Principles of Taxation for Business and Investment Planning 2019 Edition 22nd edition Jones Solutions Manual

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Chapter 2 Policy Standards for a Good Tax

Questions and Problems for Discussion

1. This question is designed to lead to a class discussion of the various tax policy issues introduced in Chapter 2.

2. Historically, the federal income tax system has not generated enough revenue to fund the government's spending programs. Consequently, the federal government has borrowed money to make up its deficits (excess of spending over revenues) and in doing so has amassed an $11 trillion national debt. The federal government operated at a deficit in every year from 1970 through 1998. In 1999 and 2000, it operated at a small surplus (excess of revenues over spending), but reverted to massive deficit spending in 2001 and subsequent years.

3. Governments can impose a new tax (by identifying and taxing a new base), increase the rate of an existing tax, or expand the base of an existing tax.

4. Governments that fail to control the growth of their money supply run the risk of devaluing the currency and triggering a crippling rate of inflation. Therefore, simply printing more money to fund an operating deficit is not a viable, long-term solution to an insufficient tax system.

5. a. Mrs. E could enter the work force. Her after-tax earnings could offset the decrease in the couple's disposable income attributable to the tax rate increase. If Mr. E works for an hourly wage, he could possibly work more hours for his employer. If he doesn't have this option, he could take a second job or even start a new business.

   b. As a self-employed individual, Mrs. F may have the flexibility to increase the number of hours devoted to her business. Her additional after-tax earnings could offset the decrease in the couple's disposable income attributable to the tax rate increase. Mr. F has the same options as Mr. E.

   c. In this case, Mr. and Mrs. G have the same options as Mr. E and Mr. F. Because they are both full-time employees, their ability to increase their before-tax income may be limited.

6. a. Mr. H may not have any realistic way to decrease the time spent at work and increase his leisure time, even if the after-tax value of his labor decreases because of a tax rate increase. Mrs. H's behavior should not change because of a tax rate increase.

   b. Mrs. J could quit her job and leave the work force if the couple decides that her leisure time is worth more than the after-tax value of her labor.

   c. As a self-employed individual, Ms. K has the flexibility to decrease the number of hours devoted to her business, thereby substituting additional leisure time for labor.

7. An increase in the income tax rate decreases the after-tax value of the bond investment but does not affect the value of the luxury auto. (Her personal use and enjoyment of the auto are nontaxable benefits to Ms. V.) Consequently, she may decide to consume the $40,000 (i.e., buy the auto) rather than to save it.

8. People derive many psychological benefits from working: a sense of self-worth and self-reliance, prestige and status, intellectual challenge, a social network, and a belief that their work makes the world a better place. These forms of *psychic income* may be as important (or even more important) than monetary incentives.

9. A national sales tax might reduce the aggregate level of consumer demand for taxable goods and services. In this case, the tax base would decrease and state and local sales tax revenues would decline.

10. Arguably, the estate tax is more convenient for two reasons. First, individuals with accumulated wealth can't avoid the tax indefinitely. Second, a person's death is a matter of public record so that the IRS can easily determine when a potentially taxable event (the transfer of wealth at death) has occurred.

11. Market economies (and the firms operating in those economies) adapt to the various taxes imposed on business transactions. The longer a tax (or a specific tax rule) has been in effect, the better the business community understands it. When governments change the tax system, the business community must spend time and money studying and reacting to the change. Firm managers must reassess, or even modify, their tax strategies. Thus, any change in the tax environment is both costly and unsettling, even if the purpose of the change is to improve the environment.

12. Clearly, the system in which employers must withhold and remit income tax from their employees' paychecks is more convenient for the government because the collection process is greatly concentrated. The withholding system is more convenient for individual employees who are not required to compute their monthly tax bills or mail tax payments to the government. Instead, their employers perform these tasks on the individuals' behalf. The withholding system shifts much of the cost of compliance to employers and is, therefore, more inconvenient from the employers' perspective.

13. a. This provision clearly is intended to encourage and reward a certain economic behavior (the purchase and use of snow removal equipment by private firms) and, therefore, meets the definition of a tax preference.

    b. Jurisdiction E is assuming that it can reduce its snow removal costs by $550,000 because more firms will own the equipment to perform this function for themselves.

14. For the income tax system to be equitable, the tax base (taxable income) should be defined as precisely as possible to reflect each individual's economic ability to pay. However, the greater the number of personal and financial circumstances taken into account in defining taxable income, the greater the complexity of the law.

15. a. This is a progressive rate structure with a -0- percent rate on income up to $35,000 and a 15 percent rate on income in excess of $35,000.

    b. This is a proportionate rate structure.

    c. This is a regressive rate structure with a 15 percent rate on income up to $80,000 and a -0- percent rate on income in excess of $80,000.

