Impact of the TCJA on PA Taxpayers

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On December 22, 2017, the Tax Cuts and Jobs Act (TCJA) was signed into law. The act made significant changes to the federal individual income and corporate net income tax codes that generally became effective for tax year 2018. Recently, the IRS released state level tax data that reveal the impact that tax law changes had on Pennsylvania federal income taxpayers. This research brief provides a general analysis of those impacts and how tax law changes affected federal income tax paid for tax year 2018 compared to amounts paid in the prior tax year.

Significant tax code changes enacted by the TCJA include the following:

- Eliminated personal exemptions and nearly doubled the standard deduction.
- Changed applicable tax rates to 10% (10% previously), 12% (15%), 22% (25%), 24% (28%), 32% (33%), 35% (35%) and 37% (39.6%). In addition, some income thresholds were raised substantially such as the 32% tax bracket (effective for taxable income above $315,000 for married filing joint, previously $237,950 for the 33% bracket) and the 37% bracket (effective for taxable income above $600,000, previously $480,050 for the 39.6% bracket).
- Allowed a new 20 percent deduction for certain qualified business income.
- Repealed itemized deductions except for state and local taxes (SALT) paid (up to $10,000), interest on home mortgage debt below $750,000, charitable contributions and other miscellaneous deductions.[1]
- Increased the child tax credit from $1,000 to $2,000 (refundable up to $1,400), raised income eligibility limits (for married filing joint, the credit phases-out for Adjusted Gross Income above $400,000; previously $110,000) and created a new $500 credit for other dependents.
- Increased alternative minimum tax (AMT) exemption phase-out thresholds.

The impact of the TCJA on Pennsylvania federal income taxpayers will depend on income level, family size, filing status, homeownership status and various other factors. This research brief provides a high-level review of how tax law changes affect reported Total Income, Taxable Income, various deductions and tax credits, and Tax Liability. The data suggest that the act likely reduced the federal income tax of Pennsylvania residents by roughly $8.5 to $9.0 billion. While lower income taxpayers benefited from the larger child tax credit, higher income taxpayers benefited from lower marginal tax rates.

Computation of Total Income

Taxpayers report various types of income on the federal income tax return including wages and salaries, interest, dividends, rent, royalties, pensions, IRAs, taxable Social Security, professional business income (independent contractors, self-employed and sole proprietors) and income from partnerships and S corporations. The sum of these income sources is equal to Total Income. It should be noted that significant income received by Pennsylvania residents is not reported on federal income tax returns. For example, roughly $30 billion of Social Security income was not reported because the recipients did not need to file a tax return due to income thresholds. For professional business income (i.e., self-employed), the IRS

[1] The TCJA increased the limit on the charitable contribution deduction from 50 to 60 percent of Adjusted Gross Income.

estimates that roughly one-half is not reported on tax returns.[2] Hence, tax data merely reflect what are reported on tax returns and do not include exempt income, unreported income or material subsidies that flow to individuals such as federal assistance with rental payments and food purchases.

Table 1 (page 4) lists amounts reported for these fields by Pennsylvania residents on the federal income tax return for tax years 2017 and 2018 for three income groups based on Adjusted Gross Income (equal to Total Income less minor statutory deductions): $0 to $75,000, $75,000 to $200,000 and greater than $200,000.[3] The data reveal the following outcomes:

- For tax years 2017 and 2018, Total Income growth was strongest for the high income group. (See bottom of table.) This outcome is not unusual for non-recession years due to strong capital gains and dividends. For 2018, the growth of capital gain and dividend income is likely related to the reduction in the corporate net income tax rate from 35 to 21 percent for tax year 2018. For the high income group, the strong growth of Total Income also reflects migration from a lower income group. For the low income group, growth may have been restrained if a 2017 filer did not need to file a 2018 tax return under the new higher standard deduction and the filer was not owed a refund.
- For all income groups, there was only moderate growth in partnership and S corporation income (federal Schedule E) and the low income group reported negative growth in both years. As noted, that could be attributable to migration to higher income groups.
- The data confirm that the three income groups report different compositions of Total Income. For the low income group, wages comprise roughly three-quarters (76.1 percent) of Total Income while partnership and S corporation income and capital gains comprise 1.4 percent. For the middle income group, those shares are 73.0 and 3.5 percent. For the high income group, the shares are 52.3 and 28.3 percent. The high income group reported 86.1 percent of total partnership and S corporation income, and 83.1 percent of total net capital gains.

