The Economics of Tax Policy and How to Think About Tax Reform

Tax Foundation University 2017, Part 2

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The Triangle of Tax Reform Tradeoffs
Imposition of a Tax

Supply (With Tax)  Supply (No Tax)

Reduction in Value of Economic Output =
Loss to Consumer +
Loss to Producer

Resources Redirected to Other Activities

Tax

Price

Quantity

Pc  Po  Pp  E1  E0

Q1  Q0
Because of deadweight losses and distortions:

• It costs the country more than $1.00 to buy an added $1.00 of government goods and services;

• About $2.00 more on average, with some taxes costing much more.

• Total cost to country: $3.00.
Higher Tax Rates Raise, Then Lower Revenues

Tax Revenues at 3 Different Tax Rates

Deadweight Loss Grows with Rate-Squared

Supply

Demand

Price

Q_3

Q_2

Q_1

Q_0

Quantity
The Laffer Curve illustrates the relationship between tax rates and government revenue. The optimum tax rate is where the value of government services equals revenue and growth costs imposed on society. This point is labeled A.

At point B, government revenue is maximized, but the tax rate is too high because it's hurting economic growth.

Point C represents a tax rate much too high, which is hurting growth and lowering government revenue.

The curve divides into two ranges: Normal Range and Prohibitive Range. In the Normal Range, the curve is upward sloping, indicating higher tax rates increase government revenue. In the Prohibitive Range, the curve is downward sloping, showing higher tax rates decrease government revenue.
Joint Tax, CBO, and Treasury routinely adjust revenue estimates for the excise effects (impacts on quantity) of excise taxes.

But excise effects also occur for broader taxes, and their effects on the size of the tax base are normally ignored in static scoring of tax bills.
Sensitivity to Tax

Rule of thumb: While both labor and capital respond to tax policy, capital is more sensitive to tax changes than labor.

- Capital is more mobile, can be sited here or abroad.
- Investors can chose to consume rather than invest.
- Less capital means fewer jobs and lower wages.
Effect of Tax On Labor

- **Wage**
  - **Gross Wage**
  - **Net Wage**
  - **Tax**

- **Hours Worked**
  - **Labor Supply**
  - **Marginal Product of Labor (Demand)**

- **Drop in Labor**
- **L₀**
- **L₁**

MPL would rise if labor had more capital to work with, and fall if capital formation lagged.
Weighted Marginal Individual Income Tax Rate

Source: Internal Revenue Service.
Effect of Tax On Desired Capital Stock

Return to Capital

Gross Return

Tax

Net Return

Required Return to Capital (Supply)

Marginal Product of Capital (Demand)

Desired Amount of Capital

Drop in Capital

K₀

K₁
A Smaller Stock Of Capital Reduces Wages

Wage

Labor Supply

MPL (K₀)

MPL (K₁)

W₀

W₁

N₁, N₀

Employment
Taxes and Growth (TAG) Model

It works like the economy:

Changes In:
- Cost of Capital
- Cost of Labor

Determine:
- Size of Capital Stock: i.e. Tools, Equipment, Buildings
- Size of Labor Supply: i.e. Hours worked, # of People in the Workforce
- Amount of Output (GDP) & Income
Economic Changes Affect Revenue

Excise effects of the broad labor and capital taxes not only drive the economy and our model. They also affect federal revenue by altering total output and income. Dynamic effects are important.

They may also have some of the “micro” effects that the revenue estimators calculate even under static scoring (such as capital gains realizations).
Capital Gains Realizations Rise When The Maximum Tax Rate on Long-Term Gains Falls, 1976 - 2007

Data from U.S. Treasury
Tax Revenue = Tax Rate x Tax Base

Selective excises hit selected products. Tariffs hit imports.

Broad taxes can be levied on payroll, income, or consumption.

