Estimating the Effects of Tax Reform on Compliance Burdens

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Introduction

The primary purpose of the tax code is to collect tax revenue; however, the complexity of the tax code imposes costs on taxpayers beyond what they are paying in taxes. These costs include time spent on record keeping, planning and gathering materials, and out-of-pocket outlays for tax software, paid-preparer services and other associated fees.[2] These real economic costs to tax filers due to tax code complexity should be counted when analyzing the effects of tax reform proposals.

The Tax Policy Center (TPC), in conjunction with the Internal Revenue Service Office of Research, Applied Analytics and Statistics (RAAS), has recently developed distributional estimates of individual compliance costs for tax filers. This paper describes the process used by TPC to incorporate the model used by RAAS into TPC's Individual Income Tax Microsimulation Model, and presents estimates produced by TPC's model.[3]

We begin with a brief discussion of microsimulation modeling, followed by a description of the burden model used by RAAS. The paper then explains how the IRS altered their model to make it workable with a public data-based microsimulation model. Finally, we present compliance cost estimates produced by TPC under current law and three tax reform options. All the estimates are based on modifications to the tax law that existed prior to enactment of the Tax Cut and Jobs Act of 2017 (TCJA).

Tax Simulation Outside the Government

The IRS Statistics of Income (SOI) division each year creates a stratified random sample of individual income tax returns to aid Executive Branch and Congressional agencies in the development and analysis of tax policies. A full description of the SOI sample can be found in Testa and Haines (2012). By statute, the only organizations allowed access to such confidential data outside of the IRS are the Office of Tax Analysis (OTA) at the Treasury Department and the Joint Committee on Taxation (JCT).[4] Some researchers who are bound by confidentiality agreements also have limited access to these data in secure facilities for specified research purposes intended to assist in the administration of the tax law.

The IRS also produces a public use version of the SOI sample, known as the Public Use File (PUF), by drawing a subsample from the full sample. To ensure taxpayer confidentiality, the PUF incorporates several nondisclosure procedures that remove direct and indirect disclosure of individual taxpayers. These procedures include omitting taxpayer identifying information, removing sensitive returns, further subsampling high income returns, and limiting the tax return fields released, among others. A more comprehensive description of these procedures can be found in Bryant (2016) and Bryant, *et al.* (2016). The PUF is designed to replicate as closely as possible the statistical results from the larger sample, with the qualification that some aggregate data cannot be generated due to the missing fields.

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[2] See Marcuss, *et al.* (2013).

[3] All model estimates are based on law before the enactment of the Tax Cuts and Jobs Act of 2017.

[4] The JCT has also allowed the Congressional Budget Office (CBO) to use the database to aid in developing revenue forecasts and at times the Government Accountability Office (GAO) has received access to enable its audits of tax policy and administration.

Individuals or organizations can purchase the PUF, but must then invest substantial programming resources to develop tax calculators and other programs to generate statistical information on the taxpaying population. Over the years, most users of the PUF have been universities, other research institutions, accounting firms, or government agencies. The CBO began using the PUF in the 1980s and still uses it for tax research studies not directly related to developing economic and revenue projections. Another major user over the years has been the National Bureau of Economic Research, which has produced many studies using its TAXSIM model.

The PUF is a rich data source, but it does not contain key information of interest to researchers that is not reported on tax returns. Therefore, researchers have supplemented tax return data in the PUF with household demographic data from other micro data files, including the Current Population Survey (CPS) produced by the U.S. Census Bureau and the Survey of Consumer Finances (SCF) produced by the Federal Reserve Board.

The Tax Policy Center (TPC), founded in 2002, developed its individual tax model based on the PUF. The current version of the model starts with the 2006 PUF, which is a sample of slightly under 150,000 tax returns. The 2006 data are adjusted by the growth of income and deduction items to match reported 2011 data by filing status and income group published by SOI. This adjustment creates what TPC calls the 2011 Look Alike Public Use File (LAPUF), which combines individual taxpayer variation from the 2006 PUF with aggregate SOI published data from 2011.

TPC uses cross-tabulations by age, filing status, and income provided by SOI to impute the ages of taxpayers and dependents to the LAPUF. TPC then performs a constrained statistical match between the LAPUF and the 2012 CPS. The CPS match adds additional demographic information to the file and allows TPC to augment the sample of tax return filers with nonfilers from the CPS to create a more complete sample of the U.S. population, grouped into "tax units." TPC then augments the matched data set with imputations of consumption, health insurance status and benefits, pension coverage and assets, and other demographic variables from a variety of data sources. The data file is then aged to years 2012 through 2027, based on CBO and JCT baseline revenue projections, JCT estimates of the distribution of tax units by income, IRS estimates of the future growth in the number of tax returns, and Census projections of the size and age-composition of the population.

A more complete description of the database that TPC has developed and the methods it uses to estimate federal receipts and the distribution of the tax burden from different federal tax sources can be found at: http://www.taxpolicycenter.org/resources/brief-description-tax-model.

Background on Burden Model

Guyton, *et al.* (2003) and Marcuss, *et al.* (2013) provide an overview of the principles and methods underlying the IRS Compliance Burden Models. The rationale for developing compliance burden microsimulation modeling capabilities to support tax administration and policy analysis dates back to a task force established in 1998 by IRS Commissioner Rossotti with support from the Treasury Office of Tax Analysis, the Office of Management and Budget, and the Government Accountability Office, as well as academic advisors.

