Spending on non-interest items assumed to follow CBO projections in all cases. All figures in nominal dollars.

The increase in taxes under the Clinton proposals would restrain economic growth (Bachman et al. 2016), lowering real GDP by almost 0.8% compared to what it would otherwise have been. This would offset the increase in tax revenues across the board, causing the Clinton revenue increase to be \$201 billion less than it would have been but for the negative behavioral response induced by the tax increases.

The increase in Federal tax revenue under the Clinton tax proposals has implications for the budget deficit and national debt, assuming that there is no offsetting change in spending. The details are worked out in Table 2.3, which shows revenue (from Table 2.2) as well as spending. We assume that non-interest spending follows the CBO projections.

More specifically, the CBO projects that total Federal spending will total \$51.4 trillion over the period 2017-2026, compared to revenue of \$42.1 trillion, leaving deficits that average 3.9% of GDP. The amount of publicly-held debt is expected to rise from \$14.0 trillion as of the end of 2016 to \$23.7 trillion by the end of 2026, by which time it will amount to 86% of GDP, up from the current level of 75% of GDP.

Spending under the Clinton tax proposals (under a dynamic analysis) would add up to \$51.2 trillion over 2017-26, which is lower than the CBO projection because of the lower interest cost due to the smaller public debt (which in turn is a consequence of deficits that would average 3.5%, rather than 3.9%, of GDP). By the end of 2026, total debt would be \$22.4 trillion, equivalent to 82% of GDP, or somewhat below the CBO projection of 86%.

3. Measuring the Distributional Effects of Tax Changes

To measure the distributional effect of the Clinton tax proposals, we need to work out how the changes would affect different groups in society, from poor to rich. For this it is necessary to construct a dataset that includes information, for a sample of households, on income and expenditure.³ Then it is possible to construct variables that mirror the incidence of taxes on each household in the sample, allocate the tax burden to each household, and summarize the results in a helpful way.

Constructing the Dataset

The central component of our database is the IRS Individual Public-Use Micro-Data files that provide information on a sample of individual federal income tax returns for 2009 – the most recent year for which such data are available. This file has records on 217 variables for 152,526 tax filers. The IRS masks the numbers, to ensure that they cannot be used to identify any given taxpayer; it uses “top coding” to set a ceiling on the reported values of many of the variables, which reduces the precision of simulations based on these data. The file oversamples high-income tax filers, but provides weights that allow us to adjust for this over-sampling.

³ The Clinton tax proposals are targeted at changing taxes on income. However, when the effects of the tax changes on GDP and hence spending are taken into account, it is helpful to have information on expenditures as well.

Not every filer represents a complete household, which is the unit of interest to us when looking at income distribution. So we excluded the 5,541 cases of tax returns filed by dependents (typically children). We also dropped the 3,039 cases of married couples filing separately, because we could not associate these returns with those of their partners, which would be needed to create household-level variables. We were thus left with a total of 143,948 tax returns that may be taken to represent households, and we adjusted the sample weights to reflect these changes.

The IRS dataset provides a good deal of information on sources of income and on the direct taxes paid by individuals, which is why it is so useful in measuring the effects of eliminating direct taxes. However, it suffers from three problems. First, the measures of income are incomplete and do not, for instance, include in-kind contributions such as employer contributions to health insurance, or food stamps. Second, it has no information on spending, which would be useful if one wants to measure the incidence of taxes that fall on outlays rather than income. And third, it does not have any information on non-filers.

We address these problems using an approach similar to the one taken by Feenberg, Mitrusi, and Poterba (1997). The key idea is to create a synthetic dataset by augmenting the information in the IRS dataset with information from the Current Population Survey of 2009 (CPS), and the 2009 Consumer Expenditure Survey (CES).

The CPS is designed mainly to collect labor-market information, but once a year it collects substantial amounts of additional information as part of its Annual Social and Economic (ASEC) Supplement. We were able to use information from 86,610 households surveyed as part of the 2009 ASEC round. One advantage of the CPS for our purposes is that it includes information on households that do not file tax returns. The non-filers typically have too little income to be required to file an income tax return, but some may have large amounts of non-taxable income such as tax-free bonds, or may be wealthy and living off their capital.

The CES collects detailed information on household expenditures from separate samples of households that keep diaries (mainly for food spending) or respond to a questionnaire (for most spending headings, including food, as well as income). Many of the spending categories are also top-coded, to preserve confidentiality. We use the information from the interview survey, which collected information from 35,227 households in 2009.

The IRS, CPS, and CES datasets all have information on a comparable basic measure of income, but they sample different people. Thus it is necessary to establish a “matching” procedure that links the observations in the IRS dataset with those from the CPS and CES surveys. We first link each household in the IRS dataset with a similar (but otherwise randomly chosen) household in the CPS dataset, and append the CPS variables; and then do the same thing with the CES dataset. The imputation procedure works as follows:

1. We created a measure of household income that is highly comparable in the IRS, CPS, and CES files, and allocated this income to ten categories.⁴ We cross-tabulated this with information on

⁴ The categories of family income (in USD per year) in 2009 are: 0-, 10,000-, 20,000-, 30,000-, 40,000-, 50,000-, 60,000-, 75,000-, 100,000-, and 150,000-. The income measure used for matching consists of the sum of the components indicated in Table 3.1.

whether a household received interest income (yes/no), and whether it received income from social security or pensions (yes/no). All households in the IRS, CPS, and CES datasets were assigned to one of the forty cells that resulted from this process.