Economic effects vary according to the rates and according to how the base is defined and measured. They are not uniform in their effects; details matter.
Tax Rate and Tax Base Interact

\[
\text{True Marginal Tax Rate} = \text{Statutory Marginal Tax Rate} \times \frac{\text{Incremental Tax Base}}{\text{Actual Incremental Income}}
\]

If the tax system hits the same income more than once, or if tax rules overstate actual income, effective marginal tax rates may exceed statutory marginal tax rates.

Example: The Statutory Marginal Tax Rate is 15%, but each extra $1.00 of income is overcounted as $1.50. The True Marginal Tax Rate is 22.5% (22.5% = 25% x 1.5).
Chart 17  Cumulative Marginal Tax Rate For A Single Taxpayer Earning $12,000 to $40,000 With 2 Children

- Federal Income Tax (10%, 15%)
- Child Tax Credit (-15%)
- Payroll Tax (7.65%)
- State Income Tax (3%)
- EITC Phase-Out (21.06%)

Marginal Tax Rate:

- 16.71%
- 26.71%
- 41.71%
- 46.71%
- 25.65%
- 22.06%
- 16.71%
- 4.35%
## Effective Federal* Marginal Tax Rates for Social Security Recipients

Marginal tax rates as Social Security benefits become taxable, in tier 1 (50% phase-in range) or tier 2 (85% phase-in range)

<table>
<thead>
<tr>
<th>Statutory Income Tax Rate</th>
<th>Income from savings, pensions **</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tier 1 (150% of statutory income tax rate)</td>
</tr>
<tr>
<td>10%</td>
<td>15%</td>
</tr>
<tr>
<td>15%</td>
<td>22.5%</td>
</tr>
<tr>
<td>25%</td>
<td>NA</td>
</tr>
</tbody>
</table>

* Add 4 to 8 percentage points for typical state income tax rates for states that follow federal taxation of benefits.

** Tax-exempt bond income is included in determining whether income is over the threshold for taxing benefits. An additional dollar adds $0.50 or $0.85 to taxable income, producing effective tax rates of 50% or 85% of the statutory rate on the supposedly exempt income.
Effective Federal* Marginal Tax Rates for Social Security Recipients

<table>
<thead>
<tr>
<th>Statutory Income Tax Rate</th>
<th>Marginal tax rates as Social Security benefits become taxable, in tier 1 (50% phase-in range) or tier 2 (85% phase-in range)</th>
<th>Wage Income ***</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Not subject to earnings test</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tier 1</td>
</tr>
<tr>
<td>10%</td>
<td></td>
<td>29.6</td>
</tr>
<tr>
<td>15%</td>
<td></td>
<td>36.7</td>
</tr>
<tr>
<td>25%</td>
<td></td>
<td>NA</td>
</tr>
</tbody>
</table>

* Add 4 to 8 percentage points for typical state income tax rates for states that follow federal taxation of benefits.

*** Assumes self-employed payroll tax, and allows for deduction of "employer's" half of payroll tax from AGI and effect of deduction on modified adjusted gross income used to determine amount of Social Security benefits subject to income taxation. Figures would be very similar for employee beneficiaries after adding the employee and employer payroll tax rate adjusted for income tax deduction of employer's half at employer's income tax rate.
Getting the Tax Base Right

The tax base is even more important than the tax rates.

- The income tax is heavily biased against saving and investment (vs. consumption).

- Over-statement of profits discourages investment in the U.S.
Multiple Taxation of Saving: One Tax on Consumption, Four Taxes on Saving

Layer 1 – Tax on Earnings
Income is taxed when earned. If it is used for consumption, there is usually no further federal tax.

Layer 2 – Personal Income Tax on Saving Returns
If the income is saved, the returns are taxed as interest, dividends, capital gains, or non-corporate business profits.

Layer 3 – Corporate Income Tax
If the saving is in corporate stock, the corporate tax hits the income before it is either paid out to shareholders or reinvested to boost future earnings.

Layer 4 – Transfer (Estate and Gift) Tax
Another tax on already taxed assets.

(Similar taxes at the state and local levels increase the multiple taxation.)
Depreciation Requires Businesses to Pay Tax on Income That Doesn’t Exist

Average Depreciation Allowance and Taxes on $100 of Capital Investment in the U.S.