The Individual Taxpayer Burden Model (ITBM) was first put into official use to support Paperwork Reduction Act (PRA) reporting starting with Tax Year 2005. The modeling approach was refined into an early version of its current specification as part of the effort to extend the framework to cover corporate and partnership taxpayers in 2009, influenced by earlier work on the compliance costs of large corporations by Slemrod and Blumenthal (1996) and by Slemrod and Venkatesh (2002). Official PRA reporting using the Business Taxpayer Burden Model (BTBM) started with Tax Year 2014, based on the specification described in Marcuss, *et al.* (2013). The current specification of the ITBM also dates from Marcuss, *et al.* (2013), but has been updated since then using more recent taxpayer burden survey data. Additional information on the development and use of the taxpayer burden model can be found in Contos, *et al.* (2009a), Contos, *et al.* (2009b), Contos, *et al.* (2010), Contos, *et al.* (2012), and the 2013 Economic Report of the President.[5]

[5] Council of Economic Advisers (2013).

Adapting the Individual Taxpayer Burden Model for the Public Use File

Adapting the Individual Taxpayer Burden (ITB) model for the PUF requires adjustments to the ITB model inputs and updated regression coefficients. The adjustments are needed to ensure the model inputs are consistent with the level of data granularity available on the PUF. Once the adjustments are made, consistent model coefficients can be estimated and then applied to the PUF to estimate taxpayer burden. Appendix 1 provides details about how the complexity category model inputs were redefined to be consistent with the level of granularity available on the PUF. Technical documentation about the burden estimation process using the PUF is provided in an electronic technical Appendix.[6] More detail about the ITB model specification and estimation procedures can be found in Contos, *et al.* (2009a), Contos, *et al.* (2009b), Contos, *et al.* (2010), and Marcuss, *et al.* (2013).

Tables 1–5 in the following section present summary statistics and simulation results that compare the similarities and differences before and after PUF adjustments. The tables include a comparison of the data used in the regression specification, regression coefficients, and distributions of simulated burdens. The results presented here use the data from the Tax Year 2007 individual taxpayer burden survey study. Results for other survey years can be found in Appendix Tables 2–5.

The ITB Model Before and After the PUF Adjustments

Differences in the Data

The PUF adjustments affect only the continuous fields used in the ITB model specification. Table 1 provides descriptive statistics for the continuous fields before and after the PUF adjustments.

TABLE 1. Model Input Distributional Statistics, Percentile Breakdown of Model Inputs, 2007

Field Description	Mean	P5	P10	P25	P50	P75	P90	P95
Before PUF Adjustments								
Log Modified Positive Income	10.42	8.39	8.93	9.72	10.50	11.21	11.77	12.16
Log of Low Complexity Activity	45.15	8.82	15.76	27.04	40.69	62.16	79.57	88.26
Log of Medium Complexity Activity	25.78	0.00	0.00	0.00	10.37	38.21	72.46	97.20
Log of High Complexity Activity	1.45	0.00	0.00	0.00	0.00	0.00	7.22	10.54
Log of Line Count	4.70	2.56	2.89	4.36	4.88	5.29	5.64	5.81
After PUF Adjustments								
Log Modified Positive Income	10.37	8.37	8.91	9.70	10.48	11.18	11.71	12.08
Log of Low Complexity Activity	39.70	8.13	14.93	26.07	36.62	52.75	66.82	74.96
Log of Medium Complexity Activity	18.24	0.00	0.00	0.00	9.60	28.64	49.25	63.18
Log of High Complexity Activity	0.69	0.00	0.00	0.00	0.00	0.00	0.00	7.49
Log of Line Count	4.68	2.56	2.89	4.36	4.84	5.26	5.58	5.74
Percent Change from PUF Adjustments								
Log Modified Positive Income	-0.49%	-0.32%	-0.25%	-0.21%	-0.14%	-0.23%	-0.54%	-0.65%
Log of Low Complexity Activity	-12.08%	-7.85%	-5.29%	-3.57%	-10.00%	-15.14%	-16.03%	-15.07%
Log of Medium Complexity Activity	-29.26%	0.00%	0.00%	0.00%	-7.50%	-25.03%	-32.03%	-35.00%
Log of High Complexity Activity	-52.70%	0.00%	0.00%	0.00%	0.00%	0.00%	-100.00%	-28.95%
Log of Line Count	-0.47%	0.00%	0.00%	0.00%	-0.64%	-0.68%	-1.04%	-1.17%

[6] The technical appendix can be found at https://www.irs.gov/statistics/irs-taxpayer-compliance-research.

The PUF data limitations do not appear to have a material impact on the modified positive income measure. This outcome seems reasonable because modified positive income is highly correlated with total income and typically deviates from total income only when taxpayers have gains and losses on multiple Schedule Cs or Fs.

The PUF data limitations do appear to have a material impact on the complexity category measures. This observation is also in line with expectations. The complexity measures are constructed as the sum of the logs of line item amounts and the PUF is missing several line items on supporting forms and schedules, so the observed decrease is expected and unavoidable. Some of these missing line items can be partially counted using residual portions of summation lines, such as total income or total adjustments, but several other line items are simply missing.

Differences in the Regression Parameters

Table 2 provides regression parameter estimates using the Tax Year 2007 ITB survey data before and after PUF adjustments. The dependent variable is the log of burden where burden is defined as out of pocket expenses plus monetized time.

TABLE 2. Regression Coefficients*

Model Details	Adjusted Regression Parameters	
	Before PUF Adjustment	After PUF Adjustment
Intercept	0.4788	0.4944
Log Modified Positive Income | Used a Paid Preparer	0.1806	0.1646
Log Modified Positive Income | Used a Tax Software	0.2350	0.2336
Log Modified Positive Income | Prepared by Hand	0.2516	0.2482
Log of Low Complexity Activity	0.0085	0.0089
Log of Medium Complexity Activity	0.0081	0.0148
Log of High Complexity Activity	0.0228	0.0233
Log of Line Count | Used a Paid Preparer	0.0396	0.0812
Log of Line Count | Used Tax Software	0.1678	0.1706
Log of Line Count | Prepared by Hand	0.2846	0.2845
Used a Paid Preparer	2.5758	2.5344
Used Tax Software	0.9530	0.9399
Adjusted R-Squared	0.5644	0.5666

* Coefficients based on the ITB Survey, 2007.