2. For each household in the IRS dataset we randomly chose an observation from the corresponding cell in the CPS dataset, and assigned the data for the CPS variables to the IRS household.
3. We then appended all the observations from the CPS on households that did not file a tax return with the IRS. There were 11,480 such cases, and when added to the IRS household give a dataset with a total of 155,428 observations.
4. Finally, we repeated step 2, this time linking the IRS/CPS dataset to the CES data.

The result of this procedure is a dataset that has detailed information from tax filings as well as imputed information on expenditure, and on some additional components of income. Like the IRS data, the CPS sample is weighted, and in the combined dataset we adjusted the weights to reflect the relative importance of filers and non-filers.

The variables in step 1 were chosen after some modest experimentation: the goal is to choose a small number of variables that may be found in both the IRS and CES datasets and that correlate well with spending. A regression of the log of household spending on the income categories crossed with interest income and pensions gives an adjusted R^2 of 0.58, which represents an acceptable, yet parsimonious, model.

Measuring wellbeing

In order to measure the distributional effects of tax changes, one needs a measure of wellbeing. Many past studies have used adjusted gross income (AGI), in part because it is readily available (in the IRS and CES datasets), but also because it captures many of the main components of income. However, it is incomplete – as the list of its components given in Table 3.1 makes clear – which is why, starting in 2004, the Tax Policy Foundation (TPF) created a broader measure that it called *cash income*, and that consists of AGI plus tax-exempt interest and social security income, IRA contributions, the employer share of payroll taxes, and a number of other adjustments (Rosenberg 2013, Table 1). More recently, the TPF has begun to use a measure that they refer to as *expanded cash income*, which also includes employee and employer contributions to health insurance, food stamps, and some other items.

We have created a similar measure, which we call *broad income*. A full list of the components, and their relative importance, are given in Table 3.1. We then make two further adjustments. First, we prune the top and bottom 1% of sample observations (each representing 0.1% of the weighted sample). This is because the bottom of the income distribution has a significant number of tax filers who report substantially negative incomes, and we do not consider that this is an accurate representation of wellbeing; and at the top, many of the income numbers have been top-coded, and so are not particularly informative about the upper tail of the distribution.

Our second adjustment is to divide household income by the square root of the number of household members, in order to arrive at a measure of *broad income per adult equivalent*. Household size is actually a censored number, so the only available categories are 1, 2, 3, 4, and 5-or-more, but the

number of large families is relatively modest – about 5% of households in our combined file – so any errors that are induced by this are manageable.

Table 3.1 The Components of Broad Income

	Variable label:		Included in:		
	IRS sample	CPS sample	AGI	Broad income	Used for matching
Compensation					
Wages, salaries	E00200	incwage	*	*	*
Estimated employer contribution to pension		***		*	
Employer contribution for health insurance		jemcontrb		*	
Employer’s contribution to payroll taxes		***		*	
Self-employment and Flow-Through Income					
Business income/loss	E00900	incbus	*	*	*
Farm income/loss	E02100	incfarm	*	*	*
Total income from estates & trusts	E02690		*	*	
Net income from rents & royalties	E25850		*	*	
Rental income, partnerships, S-corporations	E02000	incent	*	*	*
Investment income					
Taxable interest	E00300	incint	*	*	*
Tax-exempt interest	E00400			*	*
Dividends	E00600	incdivid	*	*	*
Capital gain or loss	E01000		*	*	
Retirement income					
Non-taxable Pensions & Annuities	E01500	incretir		*	*
Taxable IRA distributions	E01400		*	*	*
Taxable pensions & annuities	E01700		*	_*	*
Other taxable income					
Alimony	E00800	incalim	*	*	*
Other income n.e.s.		incoth		*	
Transfer payments					
Social security benefits	E02400	incss		*	*
Taxable social security benefits	E02500		*	*	
Unemployment compensation	E02300	incunemp	*	*	
Supplemental social security (SSI)		jincssi		*	
Public assistance		incwelfr		*	
Assistance		incasist		*	
Disability benefits		incdisab		*	
Child support		incchild		*	
Worker’s compensation		incwkcom		*	
Veteran’s benefits		incvet		*	
Survivor’s benefits		incsurv		*	
Educational assistance		inceduc		*	
Energy subsidy		heatval		*	
SNAP benefits (ex food stamps)		stampval		*	
Medicaid: person market value		jpmvcaid		*	
Medicare: person market value		jpmvcare		*	

Note: Table follows format of Table 1 in Rosenberg (2013). *** Authors’ estimate.

We could have simply divided broad income by the number of household members, to give *broad income per capita*, but this does not give adequate recognition to the importance of economies of scale in consumption – the observation that two people living together can live more cheaply than two people living separately. There are other approaches to measuring adult equivalences, but our approach has been widely used in studies in the U.S. (Chanfreau & Burchardt 2008), and has been used in some recent studies by the OECD (OECD c.2012). The main conclusions of our study are not substantially changed if one uses income per capita instead of income per adult equivalent.

Table 3.2 divides the sample into ten equal groups (deciles), from lowest to highest income per adult equivalent. For each decile it shows income per adult equivalent, and per capita. Also shown is expenditure per adult equivalent, and per capita, where expenditure is based on the imputation procedure outlined above. As expected, spending rises as income increases, but less quickly, a pattern also noted by Feenberg et al. (1997). Households in the lowest deciles appear to spend more than their incomes, presumably by dipping into their savings, and/or borrowing. The low income levels in the poorest decile reflect the fact that even when the poorest 0.1% of households (weighted) are omitted, a substantial number of the remaining households still report negative income.

