Distributional Effects of the TCJA: An Intragenerational Accounting Framework

Alan Auerbach
May 14, 2020
Did the 2017 Tax Reform Discriminate against Blue State Voters?

David Altig, Alan Auerbach, Patrick Higgins, Darryl Koehler, Laurence Kotlikoff, Ellyn Terry, and Victor Ye

Working Paper 2019-7
April 2019

FEDERAL RESERVE BANK of ATLANTA
Figure 2: Average Percentage Change in Household Lifetime Spending Resulting from TCJA
Figure 4: Change in Lifetime Spending Resulting from TCJA

[Graph showing scatter plot with 'red avg' and 'blue avg' markers, indicating changes in spending based on Republican voter margins.]
Figure 5: Percentage Change in Lifetime Spending Resulting from TCJA by Republican Voter Margin, Richest 10 Percent of Households
Figure 6: Percentage Change in Lifetime Spending Resulting from TCJA by Republican Voter Margin, Poorest 10 Percent of Households
Figure 7: Change in Lifetime Spending: TCJA versus no-SALT Change Scenario
Rank ordered by TCJA gains
Figure 8: Change in Lifetime Spending: TCJA versus no-SALT Change Scenario
Rank ordered by TCJA gains
 Richest 10 Percent of Households

<table>
<thead>
<tr>
<th>State</th>
<th>TCJA</th>
<th>no-SALT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wyoming</td>
<td>2.6%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Alaska</td>
<td>2.6%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Texas</td>
<td>2.5%</td>
<td>2.7%</td>
</tr>
<tr>
<td>South Dakota</td>
<td>2.4%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Washington</td>
<td>2.4%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Tennessee</td>
<td>2.4%</td>
<td>2.6%</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>2.4%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Nevada</td>
<td>2.4%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Florida</td>
<td>2.3%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Mississippi</td>
<td>2.2%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>2.0%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Indiana</td>
<td>2.0%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Alabama</td>
<td>2.0%</td>
<td>2.5%</td>
</tr>
<tr>
<td>North Dakota</td>
<td>2.0%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Illinois</td>
<td>1.8%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Michigan</td>
<td>1.8%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Ohio</td>
<td>1.8%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Arizona</td>
<td>1.8%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Kansas</td>
<td>1.7%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Louisiana</td>
<td>1.7%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Arkansas</td>
<td>1.7%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Utah</td>
<td>1.7%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Nebraska</td>
<td>1.6%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Missouri</td>
<td>1.6%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Maryland</td>
<td>1.6%</td>
<td>2.5%</td>
</tr>
<tr>
<td>West Virginia</td>
<td>1.6%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Georgia</td>
<td>1.6%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Kentucky</td>
<td>1.6%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Colorado</td>
<td>1.6%</td>
<td>2.5%</td>
</tr>
<tr>
<td>New Mexico</td>
<td>1.6%</td>
<td>2.5%</td>
</tr>
<tr>
<td>North Carolina</td>
<td>1.6%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Virginia</td>
<td>1.6%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>1.5%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Delaware</td>
<td>1.5%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>1.5%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Montana</td>
<td>1.5%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Iowa</td>
<td>1.4%</td>
<td>2.5%</td>
</tr>
<tr>
<td>South Carolina</td>
<td>1.4%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Idaho</td>
<td>1.4%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Maine</td>
<td>1.4%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>1.4%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Connecticut</td>
<td>1.3%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>1.3%</td>
<td>2.5%</td>
</tr>
<tr>
<td>New Jersey</td>
<td>1.2%</td>
<td>2.5%</td>
</tr>
<tr>
<td>New York</td>
<td>1.2%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Minnesota</td>
<td>1.2%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Hawaii</td>
<td>1.1%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Oregon</td>
<td>1.0%</td>
<td>2.5%</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>1.0%</td>
<td>2.5%</td>
</tr>
<tr>
<td>California</td>
<td>0.7%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Vermont</td>
<td>0.6%</td>
<td>2.4%</td>
</tr>
</tbody>
</table>
Figure 10: Change in Lifetime Spending Resulting from TCJA
State Specific Demographics versus Uniform Demographics
Rank ordered by TCJA gains
Richest 10 percent of households

