Income Taxes

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Overview

Topics covered in this lecture

- Historical context
- Definition of income
- Income tax components
- Evaluation of income tax
- Income taxation at the state level
- Corporate income tax

Mechanisms to Collect Taxes before 1913

Main revenue sources

- Federal revenue from customs duties on imported goods at the port of entry
- Tariffs as a revenue tool and protection for domestic industries
- Excise taxes on specific domestic goods such as alcohol, tobacco, and carriages
- Public land sales providing revenue from westward expansion
- State and local taxes from poll taxes and property taxes

Administrative structure

- Enforcement via physical goods and transactions

Implications

- Revenue centered in ports and manufacturing areas
- Regressive burden on consumers
- Limited revenue generating capacity and small government size

Beginnings of Income Taxation

16th Amendment (1909)

"The Congress shall have power to lay and collect taxes on incomes, from whatever source derived, without apportionment among the several States, and without regard to any census or enumeration."

Interpretation

- Requirement of direct taxes to be apportioned, i.e., distributed based on population, among states before 16th Amendment
- Ability to tax individuals' incomes directly without division of total tax burden among states based on population size

Income tax collection in 1913 (Source)

- Tax returns from less than 1% of the population
- Tax rate of 1%

Introduction

One of the most visible and important forms of taxation for federal and state governments

- Generally a progressive tax

Important source of revenue for local governments

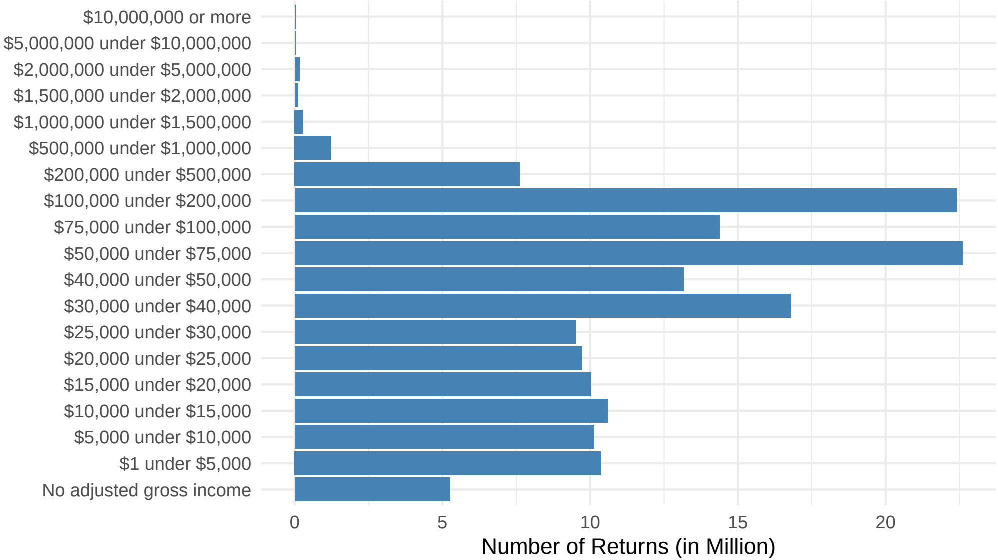
- Major revenue source of federal and state aid to local governments
- Automatic implementation of federal exemptions/deductions at state level, i.e, changes in federal income tax policy affecting state and local revenues

Payroll taxes

- Support for Social Security, Medicare, and unemployment compensation

Taxation of households and not individuals

Income Tax Today (Source: IRS 2020)



Advantages and Disadvantages of Income Tax

Advantages

- Equity: Measurement of ability to pay and adjustable to individual circumstances
- Tax yield: Higher income (e.g., higher economic growth) results in more tax revenue
- Broad tax base: Higher amounts of revenue at socially acceptable rates

Disadvantages

- Economic effects: Discourages savings and investment
- General disconnect between taxes paid and public services provided (e.g., compared to a property tax)

Income Definition

Ideal case stated by Haig-Simons (1938): Taxing a comprehensive measure of income

$$\text{Income} = \text{Consumption} + \Delta\text{Net Wealth}$$

Income sources currently included

- Wages and salaries, rents, interest income, dividends, realized capital gains

Income sources currently excluded

- Fringe benefits (to earned income), gifts, imputed income (e.g., farmer consuming crop), accrued capital gains (i.e., unrealized)
- Interest on state and local government debt: Allows governments to borrow below market rates (e.g., 5.2% versus 8% if 35% marginal tax rate)

Question: What is the difference between realized and accrued capital gains?

Haig-Simons versus Current Tax System

Case 1: Cullen owns stock that increased by $10,000 but he did not sell.