Table 3.2 Income and Expenditure by Decile, 2009 \$

Deciles	Broad income:		Expenditure	
	per adult equivalent	per capita	per adult equivalent	per capita
1 (poor)	814*	637**	17,673	15,217
2	12,648	9,596	18,313	14,612
3	18,268	14,669	20,105	16,690
4	23,571	19,215	22,646	19,023
5	29,631	23,643	25,310	20,732
6	36,973	29,411	29,087	23,670
7	46,029	36,294	33,604	27,077
8	57,929	44,841	39,057	30,732
9	76,740	58,343	47,809	36,906
10 (rich)	173,591	127,889	70,290	53,284
Total	47,619	36,453	32,395	25,799

Note: Deciles refer to income per adult equivalent. Source: IRS public use file, Current Population Survey, and Consumer Expenditure Survey, all for 2009. Top and bottom 0.1% are trimmed. If negative incomes are excluded: * 5,643; ** 4,377.

Attributing Tax Incidence

Our interest is in who actually bears the burden of taxes (effective incidence), which is not necessarily the same as the legal burden (statutory incidence). For instance, in a formal sense payroll taxes are paid in part by employers and in part by employees; yet most analyses of the effective incidence of payroll taxes assume that essentially all of the effective burden of these taxes falls on employees.

We make the following assumptions about the incidence of the main Federal taxes:

1. *Personal income tax.* This tax is assumed to fall on the income earner. Our tax calculator model computes the amount of this tax directly.

2. *Estate and gift tax.* Following Feenberg et al. (1997) we assume that this tax falls on persons with large amounts of income from capital. We construct a variable (*capinc*) that is the sum of income from dividends (IRS variable E00600), interest (E00300+E00400), capital gains (E01000), positive income from S-corporations and partnerships (E26390), and positive income from rents and royalties (E25850). We allocated the tax in proportion to the extent to which *capinc* is greater than 5% of \$5.45 million (in 2015 prices). The tax is levied only on large fortunes, and only those who are receiving enough capital income to imply that they have a sufficiently large fortune are likely to be subject to this tax.
3. *Payroll taxes.* Social Security and Medicare taxes are levied on wages at a rate of 15.3 percent (including the employer's contribution) up to \$106,800 (in 2009) and at a rate of 2.9 percent on wages above that level. For single individuals it is straightforward to compute the estimated payments of these taxes, but for married couples filing jointly it is more difficult, since we do not have information about the labor income of each. In allocating this tax, we assumed that all the household wages are attributable to a single wage earner, a simplification that somewhat underestimates the relative burden of this tax on multi-earner households.
4. *Corporate income tax.* There is no consensus on the appropriate way to measure the incidence of the corporate income tax. The traditional view, as developed by Harberger (1962), notes that although a tax on corporate profits appears to burden only the owners of corporations, but in reality it hits all owners of capital. The idea is that if corporate income is taxed, owners of capital will move their resources to the non-corporate sector (partnerships, residential houses, bonds, etc.). But this inflow of capital into the non-corporate sector will drive down the return to capital, at the margin, there.

The traditional view assumes that capital is immobile internationally, which was barely plausible in the early 1960s, and is an untenable assumption now. If capital is perfectly mobile internationally, then the net return to capital will be equalized (on a risk-adjusted basis) throughout the world. If any one country raises its tax on capital, then there will be an outflow of capital, and owners of capital will not be hurt by the tax (if the country is small) or not hurt much (if the country, like the United States, is large). The tax then gets shifted back onto labor, particularly in the case of tradable goods, where firms have a limited capacity to increase their selling prices (Harberger 2006). Randolph (2006), for instance, concludes that 70% of the tax burden is shifted onto labor, while Carroll (2009) concludes that most of state corporate taxes are borne by labor.

Although short-term capital is highly mobile, there is far less mobility, however, over the long term (Obstfeld 1993), which is why the real return to capital has not been equalized across countries – Japan's interest rates have, for example, been consistently lower than those in the United States – and there continues to be considerable discussion of the “home bias” in investors' portfolios.

Thus, we have taken an intermediate position between the extreme assumptions of perfect capital mobility on the one hand and perfect capital immobility on the other. We assume that half of the incidence of the U.S. corporate income tax is borne by capital owners in the U.S., and the remainder is shifted onto labor. The CBO assumes that a quarter of the incidence of this tax falls on labor, while the U.S. Treasury puts the proportion at 18% (Keightly and Sherlock 2014, pp. 16-17). The results of our study are relatively robust to the assumption made here.

5. *Excises and Other Federal Taxes.* We make the straightforward assumption that the burden of federal excise taxes is in proportion to spending by households. This is a rather crude proxy for the true tax base for these taxes, but sufficient for the purposes of this paper, given that the Clinton tax proposals do not envisage changes in indirect taxes such as excises.

The proxies for the tax bases are shown in Table 3.3 for each decile (of income per adult equivalent).