Conversion of Total Income into Taxable Income

Table 2 (page 5) lists the major deductions that convert Total Income into Taxable Income. Filers then apply the applicable tax rates to Taxable Income to determine Tax Liability. The data reveal the following outcomes:

- Relatively minor statutory deductions that first convert Total Income to Adjusted Gross Income (e.g., educator expenses and student loan interest) fell by $0.7 billion.
- Total claimed itemized deductions fell $27.2 billion (-59.5 percent).
- Itemized deductions for medical and dental expenses declined by $1.0 billion (-25.8 percent).
- SALT deductions recorded the strongest decline (-$17.3 billion, -80.4 percent). For the high income group, SALT deductions fell by more than 84 percent and the average deduction for taxpayers still electing to itemize fell from $32,290 to $9,570.
- Home mortgage interest deductions fell by $5.1 billion (-53.4 percent).

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[2] Recent IRS tax gap studies find that the net misreporting percentage (i.e., the share of income that should have been reported but was not) for Schedule C income (sole proprietors, independent contractors and self-employed) is 56 percent and rental income is 51 percent. See "Federal Tax Compliance Research: Tax Gap Estimates for Tax Years 2011-2013," Internal Revenue Service (September 2019).

[3] The IRS state tax data include nine income groups for taxpayers that reported positive Adjusted Gross Income. To facilitate the presentation of data, this analysis collapses those groups into three income groups. The groups used for the analysis do not imply that taxpayers in a particular group are low or middle income or wealthy.

- Although charitable contribution deductions fell, the relative magnitude was smallest for the high income group. That outcome suggests that taxpayers who made substantial charitable contributions continued to itemize despite the new limit on SALT deductions.
- The near doubling of the standard deduction allowance, and limitations on certain itemized deductions, increased the total dollar amount of standard deductions claimed by $57.9 billion (157.1 percent). Personal exemptions fell by $45.6 billion due to elimination.
- The new qualified business deduction for certain pass through entities totaled $5.3 billion.

Overall, effective deductions that convert Total Income into Taxable Income fell $8.5 billion (-6.8 percent).[4] Although Total Income increased by 5.3 percent in tax year 2018, Taxable Income increased by 10.2 percent across all income groups due to a decline in total deductions. (See bottom of table.)

Conversion of Taxable Income into Final Tax Liability

Table 3 (page 6) converts Taxable Income to Final Tax Liability. As shown, Total Income increased by $23.2 billion in tax year 2018 while Taxable Income increased by $31.7 billion because effective deductions declined. The data show that the lower marginal income tax rates from the TCJA reduced the Preliminary Average Tax Rate for all income groups. The Preliminary Average Tax Rate is equal to Income Tax Before Credits divided by Total Income. It is the share of income paid in taxes, on average, for all taxpayers in the respective groups. The percentage point reduction was largest for the high income group (-2.6 percentage points).

The expanded child tax credit (increase of $2.1 billion, excludes refundable portion) further reduced tax liability for taxpayers with dependents. If all tax credits are included, then the Final Average Tax Rate declined by -2.9 percentage points for the high income group, -1.6 percentage points for the middle income group and -1.5 percentage points for the low income group.[5]

The middle of Table 3 computes an estimate of the implied tax cut for each income group. To make that computation, the analysis assumes that in the absence of the TCJA (1) the same amount of Total Income would have been reported by each income group and (2) the same Average Tax Rate from tax year 2017 would apply. If those assumptions hold, then the TCJA resulted in a $9.1 billion tax cut for Pennsylvania federal income taxpayers. The average tax cuts were as follows: -$443 (-34.4 percent, low income group); -$1,844 (-13.4 percent, middle income group) and -$13,995 (-12.0 percent, high income group).[6]

The bottom of Table 3 lists outcomes for other miscellaneous tax data. Premium and advance premium tax credits to those enrolled on the ACA healthcare exchange increased by $1.1 billion, which generally flowed to the low income group.

[4] Effective deductions is equal to the difference between Total Income and Taxable Income. Filers claim more deductions than the effective amount because some deductions more than eliminate Total Income, and Taxable Income cannot be negative.

[5] The Final Income Tax and Final Average Tax Rate computations include refundable earned income tax credit (EITC) and child tax credit amounts, as well as the alternative minimum tax (AMT) and net investment tax (3.8 percent on certain investment income).

[6] For the low income group, this method will likely understate the total tax cut because some former taxpayers will no longer file a return as they have no Taxable Income due to the higher standard deduction and are not owed a refund. For the high income group, this method will likely overstate the total tax cut as new taxpayers would have migrated into the lower end of the group and would have likely reduced the overall Average Tax Rate for the group even in the absence of the TCJA.