On a $100 investment, a business can deduct an average of $62.40 from their revenue over the life of the asset, not the full $100 cost. This means that a full $37.60 of that $100 investment does not count as a business cost. This understates costs and overstates business profits.

Due to this mistreatment of capital investment, businesses pay taxes on income that doesn’t exist.

$100 Capital Investment

$62.40 Allowable Deduction

$37.60 Disallowed Cost Recovery

$13.16 Tax on Disallowed Cost Recovery
Equalizing Treatment of Saving and Consumption

- **Expense investment** (immediate write-off of plant, equipment, and structures, or present value equivalent).

- **Make saving either tax deferred or returns exempt** (as with regular or Roth-style IRAs, but for all saving, with no limitations on amounts or timing).

- **Integrate corporate tax with owners’ tax** (tax at business or ownership level, not both).

- **End estate and gift tax.**
Advantage of Tax Deferred Saving Over Ordinary Tax Treatment: Build-up of $1,000 Earned and Saved per Year

Saving from age 20 onward under tax-deferred system and ordinary tax treatment. Deferred plan: 7.2% pre-tax interest rate on $1,000 saved annually taxed 20% on withdrawal. Ordinary saving: $800 a year after 20% tax on $1000 earnings at after-tax 5.76% interest.
Combined Top Federal Corporate and Shareholder Marginal Tax Rates on Corporate Income

- Corporate Tax Only: 35%
- + 15% Shareholder Tax: 44.75%
- + 20% Shareholder Tax: 48%
- + 23.8% Shareholder Tax: 50.47%
### Marginal Tax Rates On Estates

And income contributed to estates, 40% Estate Tax Rate

<table>
<thead>
<tr>
<th>Tax Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>GST</td>
<td>40.0%</td>
</tr>
<tr>
<td>Estate Tax</td>
<td>64.0%</td>
</tr>
<tr>
<td>Payroll Tax</td>
<td>77.3%</td>
</tr>
<tr>
<td>State Income Tax</td>
<td>81.8%</td>
</tr>
<tr>
<td>Federal Income Tax</td>
<td></td>
</tr>
<tr>
<td>Estate Tax and Generation Skipping Trust</td>
<td></td>
</tr>
<tr>
<td>Tax on a Dollar of Interest Left in an Estate</td>
<td>81.8%</td>
</tr>
<tr>
<td>Tax on a Dollar of Wages (self-employed)</td>
<td></td>
</tr>
</tbody>
</table>

*A 40% Estate Tax Rate, with a $5 million exclusion indexed for inflation, became effective in 2010-2011. The exclusion is $5,450,000 in 2016. Assumes a self-employed married couple in the 33% federal income tax bracket, with a 6% state income tax (taken as an itemized deduction)*
Tax reform: What direction?

Movement toward a purer income base?
(Example: Camp plan, Bush panel income tax reform.)

Movement toward a more saving/consumption neutral base?
(Example: Blueprint, Bush panel cash flow tax.)

Income?  S/C Neutral?
Why it Matters

History tells us that:

- When we have moved *toward a neutral tax* with lower rates, the economy has *boomed*. (1962, 1964, 1981, 2003)

- When we have *increased tax biases* the economy has *faltered*. (1969, 1986)

- When we have *wasted tax cuts* on non-growth-related rebates, *nothing much happened*. (1975, 2001, 2009)
Examples of Neutral Taxes

- National Sales Tax or VAT
- Flat Tax (Armey, Hall-Rabushka, returns exempt saving)
- Bradford X-tax or USA tax (Flat Tax with graduated rates)
- Personal Expenditure Tax (on income less saving, i.e., saving deferred)
- Nunn-Domenici tax (P.E. tax with graduated rates)
Getting the Tax Base Right (cont’d.)

Bottom line:

For the same revenue, an income tax depresses GDP and wages more than a neutral tax.

Either can be made progressive.

Stay tuned for the -ish details.