Table 3.3 Proxies for Tax Incidence, 2009

Tax:	Personal income	Payroll	Corporate income		Estate & gift	Excise & other	Family size
Proxy:	Estimated actual PIT	Estimated payroll tax	Labor income	Capital income	High capital income	Expenditures	
<i>dollars per capita per year</i>							
Deciles							
1 (poor)	-546	336	2,382	586	256	13,649	1.86
2	-908	827	5,425	137	5	14,689	2.21
3	-569	1,013	6,644	144	4	16,149	1.98
4	-210	1,247	8,193	219	4	18,009	1.88
5	128	1,716	11,265	346	9	19,398	1.96
6	533	2,292	15,041	644	9	21,412	1.99
7	1,087	2,929	19,236	1,058	8	23,807	2.01
8	2,012	3,727	25,123	1,457	16	26,447	2.01
9	3,867	4,407	34,463	2,246	25	29,772	2.14
10 (rich)	20,005	4,029	68,888	14,535	7,051	40,191	2.19
Average	2,810	2,252	19,665	2,137	739	22,352	2.03

Note: Based on IRS public use file, Current Population Survey, and Consumer Expenditure Survey, all for 2009. Table 3.3 presents amounts in per capita terms; actual proxies are total payments across all individuals in each decile.

The Incidence of Federal Taxes

Based on the proxy measures in Table 3.3, tax payments can be allocated to households. The resulting estimated distribution Federal taxes, by decile, is set out in Table 3.4. These numbers are raw totals, in billions of dollars in 2017. So, for instance, those in the second-poorest decile will collectively pay a net \$5.4 billion in Federal taxes, even though this group will actually receive \$63.3 billion more in personal income tax than they pay (mainly through the earned income tax credit).

Table 3.5 presents the same information as Table 3.4, but gives a percentage breakdown of tax incidence both overall (the “Total Federal” column) and by tax. The final column shows the distribution of income per adult equivalent. The most affluent tenth of the population receives 37.3% of all income and pays 52.7% of all Federal taxes; this alone makes the Federal tax system progressive (in the sense that tax payments relative to income rise as income rises). Taxes on personal income, and on estates/gifts, are especially progressive, while payroll and excise taxes are far less so. The distribution of Federal tax payments, and of income, are shown side by side in Figure 3.1, which shows clearly the overall progressivity of the system.

Table 3.4 Estimated Incidence of Federal Taxes, 2017, \$ billions

Tax	Personal income	Payroll	Corporate income	Estate & gift	Excise & other	Total
Deciles						
1 (poor)	-32.0	18.8	9.3	1.1	12.3	9.5
2	-63.3	48.7	6.1	0.0	14.0	5.4
3	-35.6	56.9	7.1	0.0	14.7	43.1
4	-12.5	65.9	8.5	0.0	16.3	78.2
5	7.9	89.1	11.9	0.0	18.7	127.6
6	33.5	118.9	17.0	0.0	21.7	190.8
7	69.1	152.7	23.2	0.0	25.2	270.3
8	131.6	192.8	31.5	0.0	30.1	386.0
9	261.0	203.1	46.1	0.1	37.5	547.8
10 (rich)	1,384.4	193.5	196.1	19.6	55.6	1,849.3
Total	1,744.0	1,140.1	356.9	20.9	246.1	3,508.1

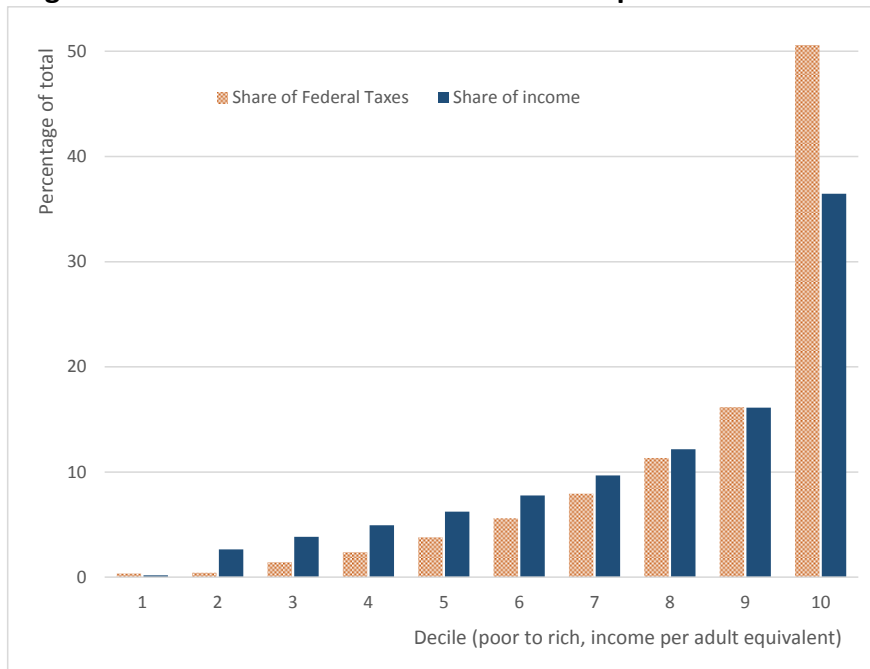
Note: Based on IRS public use file, Current Population Survey, and Consumer Expenditure Survey, all for 2009.