All the regression coefficients have the same sign before and after the PUF adjustment and most of them change little in magnitude. The coefficients for the complexity categories are all larger after the PUF adjustment. This increase seems reasonable given the drop in the complexity category measures observed in Table 1.

The most significant difference between the two models is the change in the "Log of Line Count | Used a Paid Preparer" coefficient. Part of the change is likely offset by the decrease in the "Log Modified Positive Income | Used a Paid Preparer" coefficient. Conceptually, this coefficient is still consistent. For example,

taxpayers choosing to use a paid preparer have the highest fixed costs and the lowest variable costs while taxpayers choosing to prepare without the help of a paid preparer or software have the lowest fixed costs and the highest variable costs. Overall, the coefficients are slightly different so the resulting distribution of predicted burden is expected to be slightly different as well. The next section will evaluate the distributional differences between the estimates from the two models.

Differences in Burden Simulation Results

Table 3 provides a set of distributional results using the 2007 ITB survey sample data. The table provides the distribution of burden as reported on the survey instrument, the distribution of burden estimated using the model before PUF adjustments, and the distribution of burden estimated using the model after PUF adjustments.

TABLE 3. Distributional Statistics for Reported and Estimated Total Tax Burden, 2007

Percentile of the Distribution of Burden	Burden per Tax Unit as Reported ($)	Estimated Burden Before PUF Adjustment ($)	Reported vs Before Adjustment Percent Change	Estimated Burden After PUF Adjustment ($)	Reported vs After Adjustment Percent Change
99%	$3,089	$3,252	5.28%	$3,086	-0.10%
95%	$1,332	$1,293	-2.93%	$1,299	-2.48%
90%	$845	$828	-2.01%	$832	-1.54%
75%	$394	$404	2.54%	$405	2.79%
50%	$181	$183	1.10%	$181	0.00%
25%	$77	$79	2.60%	$79	2.60%
10%	$32	$36	12.50%	$35	9.38%
5%	$20	$22	10.00%	$22	10.00%
1%	$9	$9	0.00%	$8	-11.11%
Mean	$371	$387	4.31%	$380	2.43%

Distributions for estimated burden before PUF adjustments and after PUF adjustments differ only slightly from the underlying survey data. They also appear to track each other closely, differing from the survey instrument distribution in roughly the same places. The percentage change columns show that the after PUF adjustment model is as good or better than the before PUF adjustment model at recreating the distribution of burden from the survey instrument. This suggests that the adjusted ITB model inputs and the regression coefficients using the PUF provide estimates that are roughly consistent or better than the estimates using the unadjusted ITB model.

Table 4 provides the same distributional information as in Table 3, but broken out by preparation method.

TABLE 4. Distributional Statistics for Reported and Estimated Total Taxpayer Burden by Preparation Method, 2007

Percentile of the Distribution of Burden	Burden per Tax Unit as Reported ($)	Estimated Burden Before PUF Adjustment ($)	Reported vs Before Adjustment Percent Change	Estimated Burden After PUF Adjustment ($)	Reported vs After Adjustment Percent Change
Used a Paid Preparer					
99%	$3,816	$4,209	10.30%	$3,957	3.69%
95%	$1,653	$1,664	0.67%	$1,658	0.30%
90%	$1,042	$1,067	2.40%	$1,076	3.26%
75%	$507	$534	5.33%	$537	5.92%
50%	$262	$260	-0.76%	$258	-1.53%
25%	$129	$129	0.00%	$127	-1.55%
10%	$69	$69	0.00%	$68	-1.45%
5%	$42	$48	14.29%	$47	11.90%
1%	$21	$25	19.05%	$23	9.52%
Mean	$488	$517	5.94%	$508	4.10%
Prepared by Hand					
99%	$1,424	$937	-34.20%	$929	-34.76%
95%	$471	$409	-13.16%	$406	-13.80%
90%	$284	$265	-6.69%	$260	-8.45%
75%	$123	$129	4.88%	$126	2.44%
50%	$54	$58	7.41%	$57	5.56%
25%	$23	$27	17.39%	$26	13.04%
10%	$12	$13	8.33%	$12	0.00%
5%	$9	$8	-11.11%	$8	-11.11%
1%	$4	$4	0.00%	$4	0.00%
Mean	$127	$117	-7.87%	$115	-9.45%
Used Tax Software					
99%	$1,873	$1,816	-3.04%	$1,765	-5.77%
95%	$961	$847	-11.86%	$849	-11.65%
90%	$598	$567	-5.18%	$572	-4.35%
75%	$279	$292	4.66%	$289	3.58%
50%	$131	$135	3.05%	$133	1.53%
25%	$56	$62	10.71%	$61	8.93%
10%	$29	$31	6.90%	$30	3.45%
5%	$19	$20	5.26%	$19	0.00%
1%	$9	$9	0.00%	$8	-11.11%
Mean	$254	$253	-0.39%	$250	-1.57%

These simulation results show that the full sample and PUF distributional estimates track each other closely and differ from the survey instrument distribution in roughly the same places for each preparation method. This is further evidence that the adjusted ITB model inputs and regression coefficients using the PUF provide estimates that appear to be consistent with the unadjusted ITB model.

TPC and IRS Models' Composition of Burden

Table 5 shows differences in the distribution of compliance costs by income and tax categories between the IRS full model, and the TPC PUF-based model. The TPC model was calibrated to match aggregate totals of the IRS full model, but does not necessarily match totals for each source of income and income offset. The differences for separate sources of income and adjustments can at least partially be explained by the different data sets used for the analysis.