<table>
<thead>
<tr>
<th>State</th>
<th>TCJA, State Specific Demographics</th>
<th>TCJA, Uniform Demographics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wyoming</td>
<td>2.6%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Alaska</td>
<td>2.6%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Texas</td>
<td>2.4%</td>
<td>2.4%</td>
</tr>
<tr>
<td>South Dakota</td>
<td>2.4%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Washington</td>
<td>2.4%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Tennessee</td>
<td>2.3%</td>
<td>2.3%</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>2.3%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Nevada</td>
<td>2.3%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Florida</td>
<td>2.3%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Mississippi</td>
<td>2.2%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>2.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Indiana</td>
<td>2.0%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Alabama</td>
<td>2.0%</td>
<td>1.9%</td>
</tr>
<tr>
<td>North Dakota</td>
<td>2.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Illinois</td>
<td>1.8%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Michigan</td>
<td>1.8%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Ohio</td>
<td>1.8%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Arizona</td>
<td>1.8%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Kansas</td>
<td>1.7%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Louisiana</td>
<td>1.7%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Arkansas</td>
<td>1.7%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Utah</td>
<td>1.7%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Nebraska</td>
<td>1.6%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Missouri</td>
<td>1.6%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Maryland</td>
<td>1.6%</td>
<td>1.5%</td>
</tr>
<tr>
<td>West Virginia</td>
<td>1.6%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Georgia</td>
<td>1.6%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Kentucky</td>
<td>1.6%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Colorado</td>
<td>1.6%</td>
<td>1.4%</td>
</tr>
<tr>
<td>New Mexico</td>
<td>1.6%</td>
<td>1.4%</td>
</tr>
<tr>
<td>North Carolina</td>
<td>1.6%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Virginia</td>
<td>1.6%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>1.5%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Delaware</td>
<td>1.5%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>1.5%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Montana</td>
<td>1.5%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Iowa</td>
<td>1.4%</td>
<td>1.3%</td>
</tr>
<tr>
<td>South Carolina</td>
<td>1.4%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Idaho</td>
<td>1.4%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Maine</td>
<td>1.4%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>1.4%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Connecticut</td>
<td>1.4%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>1.2%</td>
<td>1.2%</td>
</tr>
<tr>
<td>New Jersey</td>
<td>1.2%</td>
<td>1.2%</td>
</tr>
<tr>
<td>New York</td>
<td>1.2%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Minnesota</td>
<td>1.2%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Hawaii</td>
<td>1.1%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Oregon</td>
<td>1.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>1.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>California</td>
<td>0.7%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Vermont</td>
<td>0.6%</td>
<td>0.9%</td>
</tr>
</tbody>
</table>
U.S. Inequality and Fiscal Progressivity
-- An Intragenерational Accounting

Alan J. Auerbach
University of California, Berkeley

Laurence J. Kotlikoff
Boston University and The Fiscal Analysis Center

Darryl Koehler
Economic Security Planning, Inc. and The Fiscal Analysis Center

April 13, 2016, Revised August 29, 2019
Application: Tax Reform

• How progressive/regressive was the Tax Cuts and Jobs Act?
<table>
<thead>
<tr>
<th>Income Category</th>
<th>TFA Estimates</th>
<th>JCT (2017a) Estimates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Present Law</td>
<td>TJCA</td>
</tr>
<tr>
<td>Less than 10,000</td>
<td>14.04%</td>
<td>12.62%</td>
</tr>
<tr>
<td>10,000 to 20,000</td>
<td>3.33%</td>
<td>2.56%</td>
</tr>
<tr>
<td>20,000 to 30,000</td>
<td>1.64%</td>
<td>0.56%</td>
</tr>
<tr>
<td>30,000 to 40,000</td>
<td>6.45%</td>
<td>5.18%</td>
</tr>
<tr>
<td>40,000 to 50,000</td>
<td>10.69%</td>
<td>9.40%</td>
</tr>
<tr>
<td>50,000 to 75,000</td>
<td>11.79%</td>
<td>10.44%</td>
</tr>
<tr>
<td>75,000 to 100,000</td>
<td>14.57%</td>
<td>13.02%</td>
</tr>
<tr>
<td>100,000 to 200,000</td>
<td>18.92%</td>
<td>17.17%</td>
</tr>
<tr>
<td>200,000 to 500,000</td>
<td>26.00%</td>
<td>23.83%</td>
</tr>
<tr>
<td>500,000 to 1,000,000</td>
<td>34.35%</td>
<td>32.17%</td>
</tr>
<tr>
<td>1,000,000 and over</td>
<td>38.40%</td>
<td>37.42%</td>
</tr>
</tbody>
</table>
Average Lifetime and Current Year Net Tax Rates by Resource Percentile, Ages 20 - 79