Table 3.5 Estimated Incidence of Federal Taxes, 2017, % breakdown

Tax	Personal income	Payroll	Corporate income	Estate & gift	Excise & other	Total Federal	Total inc. / adult equiv.
Deciles							
1 (poor)	-1.8	1.6	2.6	5.4	5.0	0.3	1.2
2	-3.6	4.3	1.7	0.0	5.7	0.2	2.6
3	-2.0	5.0	2.0	0.1	6.0	1.2	3.7
4	-0.7	5.8	2.4	0.1	6.6	2.2	4.8
5	0.5	7.8	3.3	0.1	7.6	3.6	6.0
6	1.9	10.4	4.8	0.1	8.8	5.4	7.5
7	4.0	13.4	6.5	0.1	10.3	7.7	9.4
8	7.5	16.9	8.8	0.1	12.2	11.0	11.8
9	15.0	17.8	12.9	0.3	15.2	15.6	15.7
10 (rich)	79.4	17.0	54.9	93.7	22.6	52.7	37.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Tax revenue total, \$bn	1,744.0	1,140.1	356.9	20.9	246.1	3,508.1	

Note: Based on IRS public use file, Current Population Survey, and Consumer Expenditure Survey, all for 2009.

Figure 3.1 Distribution of Federal Taxes Compared with Income



4. The Distributional Effects of the Clinton Tax Proposals

The main purpose of this paper is to measure the distributional effects of the Clinton tax proposals. We first look at the effects of individual taxes, and then aggregate the effects to get the net overall impact of the proposed changes.

Personal income tax

Table 4.1 shows the estimated revenue from the individual income tax in 2017. The “baseline” columns accept the CBO projection for total revenue (\$1,744 billion) and allocate this across the deciles using the estimated tax payments from our tax calculator model. We then re-compute each person’s expected tax payment (or credits) using the Clinton brackets, rates, and rules, making adjustments for deductions along the lines she has proposed. The result is an expected total revenue of \$1,784 billion. The final columns in Table 4.1 show what the pattern of personal income tax revenue would be when the dynamic effects of the tax changes – essentially a decrease in GDP of about 0.8% – are taken into account.

With the Clinton plan, almost all of the incremental personal income tax (86% of the net) would be paid by those in the top decile; this group currently pays almost 80% of all Federal personal income taxes.

Table 4.1 Personal Income Tax Revenue, by Decile, 2017, \$ billions

Deciles	Baseline		Clinton plan: static change				Clinton: Dynamic	
	Revenue		Revenue		Change		Revenue	
	\$ bn	%	\$ bn	%	\$ bn	%	\$ bn	%
1 (poor)	-32.0	-1.8	-31.4	-1.8	0.6	1.6	-31.5	-1.8
2	-63.3	-3.6	-63.2	-3.5	0.1	0.3	-63.4	-3.6
3	-35.6	-2.0	-35.5	-2.0	0.1	0.4	-35.7	-2.0
4	-12.5	-0.7	-12.2	-0.7	0.3	0.7	-12.3	0.7
5	7.9	0.5	8.3	0.5	0.4	0.9	8.2	0.5
6	33.5	1.9	34.0	1.9	0.6	1.4	34.0	1.9
7	69.1	4.0	70.0	3.9	0.9	2.4	70.0	3.9
8	131.6	7.5	132.7	7.4	1.1	2.8	132.8	7.5
9	261.0	15.0	262.4	14.7	1.4	3.5	262.6	14.8
10 (rich)	1,384.4	79.4	1,418.4	79.5	34.0	86.1	1,414.8	79.5
Total	1,744.0	100.0	1,783.5	100.0	39.5	100.0	1,779.5	100.0

Note: Deciles refer to broad income per adult equivalent.

Corporate income tax

The distributional effects of the proposed Clinton changes in the corporate income tax are shown in Table 4.2. The data here refer to C-corporations, and not to partnerships or S-corporations, which are taxed at the individual level and so subsumed into the analysis of the personal income tax. The only changes incorporated here are the elimination of fossil fuel tax incentives, and the “dynamic” changes that result from the overall effects of the tax changes on economic activity. The revenue effects would be slight; and just over half of the burden would fall on the top decile of the income (per adult equivalent) distribution. As discussed above, we assume that half of the tax is borne by labor (i.e. in proportion to labor income) and half by capital (i.e. in proportion to capital income).

Table 4.2 Corporation Income Tax Revenue by Decile, 2017, \$ billions

Deciles	Baseline		Clinton plan	
	Revenue, \$ bn	%	Revenue, \$ bn	% of change
1 (poor)	9.3	2.6	9.4	2.6
2	6.1	1.7	6.2	1.7
3	7.1	2.0	7.2	2.0
4	8.5	2.4	8.6	2.4
5	11.9	3.3	12.0	3.3
6	17.0	3.3	17.2	3.3
7	23.2	6.5	23.5	6.5
8	31.5	8.8	31.9	8.8
9	46.1	12.9	46.5	12.9
10 (rich)	196.1	54.9	198.1	54.9
Total	356.9	100.0	360.5	100.0

Note: Deciles refer to income per adult equivalent.

Estate and gift tax

The Clinton proposals would reduce the threshold at which one has to pay the estate tax from the current \$5.45 million to \$3.5 million; and would raise the top marginal rate from 40% to 45%. The distributional effects are shown in Table 4.3, and show that revenue would rise by about a quarter. Because it is levied on large fortunes, this tax falls almost entirely on those in the top decile of the income distribution.