TABLE 5. Composition of Burden Cost: Percent of Total Burden Cost, 2017[a]

Income / Tax Sources	TPC (%)	IRS (%)
Other Taxes and Items Not Related to Income Tax	6.33	4.00
Alternative Minimum Tax (AMT)	4.76	2.00
Credits	12.65	14.00
Deductions	29.38	25.00
Self-Employment Income	14.37	19.00
All Other Nonwage Income	11.25	18.00
Wages	21.26	18.00
Total	**100.00**	**100.00**

NOTES: (a) Calendar year estimates. Estimates are derived by removing income and tax sources from compliance cost in the order presented in figure.
SOURCE: Urban-Brookings Tax Policy Center Microsimulation Model (version 0217-1); Economic Report of the President, March 2013, Figure 3–10; https://obamawhitehouse.archives.gov/sites/default/files/docs/erp2013/full_2013_economic_report_of_the_president.pdf.

Table 5 shows the composition of burden in the IRS full model and the TPC model. The order of the table represents the stacking order, or the order items were removed from the burden model to estimate the percent composition of burden. Because certain items available to the IRS are missing from the PUF, we see variation between the composition of burden in the IRS and TPC models. This can be seen in the All Other Non-Wage Income category. In this category, both the IRS and TPC removed Schedule C income (along with other items), but as the PUF has fewer Schedule C items, the effect of removing All Other Non-Wages for TPC (11%) is smaller than for IRS (18%). Though most of the differences are relatively small, it should be noted that they could affect the allocation of burden, thus causing distortions for estimates that repeal or modify sections of the tax code.

Distributional Analysis of Compliance Burden

TPC has estimated the total compliance burden of individual taxes and its distribution by expanded cash income (ECI) group in the current tax system, along with the changes in compliance cost by income group for three revenue neutral tax changes.

TABLE 6. Distribution of Baseline Compliance Cost by Expanded Cash Income Percentile, 2017[a]

Expanded Cash Income Percentile[b,c]	Tax Units		Percent Change in After Tax Income[d]	Share of Total Federal Tax Change	Average Federal Tax Change ($)	Average Federal Tax Rate[e]	
	Number (Thousands)	Percent of Total				Change (Percentage Points)	Under the Proposal
Quintiles							
Lowest	48,560	27.8	-0.9	5.4	116	0.8	5.0
Second	38,510	22.0	-0.8	9.2	249	0.7	9.5
Middle	34,010	19.4	-0.8	14.2	436	0.7	14.6
Fourth	28,660	16.4	-0.8	19.8	720	0.6	18.2
Top	24,130	13.8	-0.9	51.4	2,218	0.7	26.4
All	174,990	100.0	-0.8	100.0	596	0.7	20.7
Other							
80–90	12,380	7.1	-0.8	13.6	1,147	0.6	21.1
90–95	5,990	3.4	-0.9	9.8	1,703	0.7	22.9
95–99	4,630	2.6	-1.0	14.6	3,277	0.8	26.5
Top 1%	1,140	0.7	-0.9	13.4	12,270	0.6	33.5
Top 0.1%	120	0.1	-0.8	5.9	53,319	0.5	34.6

NOTES:
(a) Calendar year. Baseline is current law, with no assumed compliance costs. Estimates add compliance costs into the economy. For a description of TPC's current law baseline, see http://www.taxpolicycenter.org/resources/tpc-baseline-definitions.
(b) Includes both filing and nonfiling units but excludes those that are dependents of other tax units. Tax units with negative adjusted gross income are excluded from their respective income class but are included in the totals. For a description of expanded cash income, see http://www.taxpolicycenter.org/TaxModel/income.cfm.
(c) The income percentile classes used in this table are based on the income distribution for the entire population and contain an equal number of people, not tax units. The breaks (in 2017 dollars) are: 20% $28,100; 40% $54,700; 60% $93,200; 80% $154,900; 90% $225,400; 95% $304,600; 99% $912,100; 99.9% $5,088,900.
(d) Includes tax units with a change in Federal tax burden of $10 or more in absolute value.
(e) Average Federal tax (includes individual and corporate income tax, payroll taxes for Social Security and Medicare, the estate tax, and excise taxes) as a percentage of average expanded cash income.
SOURCE: Urban-Brookings Tax Policy Center Microsimulation Model (version 0217-1).

Table 6 shows TPC's baseline estimates for the compliance cost of filing individual taxes. We estimate that the cost of individual compliance for Calendar Year 2017 is $596 dollars per tax unit for 174.9 million units, making the total cost equal to just over $104 billion.

These estimates are compared to a baseline scenario with an assumption of no individual compliance cost, so for the purposes of Table 6, compliance costs are effectively being presented as if they were a legislated tax increase.

Tax units in all income groups incur compliance costs associated with filing taxes. Tax units in higher ECI quintiles incur higher absolute compliance costs per tax unit, but compliance costs rise less than proportionately with income through the four bottom, quintiles before increasing through the bottom 95 percent of the top quintile (the 80–99th percentiles of the distribution). The top quintile, with slightly over half (52.1 percent) of pretax income, incurs slightly over half the total compliance costs (51.4 percent), while the bottom income quintile, with 4.4 percent of pretax income, incurs 5.4 percent of the total compliance burden. Average compliance costs as a share of pretax income decrease from 0.8 percent for the bottom quintile to 0.7 percent for the second and third quintile, and 0.6 for the fourth quintile, increasing back to 0.7 for the top quintile. Within the top quintile, costs as a share of income increase slightly to 0.8 percent for tax units in the 95th to 99th percentiles before declining to 0.6 percent in the top 1 percent and 0.5 percent for the top 0.1 percent.

Hypothetical Changes in Tax Law

Tables 7–9 below include current law compliance costs in the baseline measure of taxes paid, and display the effects of changes in tax law on the sum of tax liability and compliance costs for three proposed tax changes.

1. Repeal all itemized deductions and increase the standard deduction

The first option (Table 7) would repeal all itemized deductions and use the revenues raised to finance an increase in the standard deduction. To achieve revenue neutrality, we multiplied the standard deduction for each filing status, the additional deduction for the elderly and blind and the dependent standard deduction by 2.13.