- Lowest: -113.0% (Average Lifetime), -186.1% (Average Current Year)
- Second: -7.7% (Average Lifetime), -34.8% (Average Current Year)
- Third: 14.2% (Average Lifetime), -2.5% (Average Current Year)
- Fourth: 13.9% (Average Lifetime), 23.2% (Average Current Year)
- Highest: 24.4% (Average Lifetime), 31.5% (Average Current Year)
- Top 5%: 25.9% (Average Lifetime), 33.2% (Average Current Year)
- Top 1%: 28.6% (Average Lifetime), 35.0% (Average Current Year)

Legend:
- Blue: Average Lifetime Net Tax Rate
- Orange: Average Current Year Net Tax Rate
Average Lifetime and Current Year Net Tax Rates by Resource Percentile, Ages 40 - 49

<table>
<thead>
<tr>
<th>Percentile</th>
<th>Lowest</th>
<th>Second</th>
<th>Third</th>
<th>Fourth</th>
<th>Highest</th>
<th>Top 5%</th>
<th>Top 1%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-45.5%</td>
<td>-8.2%</td>
<td>5.7%</td>
<td>14.3%</td>
<td>20.1%</td>
<td>32.5%</td>
<td>35.3%</td>
</tr>
<tr>
<td>Average Lifetime Net Tax Rate</td>
<td>4.2%</td>
<td>12.6%</td>
<td>24.0%</td>
<td>26.8%</td>
<td>28.4%</td>
<td>31.3%</td>
<td>34.5%</td>
</tr>
<tr>
<td>Average Current Year Net Tax Rate</td>
<td>18.1%</td>
<td>18.5%</td>
<td>26.8%</td>
<td>32.7%</td>
<td>34.9%</td>
<td>38.2%</td>
<td>38.8%</td>
</tr>
</tbody>
</table>
Application: Tax Reform

• How progressive/regressive was the Tax Cuts and Jobs Act?

• Differences across cohorts in degree of progressivity
## Tax Rate Reductions

<table>
<thead>
<tr>
<th></th>
<th>20-79 Years Olds</th>
<th>40-49 Year Olds</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current Year</td>
<td>Lifetime</td>
</tr>
<tr>
<td>Q1</td>
<td>1.4</td>
<td>0.8</td>
</tr>
<tr>
<td>Q2</td>
<td>1.6</td>
<td>1.3</td>
</tr>
<tr>
<td>Q3</td>
<td>1.7</td>
<td>1.5</td>
</tr>
<tr>
<td>Q4</td>
<td>1.7</td>
<td>1.6</td>
</tr>
<tr>
<td>Q5</td>
<td>1.2</td>
<td>1.2</td>
</tr>
<tr>
<td>P5</td>
<td>1.0</td>
<td>1.1</td>
</tr>
<tr>
<td>P1</td>
<td>0.6</td>
<td>0.8</td>
</tr>
</tbody>
</table>
Application: Tax Reform

- How progressive/regressive was the Tax Cuts and Jobs Act?
- Differences across cohorts in degree of progressivity
- Within cohorts lifetime measure somewhat more regressive
## Tax Rate Reductions

<table>
<thead>
<tr>
<th></th>
<th>20-79 Years Olds</th>
<th>40-49 Year Olds</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current Year</td>
<td>Lifetime</td>
</tr>
<tr>
<td>Q1</td>
<td>1.4</td>
<td>0.8</td>
</tr>
<tr>
<td>Q2</td>
<td>1.6</td>
<td>1.3</td>
</tr>
<tr>
<td>Q3</td>
<td>1.7</td>
<td>1.5</td>
</tr>
<tr>
<td>Q4</td>
<td>1.7</td>
<td>1.6</td>
</tr>
<tr>
<td>Q5</td>
<td>1.2</td>
<td>1.2</td>
</tr>
<tr>
<td>P5</td>
<td>1.0</td>
<td>1.1</td>
</tr>
<tr>
<td>P1</td>
<td>0.6</td>
<td>0.8</td>
</tr>
</tbody>
</table>