Table 4.2 Estate and Gift Tax Revenue by Decile, 2017, \$ bn

Deciles	Baseline		Clinton plan	
	Revenue, \$ bn	%	Revenue, \$ bn	% of change
1 (poor)	1.1	5.4	1.3	5.4
2	0.0	0.0	0.0	0.0
3	0.0	0.1	0.0	0.1
4	0.0	0.1	0.0	0.1
5	0.0	0.1	0.0	0.1
6	0.0	0.1	0.0	0.1
7	0.0	0.1	0.0	0.1
8	0.0	0.1	0.0	0.1
9	0.1	0.3	0.1	0.3
10 (rich)	19.6	93.7	22.9	93.7
Total	20.9	100.0	24.5	100.0

Note: Deciles refer to income per adult equivalent.

Overall Distributional Effect of the Clinton Tax Proposals

We are now ready to compute the overall distributional effect of the Clinton tax proposals. There are two good ways to present the results: first we show the reduction in taxes for each decile, both in absolute per capita terms, and relative to income. Then we show how the tax changes would affect net after-tax income.

The total size of the tax changes that result from the Clinton tax proposals are broken down by decile in Table 4.3. Federal tax revenue would rise by \$45 billion in 2017, and of this incremental burden, 86% would be borne by those in the top decile. Table 4.4 tells the story slightly differently. The first column of numbers shows the amount of tax paid per person (in 2017) by decile: the amounts rise from \$143 in the lowest decile to \$37,567 in the highest decile. The effect of the Clinton proposals would be to raise taxes in most deciles, but especially for those in the highest decile, whose taxes would rise by an average of \$715 each, equivalent 1.9% of their current Federal tax payments. The slight reductions in tax payments for those in deciles 2 and 3 occur not because tax rates would fall, but because the dynamic effects of the tax changes would reduce taxable income, which effect dominates for households in these deciles.

Averaged over the ten deciles, the tax burden would rise by 0.8%. The final column in Table 4.4 expresses the reduction in taxes as a proportion of income: the average tax increase comes to 0.17% of income, but is 0.42% in the top decile.

Table 4.3 Total Federal Tax Revenue by Decile, 2017, \$ billions

Deciles	Baseline Revenue		Clinton proposals: static change				Clinton: Dynamic Revenue	
	\$ bn	%	\$ bn	%	\$ bn	%	\$ bn	%
1 (poor)	9.5	0.3	10.5	0.3	1.0	2.1	10.3	0.3
2	5.4	0.2	5.6	0.2	0.2	0.4	5.2	0.1
3	43.1	1.2	43.4	1.2	0.2	0.4	43.0	1.2
4	78.2	2.2	78.5	2.2	0.4	0.7	78.3	2.2
5	127.6	3.6	128.2	3.6	0.5	1.0	127.9	3.6
6	190.8	5.4	191.5	5.4	0.7	1.5	191.2	5.4
7	270.3	7.7	271.5	7.6	1.2	2.4	271.1	7.6
8	386.0	11.0	387.4	10.9	1.4	2.9	387.1	10.9
9	547.8	15.6	549.7	15.5	1.8	3.8	549.3	15.5
10 (rich)	1,849.3	52.7	1,890.6	53.2	41.3	84.8	1,884.5	53.1
Total	3,508.1	100.0	3,555.8	100.0	48.7	100.0	3,547.9	100.0

Note: Deciles refer to broad income per adult equivalent.

Table 4.4 Changes in Taxes Paid: Clinton Proposals (Dynamic) vs. Current Rules

Deciles	Tax paid:	Tax paid: Clinton	Change in	% change in	% of tax	Tax change as
	current rules	proposal	tax paid	tax paid	increases	% of income
	<i>dollars per capita in 2017</i>			<i>percentages</i>		
1 (poor)	143	153	11.2	7.9	1.4	0.19
2	78	75	-2.7	-3.4	-0.3	-0.02
3	559	558	-0.9	-0.2	-0.1	-0.00
4	336	336	0.5	0.1	0.1	0.00
5	6,276	6,287	11.0	0.2	1.3	0.03
6	5,794	5,807	13.2	0.2	1.6	0.03
7	7,197	7,220	22.6	0.3	2.7	0.05
8	9,626	9,652	26.1	0.3	3.1	0.04
9	12,763	12,798	35.1	0.3	4.2	0.04
10 (rich)	37,567	38,282	714.7	1.9	86.0	0.42
Total/Avg	7,810	7,899	88.7	0.8	100.0	0.17

Note: Deciles refer to broad income per adult equivalent. Totals reflect sampling weights, and may not sum to column totals.

Finally, in Table 4.5, we ask what effect the Clinton tax proposals would have on net (i.e. after-tax) income. Net income would fall by 0.7% (or by 0.71% if the growth-restraining effects of the tax cuts are counted too). The pattern confirms what has been seen earlier: the largest absolute effects occur in the top decile of the income distribution.

Table 4.5 Gross and Net Income per Adult Equivalent, 2017, Estimated

	Baseline		Clinton: Static analysis		Clinton: Dynamic analysis	
	Gross income \$/ae/year	Net income \$/ae/year	Net income \$/ae/year	% change to baseline	Net income \$/ae/year	% change to baseline
Deciles						
1 (poor)	7,548	6,946	6,880	-0.95	6,897	-0.70
2	16,924	16,589	16,578	-0.07	16,600	0.06
3	24,446	21,628	21,614	-0.06	21,627	-0.01
4	31,542	26,317	26,294	-0.09	26,298	-0.07
5	39,655	31,303	31,272	-0.10	31,271	-0.10
6	49,482	37,066	37,019	-0.13	37,011	-0.15
7	61,606	44,146	44,070	-0.17	44,054	-0.21
8	77,537	53,003	52,914	-0.17	52,888	-0.22
9	102,728	68,520	68,405	-0.17	68,354	-0.24
10 (rich)	244,440	132,084	129,574	-1.90	129,568	-1.91
Total	66,829	44,389	44,078	-0.70	44,076	-0.71

5. Conclusions

This study reaches two main conclusions. First, the tax increases proposed by Hillary Clinton would increase Federal tax revenues by an estimated \$615 billion over the period 2017-2026, an increase of 1.5 percent. Second, the great bulk of the incremental revenue – 86 percent – would come from those in the top tenth of the income distribution. The proposed changes would thus be sharply progressive, but given their modest nature, would have a limited impact on the overall distribution of (net) income.