TABLE 7. Changes in Taxes Paid and Compliance Costs of Option 1 (as a share of pretax income), 2017[a]

Expanded Cash Income Percentile[b,c]	Tax	Compliance	Tax & Compliance
Quintiles			
Lowest	-0.5	-0.2	-0.7
Second	-1.4	-0.2	-1.6
Middle	-1.5	-0.2	-1.7
Fourth	-1.1	-0.2	-1.3
Top	1.2	-0.3	0.9
All	0.0	-0.2	-0.2
Other			
80–90	-0.3	-0.2	-0.6
90–95	0.7	-0.3	0.5
95–99	1.6	-0.3	1.3
Top 1%	2.5	-0.3	2.2
Top 0.1%	2.9	-0.3	2.6

NOTES:
(a) Calendar year. Baseline is current law with associated compliance costs of Option 1. Proposal would repeal all itemized deductions and proportionally increase the standard deduction by a factor of 2.13 to achieve revenue neutrality. For a description of TPC's current law baseline, see http://www.taxpolicycenter.org/resources/tpc-baseline-definitions.
(b) Includes both filing and nonfiling units but excludes those that are dependents of other tax units. Tax units with negative adjusted gross income are excluded from their respective income class but are included in the totals. For a description of expanded cash income, see http://www.taxpolicycenter.org/TaxModel/income.cfm.
(c) The income percentile classes used in this table are based on the income distribution for the entire population and contain an equal number of people, not tax units. The breaks (in 2017 dollars) are: 20% $28,100; 40% $54,700; 60% $93,200; 80% $154,900; 90% $225,400; 95% $304,600; 99% $912,100; 99.9% $5,088,900.
SOURCE: Urban-Brookings Tax Policy Center Microsimulation Model (version 0217-1).

Higher income tax payers are much more likely to choose to itemize deductions than others, and with the proposed repeal, the highest income quintile is the only group to see an average increase in tax burden[7] (Table 7). Taxes as a share of income would increase by 1.2 percent for the highest income quintile and 2.9 percent for the top 0.1 percent. Tax units in the bottom four quintiles would benefit more from the increase in the standard deduction than from the loss of itemized deductions. Taxes would decline for all four quintiles, with the largest benefits going to the middle quintile (1.5 percent of income) and the second quintile (1.4 percent of income).

Compliance costs would decline by 0.2 percent of pretax income for taxpayers in the bottom four income quintiles and by about 0.3 percent of income for the top quintile. The proposal would lower compliance costs for all tax units that would otherwise itemize deductions. Additionally, certain tax units in the lowest

[7] See Lu (2017).

and second quintile would benefit as they may no longer be required to file taxes. Currently individuals are required to file taxes if their gross income is greater than the standard deduction plus their allotted personal exemptions.[8] With the increase in the standard deduction, many tax units who would file under current law would no longer need to file, and under our estimation parameters would no longer have any compliance cost.

Summing up the changes in tax burdens and compliance burdens, the proposal would reduce total burdens in the bottom four quintiles and increase the combined tax and compliance burden for the top quintile. The reduction in compliance costs benefits all groups, but offsets only a portion of the tax increase for the top quintile, leaving the pattern of the distributional change roughly similar to the distributional pattern of the change in tax payments alone.

2. Eliminate most itemized deductions

The second option would eliminate most itemized deductions, but would retain the deductions for mortgage interest and charitable giving (Table 8). To achieve revenue neutrality the standard deduction for all filing units, the additional deduction for the elderly and blind and the dependent standard deduction were all multiplied by 1.90.

TABLE 8. Changes in Taxes Paid and Compliance Costs of Option 2 (as a share of pretax income), 2017[a]

Expanded Cash Income Percentile[b,c]	Tax	Compliance	Tax & Compliance
Quintiles			
Lowest	-0.5	-0.2	-0.7
Second	-1.1	-0.2	-1.3
Middle	-1.2	-0.2	-1.4
Fourth	-0.8	-0.2	-1.0
Top	0.9	-0.2	0.7
All	0.0	-0.2	-0.2
Other			
80–90	-0.1	-0.2	-0.3
90–95	0.7	-0.2	0.5
95–99	1.2	-0.2	1.0
Top 1 Percent	1.7	-0.2	1.5
Top 0.1 Percent	1.7	-0.2	1.5

NOTES:
(a) Calendar year. Baseline is current law with associated compliance costs. Proposal would repeal all itemized deductions except the mortgage interest and charitable deductions and proportionally increase the standard deduction by a factor of 1.90 to achieve revenue neutrality. For a description of TPC's current law baseline, see http://www.taxpolicycenter.org/taxtopics/Baseline-Definitions.cfm.
(b) Includes both filing and nonfiling units but excludes those that are dependents of other tax units. Tax units with negative adjusted gross income are excluded from their respective income class but are included in the totals. For a description of expanded cash income, see http://www.taxpolicycenter.org/TaxModel/income.cfm.
(c) The income percentile classes used in this table are based on the income distribution for the entire population and contain an equal number of people, not tax units. The breaks (in 2017 dollars) are: 20% $28,100; 40% $54,700; 60% $93,200; 80% $154,900; 90% $225,400; 95% $304,600; 99% $912,100; 99.9% $5,088,900.
SOURCE: Urban-Brookings Tax Policy Center Microsimulation Model (version 0217-1).

The distributional effects are similar to those for eliminating all itemized deductions, with average tax burden increasing only for those in the highest income quintile. While the average tax as a share of pretax income increases for the top quintile under this option, the increase in tax burdens drops from 1.2 to 0.9 percent of income when allowing them to continue to deduct mortgage interest and charitable contributions. The middle

[8] Certain filers are required to file even if they do not meet the gross income requirements. For a comprehensive list of IRS filing requirements see: https://www.irs.gov/publications/p17/ch01.html#en_US_2016_publink1000170388.