- Haig-Simons definition: Income
- Current tax system: Unrealized capital gains

Case 2: Dena lives in a house she owns and consumes its services

- Haig-Simons definition: Consumption of housing service and part of income
- Imputed rental value tax (abolished recently in Switzerland)
- Current tax system: No tax and thus providing incentives to purchase assets producing non-cash returns to the owner

Case 3: Kenna inherits $50,000 from her aunt

- Haig-Simons definition: Increase in net wealth
- Current tax system: Not income since aunt paid gift/inheritance tax

Overview

Total (gross) income to Adjusted Gross Income (AGI)

- Adjustments

AGI to taxable income

- Itemized or standard deductions
- Personal exemptions for each person in the tax unit (suspended until 2025)

Taxable income to tax liability

- Tax rates and tax brackets
- Tax credits

AGI as a measure aggregate tax-bearing capacity

Adjustments

Retirement contributions as encouragement for retirement savings

- Individual Retirement Account (IRA)

Transfer payments (e.g., food stamps)

- Avoidance of unnecessary transactions, e.g., assistance to low-income households and subsequent taxation of such assistance
- Exceptions: Full taxation on unemployment benefits and assistance (e.g., Social Security) not targeted at low-income households

Other adjustments

- Alimony, job-related moves, student loan interest, self-employed health insurance payments since no tax on corporate health benefits, unrealized capital gains, fringe benefits from employers, gifts, and inheritances (to a degree)

Interests received from state and local government bonds

Deductions

Expenditures outside the control of the household

- Medical and dental expenses above 7.5% of AGI
- Losses from casualty or theft above 10% of AGI
- State/local income and property taxes

Expenditures encouraged by the federal government by reducing after-tax cost of actions

- Charitable contributions
- Home mortgage interest on first and second homes

Certain job related expenses

- Education, union dues, work uniforms, occupational taxes

Personal Exemptions

Personal exemptions

- Flat amount for each person in household
- Adjustment for family size
- Removal of low-income families from tax system
- Suspension until 2025

Deductions and exemptions adjust ability-to-pay to individual taxpayers' circumstances

- Improvement in horizontal and vertical equity

Tax Credits

Mechanism

- Direct deduction from tax liability

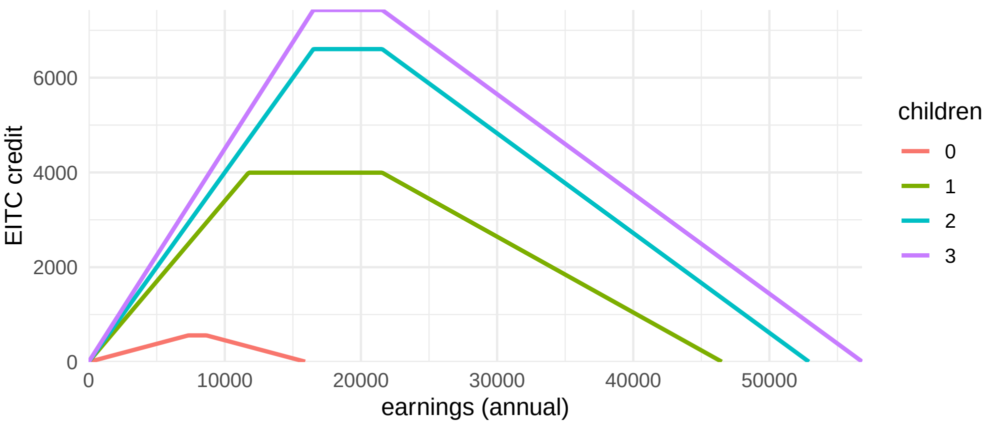
Used to stimulate private activities and encourage certain behavior

- Home energy conservation
- Child care
- Earned income tax credit (EITC) for low-income workers (decreasing percentage of earned income)

EITC Example

children	r_in	r_out	y1	y2
0	7.65	7.65	7320	8660
1	34	16	11750	21560
2	40	21.06	16510	21560
3	45	21.06	16510	21560

Earned Income Tax Credit: Graph



Tax Rates

Average tax rate (ATR)

- Tax divided by taxable income
- Always below marginal rate

Effective tax rate (ETR)

- Tax divided by AGI
- Always below average rate

Efficiency

Work versus leisure

- Taxation of income but not leisure
- Potential encouragement of people to work less

Savings versus consumption

- Savings (interests) are taxed twice but consumption only once
- Potential encouragement to lower savings and/or investment in real estate as opposed to financial assets

Higher efficiency loss due to higher marginal tax rate

- Trade-off between efficiency and tax progressiveness
- Trade-off between efficiency and horizontal equity for some deductions and exemptions

New Jersey Millionaires Tax

"This paper examines the migration response to a millionaire tax in New Jersey, which raised its income tax rate on top earners by 2.6 percentage points to 8.97 percent, one of the highest tax rates in the country. [. . .], we estimate the migration response of millionaires to the rate increase, [. . .]. The results indicate little responsiveness, with semi-elasticities generally below 0.1. Tax-induced migration is estimated to be higher among people of retirement age, people living on investment income rather than wages, and people who work (and pay tax) entirely in-state. The tax is estimated to raise $1 billion per year and modestly reduce income inequality."