The Tax Foundation estimates that, over the decade 2017-2026, the Clinton proposals will raise just \$191 billion additional revenue (Pomerleau and Schuyler 2016), while the Tax Policy Center puts the incremental revenues at \$1,077 billion (Auxier et al. 2016). Our estimates fall between these extremes. Our static estimates, which do not take into account the effects of the tax changes on economic growth, are relatively close to the TPC estimates, especially for the personal income tax; we are less sanguine than the TPC about the potential change in estate tax revenue, and we (unlike the TPC) do not include the effects of reforms to the corporate income tax that may bring more profit of U.S. multinational corporations “back” to the U.S. The TPC study discusses the potential effects on growth of the Clinton proposals – i.e. the dynamic effects – but does not try to quantify these.

Our estimates of the effects of the estate tax are closer to those of the Tax Foundation, but our tax calculator model estimates of personal income tax revenue are substantially higher than theirs. Our dynamic revenue estimates for the personal income tax are about 20% lower than the static estimates, which is in line with what academic researchers have found in other contexts; on the other hand, the Tax Foundation reports surprisingly large estimates of the reduction in tax revenue due to the dynamic effects.

All three studies estimate that after-tax income would fall by about one percent; the differences are due in part to differences in the way that income is measured, with the Tax Policy Center using a broad measure that is similar to the one we use, while the Tax Foundation measures income more narrowly. A consistent finding is that the bulk of the tax burden falls on the top decile; here the differences reflect

both the variations in revenue estimates, as well as somewhat different approaches to dividing the population into deciles.

Table 5.1 Revenue and Distributional Estimates Compared

	Our estimates		Tax Foundation		Tax Policy Center
	Static	Dynamic	Static	Dynamic	Static
<i>billions of dollars</i>					
Change in Revenue, 2017-2026					
Personal income tax	693	548	381	173	781
Corporate income tax	42	43	11	12	136
Estate tax	81	75	106	102	161
Payroll tax	0	-47	0	-80	0
Other taxes	0	-4	0	-15	0
Total tax revenue	816	615	498	191	1,077
% change in net income	-0.70	-0.71	-0.3	-1.3	-0.9
% change, top 10%	-1.90	-1.91	-0.7	-1.7	-2.5*

Note: * Our estimate, based on TPC results. *Sources:* For Tax Foundation, Pomerleau and Schuyler (2016); for Tax Policy Center, Auxier et al. (2016).

Although our conclusions are rooted in high-quality data, from the IRS public use sample, the Current Population Survey, and the Consumer Expenditure Survey, they also rest on a number of assumptions that, while we believe they are reasonable, could be questioned. We assume that the incidence of the income tax falls on those who receive labor and capital income; that half of the weight of the corporate income tax falls on earners, and half on those who own capital; and that the estate tax is borne by those who have large fortunes. The appropriate assumptions to make about the incidence of the corporate income are controversial, and this issue is not yet settled.

We also had to make other practical decisions: we constructed a measure of welfare that consists of a relatively broad form of income divided by the square root of the (truncated) family size. A strong case can be made that expenditure is a more reliable guide to long-term wellbeing than is income, but the difficulty here is that our measure of spending is synthetic, glued onto the income data in a way that is defensible, but not robust as support for inferences about wellbeing. Our method for adjusting for adult equivalence, while commonly used, is only one of at least 50 possible methods that have been used; fortunately, the results are not sensitive to the particular adjustment used here. And the measure of income itself is not complete: it does not adequately include the implicit income from owning one's home (which turns out to be difficult to quantify satisfactorily), and the treatment of retirement income is imperfect (and also inherently difficult to build in well).

We have focused on the direct effects of the proposed tax changes, and have assumed that the spending trajectory projected by the Congressional Budget Office would continue to apply. This may not be realistic, as Clinton has indicated that she would like to spend more on items such as infrastructure, but we do not speculate here on the possible magnitude of such effects.

Despite these caveats, the key conclusions are clear: The proposed changes in Federal Tax rules would boost tax revenue by a modest 1.5% over the coming decade, and even though six-sevenths of the

incremental tax burden would fall on those in the top decile, the after-tax distribution of income would change only slightly.