Table 1: Sources of Pennsylvania Total Income

	Amount 2017 ($ billions)				Amount 2018 ($ billions)			
	0-75K	75-200K	200K+	Total	0-75K	75-200K	200K+	Total
Total Income	**$134.0**	**$164.5**	**$139.1**	**$437.7**	**$134.3**	**$173.0**	**$153.6**	**$460.9**
Wages and Salaries	101.7	121.1	74.7	297.5	102.2	126.2	80.4	308.9
Taxable Interest	0.7	0.8	1.8	3.3	0.8	1.0	3.3	5.0
Ordinary Dividends	1.5	2.6	5.9	10.0	1.5	2.8	7.0	11.3
Professional Net Income	4.6	4.3	4.9	13.8	4.5	4.5	5.2	14.2
Net Capital Gains	1.2	3.4	21.6	26.2	1.3	3.7	24.9	29.9
Pensions and IRAs	16.6	18.5	6.3	41.4	16.3	21.6	7.7	45.6
Taxable Social Security	5.3	7.8	1.5	14.6	5.5	8.6	1.8	15.9
Partnership-S Corporation	0.7	2.4	18.3	21.3	0.6	2.4	18.6	21.6
All Other Income	1.8	3.6	4.1	9.5	1.6	2.1	4.7	8.4
	Growth 2016 to 2017				**Growth 2017 to 2018**			
	0-75K	**75-200K**	**200K+**	**Total**	**0-75K**	**75-200K**	**200K+**	**Total**
Total Income	**0.4%**	**5.1%**	**10.8%**	**5.3%**	**0.2%**	**5.1%**	**10.4%**	**5.3%**
Wages and Salaries	0.6	3.9	8.0	3.7	0.5	4.3	7.6	3.8
Taxable Interest	-6.1	0.5	-1.6	-2.1	8.3	19.5	83.0	51.2
Ordinary Dividends	-4.6	8.0	11.8	8.1	-0.9	6.4	18.4	12.4
Professional Net Income	0.2	0.1	4.6	1.7	-1.0	3.0	6.9	3.0
Net Capital Gains	51.4	47.2	30.7	33.5	7.8	11.3	15.1	14.3
Pensions and IRAs	-1.2	-1.0	19.7	1.6	-1.7	16.5	23.0	10.2
Taxable Social Security	2.2	9.3	19.6	7.5	3.5	11.1	19.9	9.3
Partnership-S Corporation	-3.0	-0.7	3.5	2.8	-8.5	1.1	1.8	1.4
All Other Income	-9.2	82.8	4.8	20.7	-13.5	-40.9	14.5	-11.9

Note: All data exclude filers that reported negative Adjusted Gross Income.

Source: Historic Table 2, IRS Statistics of Income Division.

Table 2: Conversion of Total Income to Taxable Income

	Amount 2017 ($ billions)				Amount 2018 ($ billions)			
	0-75K	75-200K	200K+	Total	0-75K	75-200K	200K+	Total
Total Income	**$134.0**	**$164.5**	**$139.1**	**$437.7**	**$134.3**	**$173.0**	**$153.6**	**$460.9**
Statutory Deductions	1.8	1.8	2.3	5.9	1.6	1.7	1.9	5.2
Itemized Deductions	**10.5**	**19.9**	**15.3**	**45.7**	**3.9**	**6.7**	**8.0**	**18.5**
Medical and Dental	2.4	1.4	0.3	4.0	1.5	1.1	0.3	3.0
State and Local Tax	3.5	9.2	8.8	21.5	0.8	2.0	1.4	4.2
Home Mortgage Interest	2.2	5.1	2.3	9.6	0.7	1.9	1.8	4.5
Charitable Contributions	1.2	2.6	3.9	7.7	0.5	1.3	3.4	5.2
Average SALT Deduction	5,387	10,268	32,291	11,846	5,194	8,149	9,566	7,643
Standard Deduction	30.9	5.8	0.2	36.8	63.2	27.5	4.0	94.7
Personal Exemption	27.7	14.5	3.4	45.6	--	--	--	--
Qualified Business Deduction	--	--	--	--	0.5	1.2	3.5	5.3
Total Effective Deductions	63.1	42.4	20.0	125.4	62.2	37.2	17.4	116.9
Taxable Income	**70.9**	**122.1**	**119.1**	**312.2**	**72.1**	**135.7**	**136.2**	**344.0**
	Growth 2016 to 2017				**Growth 2017 to 2018**			
	0-75K	**75-200K**	**200K+**	**Total**	**0-75K**	**75-200K**	**200K+**	**Total**
Total Income	**0.4%**	**5.1%**	**10.8%**	**5.3%**	**0.2%**	**5.1%**	**10.4%**	**5.3%**
Itemized Deductions	**-3.1**	**2.9**	**9.5**	**3.5**	**-63.4**	**-66.2**	**-47.9**	**-59.5**
Medical and Dental	0.7	16.1	37.1	7.5	-34.8	-16.4	7.7	-25.8
State and Local Tax	-3.1	2.9	10.6	4.8	-75.6	-78.3	-84.4	-80.4
Home Mortgage Interest	-5.6	0.2	6.8	0.3	-66.3	-62.6	-20.6	-53.4
Charitable Contributions	-1.2	4.0	8.9	5.5	-59.1	-50.8	-13.7	-33.3
Average SALT Deduction	0.6	0.5	1.0	3.7	-3.6	-20.6	-70.4	-35.5
Total Effective Deductions	-1.0	3.6	9.5	2.1	-1.4	-12.1	-12.6	-6.8
Taxable Income	**1.7**	**5.6**	**11.0**	**6.7**	**1.6**	**11.1**	**14.3**	**10.2**