Young and Varner (2011) Millionaire Migration and State Taxation of Top Incomes: Evidence from a Natural Experiment National Tax Journal 64(2), 255-284.

Equity, Adequacy, and Elasticity

Adjustment of taxable income to adapt to ability-to-pay

- Example 1: Improvement of horizontal equity resulting from medical/dental and state/local tax deductions
- Example 2: Favoring of homeowners as opposed to renters due to home mortgage interest deduction

Vertical equity

- Reduction in progressiveness due to deductions and loopholes

Adequacy

- Very broad based tax and good revenue adequacy

Elasticity

- Tied directly to personal income but potential for bracket creep

Bracket Creep and Indexation

Setup

- Current income: \$100,000
- Current federal income tax bracket: 28%
- Marginal rate after \$102,000: 30%

Mechanism of bracket creep

- Inflation of 3% and salary adjustment to \$103,000
- No change in real income by higher tax liability

Removal of bracket creep

- Indexation: Adjustment of marginal tax brackets to inflation

Feasibility

Ease of administration for government

- Manageable identification of taxpayers
- Assessment and collection by individuals and/or employers through payroll deduction (withholding)
- Government's administrative costs mostly due to tax law enforcement and sample audits

Sizable taxpayer compliance costs

Systems

State tax as a percentage of federal tax liability

- Sensitive to changes in federal tax code

State tax base equal to federal taxable income

- Use of different tax rate
- Sensitive to changes in federal base but not rates

State tax base equal to federal AGI

- Use of different deductions, credits, and rates
- Reduction in sensitivity as it relates to federal changes

State tax base is unrelated to the federal tax

- Unrelated to federal system and hence, insensitive to federal changes

Flat tax rate in many states with Indiana at 3.23% of Adjusted Gross Income

Reciprocal Deductability I

Let s and f be the federal and state tax rate, respectively. Then the federal and state tax liability, i.e., x_s and x_f, are:

- State tax liability

$$x_s = \frac{s - s \cdot f}{1 - s \cdot f} \cdot M$$

- Federal tax liability

$$x_f = \frac{f - s \cdot f}{1 - s \cdot f} \cdot M$$

Setup

- Taxable income: $M = 60,000$
- Federal tax rate: $f = 0.25$
- State tax rate: $s = 0.05$

Reciprocal Deductability II

Tax liability

- State

$$x_s = \frac{s - s \cdot f}{1 - s \cdot f} \cdot M \Rightarrow \frac{0.05 - 0.05 \cdot 0.25}{1 - 0.05 \cdot 0.25} \cdot 60,000 = 2,279$$

- Federal

$$x_f = \frac{f - s \cdot f}{1 - s \cdot f} \cdot M \Rightarrow \frac{0.25 - 0.05 \cdot 0.25}{1 - 0.05 \cdot 0.25} \cdot 60,000 = 14,430$$

- Total: \$16,709
- Average tax rate: $16,709/60,000 = 0.2785$

No Deductability

Tax liability

- State

$$s \cdot M \Rightarrow 0.05 \cdot 60,000 = 3,000$$

- Federal

$$f \cdot M \Rightarrow 0.25 \cdot 60,000 = 15,000$$

- Total: \$18,000
- Average tax rate: $18,000/60,000 = 0.3$

State Deductability from Federal

Tax liability

- State

$$s \cdot M \Rightarrow 0.05 \cdot 60,000 = 3,000$$

- Federal

$$f \cdot (1-s) \cdot M \Rightarrow 0.25 \cdot (1-0.05) \cdot 60,000 = 14,250$$

- Total: \$17,250
- Average tax rate: $17,250/60,000 = 0.2875$

Overview

Entities subject to corporate income tax:

- C Corporations
- Consideration of S Corporations as pass-through (to the owner) entities

Corporate income tax base: Net earnings of incorporated businesses

- Inclusion of retained earnings and dividends
- Exclusion of cost of earning income
- Exclusion of interest payments on debt

Advantages and Disadvantages

Advantages

- Mean of taxing out-of-state owners for services consumed
- Retained earnings would not be taxed under personal income tax
- Increases progressiveness of tax

Disadvantages

- Negative effect on savings and investments
- Distortion of financing decisions, i.e., debt (tax deductible) versus equity (not tax deductible)
- Double taxation of dividends