This presentation embodies work undertaken for the staff of the Joint Committee on Taxation, but as members of both parties and both houses of Congress comprise the Joint Committee on Taxation, this work should not be construed to represent the position of any member of the Committee.
Outline

1) Current U.S. federal tax system is progressive

2) Tax progressivity increased since 1979

3) Progressivity vs. Redistribution measures

4) Redistribution increased since 1979
Previous Research

Average tax rates
- Expanded income: TPC, JCT, OTA, CBO (Kasten, Sammartino & Toder 1994)
- Fiscal income: Piketty & Saez (2007)

“Progressivity” measures
  Moore & Pecoraro (2020) review and critique use of smooth functions

Tax/Transfer Redistribution Measures
- Reynolds & Smolensky (1977), Lambert (1985), Meyer et al. (2020)
1) Current federal tax system is progressive
Average Tax Rates in 2014

Federal taxes (including payroll taxes)

Notes: JCT for 2015. Piketty-Saez for 2004 and based on narrow fiscal income, Auten-Splinter on broad national income, and others on intermediate income definitions.
2) Tax progressivity increased since 1979
(CBO data for rest of presentation)
Tax progressivity increased since 1979
Quintile-level average federal tax rates

Source: Author’s calculations from CBO estimates. Notes: Income excludes means-tested transfers.
Tax progressivity measures
Kakwani index

Source: Author’s calculations from CBO estimates. Notes: Income excludes means-tested transfers.
Tax progressivity increased, 1979=100

Source: Author’s calculations from CBO estimates. Notes: Income excludes means-tested transfers. Includes 2008 recovery rebate credits, 2009-10 making work pay credits, and 2011-12 payroll tax holiday.
Tax progressivity measures

**Tax elasticity** *(weighted by #individuals)*

\[ \varepsilon = \text{slope} - 1 = 0.47 \]

*Source*: Author’s calculations from CBO estimates. *Notes*: Income excludes means-tested transfers.
Tax progressivity increased, 1979=100

Source: Author’s calculations from CBO estimates. Notes: Income excludes means-tested transfers. Includes 2008 recovery rebate credits, 2009-10 making work pay credits, and 2011-12 payroll tax holiday.
Tax progressivity increased, 1979=100

Source: Author’s calculations from CBO estimates. Notes: Income excludes means-tested transfers. Includes 2008 recovery rebate credits, 2009-10 making work pay credits, and 2011-12 payroll tax holiday.
Top rates are not progressivity
Not enough taxpayers are subject to top income rates

Source: SOI individual reports for various years.
Top rates are not progressivity
Top 1% avg. income tax rates flat since 1960s

Source: SOI individual reports for various years.
Top rates are not progressivity more sheltering in C corps with higher rates

Tax base was “full of leaks, loopholes, exemptions and preferences” –Hellerstein (1963)

Source: SOI individual reports for various years.
3) Progressivity vs. Redistribution measures
Progressivity vs. Redistribution

%Δ Taxes measures progressivity
- independent of proportional tax changes
- not sensitive to amount of total taxation

Source: Author’s example: initial A income of $10K and tax $1K, B of $100K and $30K.
Progressivity vs. Redistribution

%Δ After-tax income measures redistribution
• not independent of proportional tax changes
• sensitive to amount of total taxation

Source: Author’s example: initial A income of $10K and tax $1K, B of $100K and $30K.
## Progressivity vs. Redistribution

**Proportional changes to 2014 taxes**
- Progressivity is NOT affected
- Redistribution is affected

<table>
<thead>
<tr>
<th>Effective tax rate</th>
<th>Tax progressivity (%Δ)</th>
<th>Tax redistribution (%Δ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline (2014)</td>
<td>New rate</td>
<td>Kakwani index</td>
</tr>
<tr>
<td>21.2</td>
<td>23.3</td>
<td>0.0</td>
</tr>
<tr>
<td>21.2</td>
<td>19.1</td>
<td>0.0</td>
</tr>
</tbody>
</table>

*Proportional increase in avg. tax rates of 10 percent*

*Proportional decrease in avg. tax rates of 10 percent*

*Source:* Author’s calculations from CBO estimates. *Notes:* Income excludes means-tested transfers.
4) Redistribution increased since 1979
Average Tax Rates

Tax rate = taxes/income
Average Tax Rates

Tax rate = taxes/income

Source: Author’s calculations from CBO estimates. Notes: Income is market income.
Tax/transfer redistribution in 2016
Redistribution rate = (taxes – transfers)/income

Source: Author’s calculations from CBO estimates. Notes: Income is market income.
Tax/transfer redistribution measures
Reynolds-Smolensky index

Source: Author’s calculations from CBO estimates. Notes: Individuals ranked by market income.
Tax/transf. redistribution increased since 1979

Source: Author’s calculations from CBO estimates. Notes: 1979 level set to 100.
Tax/transf. redistribution increased since 1979

Mitigating factors:
Total taxes as share of income fell
Transfers increasingly to middle incomes

Source: Author’s calculations from CBO estimates. Notes: 1979 level set to 100.
Conclusions

Current U.S. tax system is progressive

Redistribution is not progressivity
\[ \Delta \text{After-tax income measure} \neq \Delta \text{Redistribution} \]

Progressivity/Redistribution increased since 1979

Tax progressivity by Kakwani increased 49%
Redistribution by Reyn-Smol. increased 61%

Comments: david.splinter@jct.gov
Data: davidbsplinter.com
Appendix Slides
Tax progressivity increased since 1979
Quintile-level federal tax rate comparisons

Source: Author’s calculations from CBO estimates. Notes: Income excludes means-tested transfers.
Redistribution increased since 1979
Quintile-level transfer rates by source

Source: Author’s calculations from CBO estimates. Notes: Income is market income.
Tax/transf. redistribution increased since 1979
Average redistribution rates (pp changes)

Source: Author’s calculations from CBO estimates. Notes: Income is market income.
Saez-Zucman (2019) reconciliation to CBO + state/local approach
Average Tax Rates in 2010
Federal (CBO) + State/Local taxes (ITEP)

Notes: ITEP is the Institute on Taxation and Economic Policy.
Average Tax Rates in 2010
Saez-Zucman rates matched to CBO+State/Local

![Graph showing average tax rates by income quintile for 2010](image)
Average Tax Rates in 2010
Saez-Zucman rates matched to CBO+State/Local

Add missing OASDI taxes & social insurance to income
Average Tax Rates in 2010
Saez-Zucman rates matched to CBO+State/Local

Remove imputed retirement & underreported income
Average Tax Rates in 2010
Saez-Zucman rates matched to CBO+State/Local

Account for refundable credits

CBO+SL

Top 1%

Income quintile

Bottom 2nd 3rd 4th Top
Average Tax Rates in 2010
Saez-Zucman rates matched to CBO+State/Local

Add back 11% of adults dropped by SZ from bottom of income distribution, remove other imputed income, equivalence scale, weight by #indivs.