Note: Total effective deductions is the difference between Total Income and Taxable Income.

Source: Historic Table 2, IRS Statistics of Income Division.

Table 3: Tax Liability and Average Tax Rates

	Amount 2017 ($ billions)				Amount 2018 ($ billions)			
	0-75K	75-200K	200K+	Total	0-75K	75-200K	200K+	Total
Number of Filers (000s)	4,470.2	1,414.5	285.6	6,170.3	4,401.4	1,479.0	313.9	6,194.4
Total Income	$134.0	$164.5	$139.1	$437.7	$134.3	$173.0	$153.6	$460.9
Taxable Income	$70.9	$122.1	$119.1	$312.2	$72.1	$135.7	$136.2	$344.0
Income Tax Before Credits	**$9.4**	**$20.2**	**$33.8**	**$63.4**	**$8.4**	**$19.7**	**$33.3**	**$61.4**
Preliminary Average Tax Rate	7.0%	12.3%	24.3%	14.5%	6.2%	11.4%	21.7%	13.3%
Tax Credits								
Child Tax Credit	$0.6	$0.5	$0.0	$1.0	$1.1	$1.7	$0.4	$3.1
Other Non-Refundable Credits	$0.4	$0.3	$0.5	$1.3	$0.4	$0.4	$0.7	$1.4
Refundable Tax Credits	$2.8	$0.0	$0.0	$2.8	$3.2	$0.0	$0.0	$3.2
Final Income Tax	**$5.7**	**$19.4**	**$33.2**	**$58.3**	**$3.7**	**$17.7**	**$32.3**	**$53.7**
Average Tax Paid	$1,266	$13,723	$116,384	$9,450	$845	$11,954	$102,936	$8,671
Final Average Tax Rate	4.2%	11.8%	23.9%	13.3%	2.8%	10.2%	21.0%	11.7%
Counterfactual Final Income Tax (see note)					**$5.7**	**$20.4**	**$36.7**	**$62.8**
Change in Total Tax					-$2.0	-$2.7	-$4.4	-$9.1
Counterfactual Average Tax					$1,288	$13,799	$116,931	$10,136
Implied Average Tax Cut					-$443	-$1,844	-$13,995	-$1,464
Percentage Tax Cut					-34.4%	-13.4%	-12.0%	-14.4%
Other Data								
Self-Employment Tax	$0.8	$0.7	$0.7	$2.2	$0.8	$0.7	$0.7	$2.2
Medicare Tax	$0.0	$0.0	$0.3	$0.3	$0.0	$0.0	$0.3	$0.3
Premium Tax Credit	$1.1	$0.0	$0.0	$1.2	$1.7	$0.1	$0.0	$1.8
Advance Premium Tax Credit	$1.2	$0.1	$0.0	$1.3	$1.8	$0.0	$0.0	$1.8

Note: Average Tax Rate equal to Income Tax Before Credits divided by Total Income or Final Income Tax divided by Total Income. The counterfactual computation assumes that Total Income for tax year 2018 is unaffected by the tax law change and the Average Tax Rate for tax year 2017 is applied to that income level.

Source: Historic Table 2, IRS Statistics of Income Division.