[9] http://www.taxpolicycenter.org/briefing-book/who-pays-amt.

(1.2 percent of income) and second (1.1 percent of income) quintiles still receive the largest decrease in taxes as a share of pretax income. The lowest quintile remains unchanged from the previous proposal with a tax cut of 0.5 percent of pretax income.

As in the proposal to eliminate all itemized deductions, compliance costs decline by about 0.2 percent of pretax income for all quintiles. Tax units above the 90th percentile see their compliance costs decrease slightly less as a share of income when the two deductions are maintained than when all itemized deductions are eliminated, falling by 0.2 instead of 0.3 percent of income (Tables 7 and 8).

3. Repeal the AMT and reduce the State & local tax deduction

The final proposal repeals the Alternative Minimum Tax (AMT), and to maintain revenue neutrality, scales down the State and local tax deduction. This proposal allows tax units to deduct only 80 percent of the current law value of the State and local deduction.

The AMT typically affects tax units that are high income, but less so for units at the very top of the income distribution.[9] The State and local deduction benefits tax units that itemize deductions, which again, are generally higher income earners. This can be seen in Table 9, with tax units in the 95–99th percentile disproportionately benefiting from the repeal of the AMT, while the loss of the State and local income deduction is spread more evenly across the middle, fourth and top quintiles.

The plan would increase average taxes by 0.1 percent of pretax income for the middle and fourth income quintiles, while decreasing taxes in the top quintile by 0.1 percent of income (Table 9). Tax units in the 80-90th percentiles and 90–95th percentile would see a slight increase in taxes (0.2 and 0.1 percent of pretax income). Those in the 95–99th percentiles would receive the largest share of the benefit with a tax cut of 0.5 percent of income, while the top 1 percent (0.1 percent) and the top 0.1 percent (0.2 percent) would receive smaller cuts as a share of pretax income. The proposal would have a negligible effect on the bottom two quintiles.

TABLE 9. Changes in Taxes Paid and Compliance Costs of Option 3 (as a share of pretax income), 2017[a]

Expanded Cash Income Percentile[b,c]	Tax	Compliance	Tax & Compliance
Quintiles			
Lowest	0.0	0.0	0.0
Second	0.0	0.0	0.0
Middle	0.1	0.0	0.1
Fourth	0.1	0.0	0.1
Top	-0.1	-0.1	-0.2
All	0.0	-0.1	-0.1
Addendum			
80–90	0.2	0.0	0.2
90–95	0.1	0.0	0.1
95–99	-0.5	-0.1	-0.7
Top 1%	-0.1	-0.1	-0.2
Top 0.1%	-0.2	-0.1	-0.2

NOTES:
Calendar year. Baseline is current law with associated compliance costs. Proposal would repeal the Alternative Minimum Tax (AMT) and scale down the State and local deduction by 20 percent to achieve revenue neutrality. For a description of TPC's current law baseline, see http://www.taxpolicycenter.org/taxtopics/Baseline-Definitions.cfm.

(b) Includes both filing and nonfiling units but excludes those that are dependents of other tax units. Tax units with negative adjusted gross income are excluded from their respective income class but are included in the totals. For a description of expanded cash income, see http://www.taxpolicycenter.org/TaxModel/income.cfm.

(c) The income percentile classes used in this table are based on the income distribution for the entire population and contain an equal number of people, not tax units. The breaks (in 2017 dollars) are: 20% $28,100; 40% $54,700; 60% $93,200; 80% $154,900; 90% $225,400; 95% $304,600; 99% $912,100; 99.9% $5,088,900.

SOURCE: Urban-Brookings Tax Policy Center Microsimulation Model (version 0217-1).

The proposal would have a modest effect on compliance costs at the top of the income distribution, as those returns would no longer have to file the AMT, but would generate negligible compliance savings for the bottom four income quintiles and, within the top quintile, for tax units in the 80-95th percentiles. Among income recipients in the top quintile, only those in the 95-99th percentiles (0.1 percent of income) and top 1 percent (0.1 percent of income) would see their compliance costs decline. When accounting for changes in tax and compliance cost, tax units in the 95–99th percentiles would get the largest share of the benefit with total taxes and compliance costs decreasing by 0.7 percent of pretax income.

Conclusion

Our analysis of compliance costs shows that the complexity of the tax code cost individuals over $104 billion dollars in Tax Year 2017, or an average of $596 per taxpayer. While compliance costs increase for higher income taxpayers, compliance burden is highest as a share of pretax income for those in bottom income quintile.

The $104 billion figure is comprised of monetized time, out-of-pocket costs and other monetized costs of filing individual taxes. While any tax system will inevitably have costs associated with compliance and other sources of efficiency loss, a goal of tax policy should be to limit these inefficiencies, while collecting the necessary amount of revenue with an equitable distribution of the tax burden.[10]

As seen in the reform options presented in this paper, repealing sections of the tax code can lower compliance burdens, which are one component of the resource cost of taxation. These reductions can work to mitigate a portion of tax increases for those who would otherwise face an increased burden under the plan, and increase benefits for those who would already be benefiting from the proposed changes in tax law. This analysis highlights the fact that when considering tax reform proposals, policy makers should consider the real economic costs associated with adding complication into the tax code, and the added resource benefits of simplifying the existing system. While reducing compliance burdens increases the overall efficiency of the system, it may often, as shown in these examples, have little effect on which groups are net winners and losers from a particular tax policy change.

[10] See GAO (2005).

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Appendix

Table A1 shows the different PUF items used in the ITB and the TPC adjusted model, and the corresponding complexity assignments. The items are organized by where they appear in the tax code, starting with the 1040, Schedule A, Schedule C, Schedule D, Schedule E (page 1), Schedule E (page 2), Form 2441 and Form 8863.