16. Jurisdiction Q could enact:

    A gross receipts tax. Because Corporation R and Corporation T both have $5 million gross receipts, they would pay the same tax. Corporation T could argue that this result is horizontally inequitable because its gross and net profit are less than Corporation R's gross and net profit, indicating that Corporation T has less ability to pay a tax.

    A tax based on gross profit. Because Corporation R has more gross profit than Corporation T, Corporation R would pay the greater tax. Corporation R could argue that this result is horizontally inequitable because it has a higher ratio of annual operating expenses to gross profit (55.5 percent) than Corporation T (30.1 percent). Consequently, gross profit doesn't accurately reflect the two corporations' ability to pay tax.

A tax based on net profit before charitable contributions. In this case, Corporation R's tax base would be $800,000, and Corporation T's tax base would be $930,000. Corporation T might argue that its generous charitable contributions reduced its economic ability to pay and should be taken into account. Corporation R could refute by arguing that discretionary charitable contributions are irrelevant to the measurement of ability to pay tax on business earnings.

A tax based on net profit after charitable contributions. In this case, Corporation R would pay more tax than Corporation T and could argue that allowing Corporation T to deduct charitable contributions violates the concept of horizontal equity.

17. Ms. P should consider her marginal rate: the rate at which the incremental income from the investment will be taxed. For tax planning purposes, the average tax rate that she pays on her entire income is irrelevant.

Application Problems

1. a. Next year's excise tax revenue will be $880,000 ($8 million base × 11%).
   b. Next year's excise tax revenue will be $1,023,000 ($9.3 million base × 11%).
   c. Next year's excise tax revenue will be $770,000 ($7 million base × 11%).

2. a. Next year's restaurant tax revenue will be $441,000 ($29.4 million base × 1.5%).
   b. Next year's restaurant tax revenue will be $540,000 ($36 million base × 1.5%).
   c. Next year's restaurant tax revenue will be $615,000 ($41 million base × 1.5%).

3. a. Next year's hotel tax revenue will be $1.5 million ($25 million base × 6%).
   b. Next year's hotel tax revenue will be $1.32 million ($22 million base × 6%).
   c. Next year's hotel tax revenue will be $1.14 million ($19 million base × 6%).

4. Before the rate increase, Mrs. K's disposable income is $35,700 ($42,000 − $6,300 tax). If the tax rate increases from 15 percent to 20 percent, she must earn an additional $2,625 to maintain this income. This number is derived from the following formula.

   ($42,000 + additional income) − 20% ($42,000 + additional income) = $35,700

   If Mrs. K can earn an extra $2,625, her disposable income won't be affected by the rate increase.

Taxable income	$44,625
Tax rate	.20
Tax	$8,925

   After-tax income ($44,625 – $8,925) = $35,700

5. Before the rate increase, Mr. and Mrs. E's disposable income is $66,400 ($83,000 − $16,600 tax). If the tax rate increases from 20 percent to 28 percent, Mrs. E must earn an additional $9,222 to maintain this income. This number is derived from the following formula.

($83,000 + additional income) − 28% ($83,000 + additional income) = $66,400

If Mrs. E can earn $9,222 from her part-time job, the couple's disposable income won't be affected by the rate increase.

Taxable income	$92,222
Tax rate	.28
Tax	$25,822

After-tax income ($92,222 – $25,822) = $66,400

6. a. $125,000 tax base (Mr. and Mrs. J's taxable income) × 8% rate increase = $10,000 additional revenue collected from Mr. and Mrs. J.

b.

$140,000 increased tax base × 40%	$56,000
Tax collected on original $125,000 base × 32%	(40,000)
Additional revenue collected from Mr. and Mrs. J	$16,000

c.

$110,000 decreased tax base × 40%	$44,000
Tax collected on original $125,000 base × 32%	(40,000)
Additional revenue collected from Mr. and Mrs. J	$4,000

7. a. $300,000 tax base (Ms. BK's taxable income) × 10% rate decrease = $30,000 decrease in revenue collected from Ms. BK.

b.

$375,000 increased tax base × 25%	$93,750
Tax collected on original $300,000 base × 35%	(105,000)
Decrease in revenue collected from Ms. BK	$(11,250)

c.

$275,000 decreased tax base × 25%	$68,750
Tax collected on original $300,000 base × 35%	(105,000)
Decrease in revenue collected from Ms. BK	$(36,250)

8. a. Jersey Inc.'s income tax is $273,000 ($3.9 million × 7%), and its average and marginal tax rates are 7%.

b. Leray Inc.'s income tax is $350,000 ($5 million × 7%). Its average rate is 3.6% ($350,000 ÷ $9.6 million), and its marginal rate is 0%.

c. Jurisdiction B uses a regressive rate structure because the average rate decreases as the tax base (corporate income) increases.

