

## Incidence (final)

Just as nominally one person may pay tax but in reality a different person actually pays it, so nominally a corporation or organization may pay the tax but in reality some person always pays  
(customers, workers, suppliers, management, shareholders)

## Fairness in taxation

Since we can't really disentangle "fairness in taxation" from "fairness of the before-tax / after-tax income distribution" we need to be able to discuss all the issues together.

## "Data of Fairness"

All this information that people bring into conversations of fairness in taxation.

\* Piketty & Saez papers, on long term trends in income distribution (not just US).

\* CBO (Congressional Budget Office) report.

Looks at income quintiles (and other percentiles) and before-tax income, after-tax income, and average tax rates for all 5 federal taxes and for whole federal tax systems.

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Piketty & Saez:

\* US & other English speaking countries seem to be different.

\* Growing income inequality, esp. concentration at and above top 1%, is real.

\* Salaries a big part of the story, not capital income. Different from "hard old days."

## CBO studies.

\* Start with households as decision making unit.

\* Compute "comprehensive household income."

-- tax return info about income.

-- info about employer benefits.

-- info about govt. benefits to people who receive them.

\* Break up households to individuals

To take into account returns to scale, divide by  $\sqrt{N}$  instead of  $N$ .

$N > 1$ ,  $\sqrt{N} < N$ , so

"individual comprehensive income" is (correctly) larger than "per-capita comprehensive income."

\* Compute taxes.

-- Federal income tax

Assumption is labor supply for everyone is fairly inelastic, so the wage/salary earner really does pay the tax.

-- Social Security tax.

Same assumption, so whole 15.3% paid by wage/salary earner.

- Federal excise taxes.

Assumed consumer pays.

Used data on consumption patterns to impute these taxes to each household.

- Corporate profits tax.

Assumed this tax is paid by

Shareholders. Again,

imputed this tax to each household based on its share ownership.

- Estate Tax

(Note the role of tax incidence theory in these calculations).

⇒ To the tables!

From CBO, average income tax rates.

Lowest Quintile	-6.2
Second Quintile	-0.8
Middle Quintile	2.9
Fourth Quintile	5.9
Highest Quintile	13.9

Progressivity

All 8.7

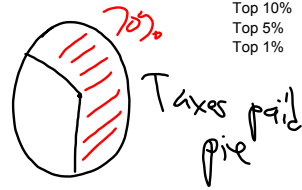
Top 10%	15.9
Top 5%	17.6
Top 1%	19.6

Share of income tax liabilities.

Lowest Quintile	-2.9
Second Quintile	-0.9
Middle Quintile	4.7
Fourth Quintile	13.8
Highest Quintile	85.3

All 100.0

Top 10%	70.8
Top 5%	58.4
Top 1%	36.7



→ 70.8% of Fed income taxes paid are paid by top 10% of income earners.

Pre-tax & post-tax income pie.

Lowest Quintile	4.9
Second Quintile	10.0
Middle Quintile	15.0
Fourth Quintile	21.1
Highest Quintile	50.0

All 100.0

Top 10%	35.5
Top 5%	25.9
Top 1%	14.0

→ 35.5% of all post-tax income goes to top 10% of income earners.

## Principles

\* Most radical: There is an ideal post-tax income distribution and tax policy should be used to achieve it.

- Really? Regardless of effort or ability?
- Practical matter of how to do this without shrinking the "pie" too much.

\* There is a pre-tax distribution. The post-tax distribution should be "less unequal."

⇒ Progressivity (increasing average tax rates).

Alternatively, consider this:

-- \$100,000 before tax.  
Tax them at 50%.  
⇒ \$50,000 after tax.

-- \$50,000 before tax.  
Tax them at 50%.  
⇒ \$25,000 after tax.

If you think this is unfair, that the lower income person should be left with more than \$25,000, then you want their average tax rate lower. Progressivity.

\* What should be fair is sharing of tax burden.

Esp. common is that fairness in sharing burden implies "equal sacrifice."

Perhaps surprisingly, equal sacrifice implies that higher income  $\Rightarrow$  higher taxes but not necessarily progressivity. (See next problem for latter.)

For former:

$$(*) U(y) - U(y-T) = C$$

A "T" which imposes equal sacrifice does this at all "y."  
 $\Rightarrow T(y)$ .

Easy to see that (\*) implies  $\frac{\partial T}{\partial y} > 0$ .

$$\frac{\partial T}{\partial y} = -\frac{\partial F / \partial y}{\partial F / \partial T} \quad (\text{"F" is left side of (*)})$$

$$= -\left[ \frac{U'(y) - U'(y-T)}{U'(y-T)} \right]$$

$$= \frac{U'(y-T) - U'(y)}{U'(y-T)} > 0$$

\* People receive a benefit from government, they should pay in proportion to the benefit they receive.

What this implies for taxes depends on what you mean by "benefit."

What are the "benefits" of government to high versus low income people?

May low income people who receive benefits above taxes today should have to pay it back later?

High income people have more to protect, so they should pay a lot?

Are we assuming a normal civil society exists (from to so far). If so, may not be consistent to say rich get benefit of protection against the unwashed rabble.