Tables A2-A5 show the regression coefficients and variances for the 2007, 2010, 2011, and 2012 ITB survey, before and after the PUF adjustments. Bolded coefficients signify that they are statistically significant, with a t-statistic above 2.00.

TABLE A1. Complexity Categories

Field Description	PUF Field Name	Complexity Assignment
Form 1040		
Salaries, Wages, and Tips	E00200	Low
Interest Received	E00300	Low
Tax-Exempt Interest	E00400	Low
Dividends	E00600	Low
Qualified Dividends	E00650	Medium
State Income Tax Refunds	E00700	Low
Alimony Received	E00800	Medium
Capital Gain Distributions (not reported on Schedule D)	E01100	Low
Supplemental Schedule (Form 4797) Net Gain or Loss	E01200	Medium
Pensions and Annuities—Gross = Net	E01500	Low
Pensions and Annuities—Gross ~= Net	E01500	Medium
Unemployment Compensation	E02300	Low
Social Security Income—Gross = Net	E02400	Low
Social Security Income—Gross ~= Net	E02400	Medium
Total Deductible IRA Payments	E03150	Low
Student Loan Interest Deduction	E03210	Low
Educator Expenses Deduction	E03220	Low
Tuition and Fees Deduction	E03230	Low
Self-Employed Health Insurance Deduction	E03270	Medium
Domestic Production Activity Deduction Amount	E03240	High
Payments to a Keogh Plan and SEP Deduction	E03300	Medium
Forfeited Interest Penalty on Early Withdrawal of Savings	E03400	Low
Alimony Paid	E03500	Medium
Exemption Amount—Amount Not Limited	E04600	Low
Exemption Amount—Amount Limited	E04600	Low
Foreign Tax Credit—Form 1116	E07300	Medium
Gross Child Tax Credit	N24*1000	Low
Credit for Elderly or Disabled—Schedule R	E07200	Medium
Residential Energy Credit—Form 5695	E07260	Medium
General Business Credit—Form 3800	E07400	Medium
Prior Year Minimum Tax Credit—Form 8801	E07600	High
Other Statutory Credits	P08000	Medium
Self-Employment Tax	E09400	Medium

TABLE A1. Complexity Categories—Continued

Field Description	PUF Field Name	Complexity Assignment
Recapture Tax	E09700	Medium
Penalty Tax on Qualified Retirement Plans	E09900	Medium
Income Tax Withheld	E10700	Low
Estimated Tax Payments—Assisted	E10900	Low
Estimated Tax Payments—Unassisted	E10900	Medium
Amount Paid with Form 4868—Request for Extension	E11100	Medium
Excess FICA / RRTA	E11200	Low
Earned Income Tax Credit—Exemption Claimed for Qualifying Child	CODED	Low
Earned Income Tax Credit—Exemption Not Claimed for Qualifying Child	CODED	Medium
Gross Additional Child Tax—Self Employed	N24*1000	Medium
Gross Additional Child Tax—Not Self Employed	N24*1000	Low
Form 4136 Fuels Tax Credit	E11300	Medium
Regulated Investment Company Credit—Form 2439	E11400	Medium
Federal Telephone Excise Tax Credit	E11600	Low
Credit Elect Applied to Next Year's Estimated Tax	E12000	Low
Predetermined Estimated Tax Penalty	E12200	Medium
Form 1040 (Schedule A)		
Total Medical Expenses	E17500	Medium
Income Taxes	E18425	Low
General Sales Taxes	E18450	Medium
Real Estate Taxes	E18500	Low
Cash Contributions	E19800	Medium
Elected Qualified Contributions	E19850	Medium
Other Than Cash Contributions	E20100	Medium
Unreimbursed Employee Business Expense	E20550	Medium
Total Miscellaneous Deductions Subject to 2% AGI Limitation	E20400	Medium
Net Casualty or Theft Loss	E20500	Medium
Form 1040 (Schedule C)		
Income/Loss from Sales and Operations—No COGS	E90040	Low
Income/Loss from Sales and Operations—With COGS	E90040	Medium
Cost of Goods Sold and/or Operations	E90050	Medium
Other Income / (Loss)	E90080	Medium
Depreciation	E90190	Medium
Insurance	E90210	Medium
Mortgage Interest	E90240	Medium
Office Expenses	E90280	Medium
Net Wages	E90370	Medium
Form 1040 (Schedule D)		
Net Short Term Gain or Loss	P22250	Medium
Schedule D Capital Gain Distributions	E22370	Low
Net Long Term Gain or Loss	P23250	Medium

TABLE A1. Complexity Categories—Continued

Field Description	PUF Field Name	Complexity Assignment
Unrecaptured Section 1250 Gain	E24515	High
28% Rate Gain or Loss	E24518	High
Form 1040 (Schedule E—Page 1)		
Total Rents Received	E25350	Medium
Total Royalties Received	E25360	Medium
Mortgage Interest Paid to Financial Institutions	E25370	Medium
Rental Depreciation	E25500	High
Form 1040 (Schedule E—Page 2)		
Total Passive Income	E25360+E27200	Medium
Total Nonpassive Income	E25370+E32800	Medium
Total Passive Loss	E25500+E62100	Medium
Total Nonpassive Loss	E26390+E87520	Medium
Total Income, Estate and Trust	E26390	Medium
Total Loss, Estate and Trust	E26400	Medium
Farm Net Rental Income or Loss	E27200	Medium
Form 2441		
Qualifying Individual Expenses	E32800	Medium
Form 8863		
Tentative Hope Credit Amount	E87520	Low
Lifetime Learning Total Qualified Expenses	E87530	Low