References

- Angelini, James P., and David G. Tuerck. 2015. The U.S. Corporate Income Tax: A Primer for U.S. Policy Makers. National Center for Policy Analysis, Dallas TX. <http://www.ncpa.org/pub/the-us-corporation-income-tax-a-primer-for-us-policy-makers> [Accessed January 10, 2016.]
- Auxier, Richard, Len Burman, Jim Nunns, and Jeff Rohaly. 2016. An Analysis of Hillary Clinton's Tax Proposals. Tax Policy Center, Urban Institute & Brookings Institution, Washington DC.
- Bachman, Paul, Keshab Bhattarai, Frank Conte, Jonathan Haughton, and David G. Tuerck. 2016. The Economic Effects of Hillary Clinton's Tax Proposal. Draft, Beacon Hill Institute, Suffolk University.
- Bachman, Paul, Keshab Bhattarai, Frank Conte, Jonathan Haughton, Michael Head, and David G. Tuerck. 2016. Trump v. Cruz: The Comparative Economic Effects of Two Tax Proposals. National Center for Policy Analysis, Dallas TX. http://www.ncpa.org/pdfs/sp_NCPA-BHI-Trump-Cruz-Tax-Plans.pdf [Accessed March 19, 2016]
- Campbell, C. 2016. TRUMP: Let's slap a 45% tariff on Chinese imports. *Business Insider*.
- Carroll, Robert. 2009. The Corporate Income Tax and Workers' Wages: New Evidence from the 50 States. Special Report no. 169, Tax Foundation, Washington DC.
- Chanfreau, Jenny, and Tania Burchardt. 2008. Equivalence scales: rationales, uses, and assumptions. <http://www.gov.scot/resource/doc/933/0079961.pdf> [Accessed July 4, 2016.]
- Cole, Alan. 2015. Details and Analysis of Donald Trump's Tax Plan. *Fiscal Fact No. 482*, Tax Foundation, Washington DC. <http://taxfoundation.org/article/details-and-analysis-donald-trump-s-tax-plan> [Accessed June 25, 2016]
- CBO. 2016 (March). *Updated Budget Projections: 2016 to 2026*. <https://www.cbo.gov/publication/51384> [Accessed June 25, 2016]
- Feenberg, Daniel, Andrew Mitrusi, and James Poterba. 1997. Distributional Effects of Adopting a National Retail Sales Tax. NBER Working Paper No. 5885. National Bureau of Economic Research, Cambridge MA.
- Groden, C. 2015. Donald Trump Ups Attacks on Ford at Michigan Rally. *Fortune*, December 22.
- Harberger, Arnold. 1962. "The Incidence of the Corporation Income Tax." *Journal of Political Economy* 70: 215-240.
- Harberger, Arnold. 2006. "Corporate Tax Incidence: Reflections on What is Known and Unknowable." Paper prepared for a conference, "Is It Time for Fundamental Tax Reform? The Known, the Unknown, and the Unknowable." James A. Baker III Institute for Public Policy, Rice University.

- Huang, Chye-Ching, and Brandon Debot. 2015. Ten Facts You Should Know About the Federal Estate Tax, *Center on Budget and Policy Priorities*, Washington <http://www.cbpp.org/research/ten-facts-you-should-know-about-the-federale-estate-tax?fa=view&id=2655> [Accessed June 30, 2016]
- IRS-SOI (Internal Revenue Service – Statistics on Income). 2016. *SOI Tax Stats – Corporation Complete Report*. <https://www.irs.gov/uac/soi-tax-stats-corporation-complete-report> [Accessed July 5, 2016]
- Keightly, Mark P., and Molly F. Sherlock. 2014. *The Corporate Income Tax System: Overview and Options for Reform*, Congressional Research Service, Library of Congress, Washington DC.
- Obstfeld, Maurice. 1993. “International Capital Mobility in the 1990s.” NBER Working Paper no. 4534. Cambridge, MA: National Bureau of Economic Research.
- OECD. c. 2012. What Are Equivalence Scales? <http://www.oecd.org/els/soc/OECD-Note-EquivalenceScales.pdf> [Accessed July 3, 2016]
- Pianin, Eric, and Rob Garver. 2016. Grading Hillary Clinton’s Tax Plan. *The Fiscal Times*, May 17. <http://www.thefiscaltimes.com/2016/05/17/Grading-Hillary-Clinton-s-Tax-Plan> [Accessed August 9, 2016.]
- Pomerleau, Kyle, and Michael Schuyler. 2016. Details and Analysis of Hillary Clinton’s Tax Proposals. *Fiscal Fact No. 496*, Tax Foundation, Washington DC. <http://taxfoundation.org/sites/taxfoundation.org/files/docs/TaxFoundation-FF496.pdf> [Accessed August 9, 2016.]
- Randolph, William C. 2006. International Burdens of the Corporate Income Tax. Working Paper Series, Congressional Budget Office, Washington DC. <http://taxfoundation.org/sites/default/files/docs/TaxFoundation-FF496.pdf> [Accessed August 9, 2016.]
- Rosenberg, Joseph. 2013. *Measuring Income for Distributional Analysis*. Tax Policy Center, Urban Institute and Brookings Institution, Washington DC.
- Trump, Donald J. 2016. Tax Reform That Will Make America Great Again. <https://www.donaldjtrump.com/positions/tax-reform> [Accessed July 5, 2016]
- Tuerck, David G., Paul Bachman, and Frank Conte. 2016. The Trump Tariffs: A Bad Deal for Americans. NFAP Policy Brief, National Foundation for American Policy, Arlington VA. <http://nfap.com/wp-content/uploads/2016/05/Impact-of-the-Trump-Tariffs.NFAP-Policy-Brief.May-20161.pdf> [Accessed July 5, 2016]
- U.S. Department of the Treasury – Office of Tax Analysis. 2016. Taxes Paid on Capital Gains for Returns with Positive Net Capital Gains, 1954-2013.