TABLE A2. Regression Coefficients Based on the 2007 ITB Survey

Item	Before PUF Adjustment		After PUF Adjustment	
	Log Model	Variance Model	Log Model	Variance Model
Intercept	-0.1451	1.2477	-0.0951	1.1790
Log Modified Positive Income | Used a Paid Preparer	**0.1904**	-0.0196	**0.1745**	-0.0197
Log Modified Positive Income | Used a Tax Software	**0.2794**	-0.0887	**0.2773**	-0.0873
Log Modified Positive Income | Prepared by Hand	**0.2591**	-0.0151	**0.2486**	-0.0009
Log of Low Complexity Activity	**0.0104**	-0.0038	**0.0113**	-0.0049
Log of Medium Complexity Activity	**0.0077**	0.0010	**0.0140**	0.0016
Log of High Complexity Activity	**0.0207**	0.0043	**0.0234**	-0.0003
Log of Line Count | Used a Paid Preparer	0.0239	0.0313	**0.0614**	0.0395
Log of Line Count | Used Tax Software	**0.1508**	0.0341	**0.1566**	0.0281
Log of Line Count | Prepared by Hand	**0.2996**	-0.0300	**0.3035**	-0.0379
Used a Paid Preparer	**2.7825**	-0.4133	**2.7044**	-0.3399
Used Tax Software	**0.7685**	0.3691	**0.6973**	0.4852
Adj. R-Squared	0.5644	0.0172	0.5575	0.0183

NOTE: Estimates with a t-statistic in excess of 2 are bold.

TABLE A3. Regression Coefficients Based on the 2010 ITB Survey

Item	Before PUF Adjustment		After PUF Adjustment	
	Log Model	Variance Model	Log Model	Variance Model
Intercept	-0.2708	1.5262	0.0241	1.2626
Log Modified Positive Income | Used a Paid Preparer	**0.1455**	-0.0676	**0.1252**	-0.0539
Log Modified Positive Income | Used a Tax Software	**0.2905**	-0.0384	**0.2981**	-0.0335
Log Modified Positive Income | Prepared by Hand	**0.1983**	-0.0905	**0.1588**	-0.0559
Log of Low Complexity Activity	**0.0060**	-0.0012	**0.0071**	-0.0020
Log of Medium Complexity Activity	**0.0081**	0.0006	**0.0135**	0.0016
Log of High Complexity Activity	**0.0275**	0.0084	**0.0340**	0.0022
Log of Line Count | Used a Paid Preparer	**0.2561**	-0.0128	**0.3126**	-0.0014
Log of Line Count | Used Tax Software	**0.2236**	-0.1094	**0.2277**	-0.1125
Log of Line Count | Prepared by Hand	**0.4834**	0.0627	**0.5078**	0.0485
Used a Paid Preparer	**2.2942**	-0.0896	**1.9558**	0.0069
Used Tax Software	0.4410	0.1594	0.0433	0.4142
Adj. R-Squared	0.5430	0.0166	0.5362	0.0149

NOTE: Estimates with a t-statistic in excess of 2 are bold.

TABLE A4. Regression Coefficients Based on the 2011 ITB Survey

Item	Before PUF Adjustment		After PUF Adjustment	
	Log Model	Variance Model	Log Model	Variance Model
Intercept	**-0.9834**	1.1148	**-0.5870**	1.2369
Log Modified Positive Income | Used a Paid Preparer	**0.2371**	-0.0536	**0.2183**	-0.0638
Log Modified Positive Income | Used a Tax Software	**0.4016**	-0.0631	**0.4059**	-0.0679
Log Modified Positive Income | Prepared by Hand	**0.2668**	-0.0330	**0.2105**	-0.0476
Log of Low Complexity Activity	**0.0054**	-0.0031	**0.0063**	-0.0037
Log of Medium Complexity Activity	**0.0089**	0.0012	**0.0148**	0.0017
Log of High Complexity Activity	**0.0240**	0.0107	**0.0464**	0.0146
Log of Line Count | Used a Paid Preparer	**0.1814**	0.0509	**0.2167**	0.0665
Log of Line Count | Used Tax Software	**0.2298**	0.0098	**0.2188**	0.0086
Log of Line Count | Prepared by Hand	**0.4948**	0.0334	**0.5334**	0.0446
Used a Paid Preparer	**2.5055**	-0.1355	**2.1222**	-0.2063
Used Tax Software	0.0257	0.3763	-0.4018	0.3236
Adj. R-Squared	0.5916	0.0221	0.5813	0.0231

NOTE: Estimates with a t-statistics in excess of 2 are bold.

TABLE A5. Regression Coefficients Based on the 2012 ITB Survey

Item	Before PUF Adjustment		After PUF Adjustment	
	Log Model	Variance Model	Log Model	Variance Model
Intercept	-0.5160	1.1975	-0.1582	1.4992
Log Modified Positive Income | Used a Paid Preparer	**0.1765**	-0.0237	**0.1049**	-0.0273
Log Modified Positive Income | Used a Tax Software	**0.3278**	-0.0911	**0.3158**	-0.0877
Log Modified Positive Income | Prepared by Hand	**0.2652**	-0.0325	**0.2204**	-0.0638
Log of Low Complexity Activity	**0.0061**	-0.0017	**0.0078**	-0.0033
Log of Medium Complexity Activity	**0.0108**	0.0013	**0.0182**	0.0017
Log of High Complexity Activity	**0.0267**	0.0066	**0.0581**	0.0105
Log of Line Count | Used a Paid Preparer	**0.1060**	0.0086	**0.1690**	0.0423
Log of Line Count | Used Tax Software	**0.2239**	-0.0331	**0.2157**	-0.0207
Log of Line Count | Prepared by Hand	**0.3748**	0.0110	**0.3875**	0.0394
Used a Paid Preparer	**2.9691**	-0.3897	**3.0045**	-0.7051
Used Tax Software	0.4013	0.7205	0.1297	0.4331
Adj. R-Squared	0.5678	0.0215	0.5405	0.0207

NOTE: Estimates with a t-statistics in excess of 2 are bold.