9. a. Mr. Hill's taxable income is $63,750 ($98,750 – $35,000), and his tax is $8,925 ($63,750 × 14%). His average rate is 9% ($8,925 ÷ $98,750), and his marginal rate is 14%.

b. Ms. Lui's taxable income is $12,900 ($47,900 – $35,000), and her tax is $1,806 ($12,900 × 14%). Her average rate is 3.8% ($1,806 ÷ $47,900), and her marginal tax rate is 14%.

c. Ms. Archer's average and marginal rates are zero.

d. Jurisdiction X uses a progressive rate structure, because the average rate increases as the tax base (individual income) increases.

10. a. Taxpayer A's tax on $119,400 of income is computed as follows.

6% of first $30,000 of income	$1,800
10% of next $40,000 of income	4,000
20% of next $49,400 of income	9,880
	$15,680

Taxpayer A's average tax rate is 13.13% ($15,680 ÷ $119,400), and his marginal tax rate is 20%.

b. Taxpayer B's tax on $383,900 of income is computed as follows.

6% of first $30,000 of income	$1,800
10% of next $40,000 of income	4,000
20% of next $130,000 of income	26,000
28% of next $183,900 of income	51,492
	$83,292

Taxpayer B's average tax rate is 21.70% ($83,292 ÷ $383,900), and his marginal tax rate is 28%.

11. a. Both taxpayers earn $500,000 total income over the 10-year period.

b. Taxpayer O paid an annual tax of $3,800 on $50,000 taxable income. Thus, Taxpayer O paid $38,000 tax for the 10-year period and had an average tax rate of 7.6% ($38,000 ÷ $500,000). Taxpayer P paid an annual tax of $1,200 on $20,000 taxable income for years 1 through 5 and an annual tax of $7,800 on $80,000 taxable income for years 6 through 10. Thus, taxpayer P paid $45,000 tax for the 10-year period and had an average tax rate of 9% ($45,000 ÷ $500,000).

12. a. Mr. LV's tax on $69,200 of income is computed as follows.

10% of first $20,000 of income	$2,000
15% of next $49,200 of income	7,380
	$9,380

Mr. LV's average tax rate is 13.55% ($9,380 ÷ $69,200), and his marginal tax rate is 15%.

b. Ms. JC's tax on $184,400 of income is computed as follows.

10% of first $20,000 of income	$2,000
15% of next $55,000 of income	8,250
25% of next $85,000 of income	21,250
30% of next $24,400 of income	7,320
	$38,820

Ms. JC's average tax rate is 21.05% ($38,820 ÷ $184,400), and her marginal tax rate is 30%.

13. a. Both taxpayers earn $750,000 total income over the 5-year period.

b. Ms. SP paid $29,000 tax annually on $150,000 taxable income. Thus, Ms. SP paid $145,000 tax for the 5-year period and had an average tax rate of 19.33% ($145,000 ÷ $750,000). Ms. OC paid $2,000 tax on $20,000 taxable income for years 1 through 4 and $184,500 tax on $670,000 taxable income for year 5. Thus, Ms. OC paid $192,500 tax for the 5-year period and had an average tax rate of 25.67% ($192,500 ÷ $750,000).

14. a. Individual C's excise tax is $15 and C's average tax rate is 3% ($15 ÷ $500).

    b. Individual D's excise tax is $70 and D's average tax rate is 1.4% ($70 ÷ $5,000).

    c. Jurisdiction Z's excise tax meets a strict definition of vertical equity because individual D, who has a larger tax base than individual C, pays more tax than individual C. However, the tax is regressive because individual D's average tax rate is less than individual C's average tax rate.

Issue Recognition Problems

1. Does Country O have a sufficient tax system? Does Country O have a surplus (an excess of $903 million total revenues over $877 million total expenditures) or a deficit (an excess of $800 million general expenditures over $718 million general revenues.)? Note that this question mirrors the current debate concerning whether federal payroll tax receipts and Social Security/Medicare disbursements should be on-budget or off-budget.

2. Will the increase in the gross receipts tax rate cause firms to conduct less business in County M so that the aggregate gross receipts after the tax increase are less than $400 million? Is a static forecast of the incremental revenue from the rate increase appropriate because the county's improved road system will encourage increased business activity within its jurisdiction?

3. Is the horizontal equity of the federal income tax impaired because the law gives preferential treatment for one type of physical disability (blindness) but not for other types of disabilities (paralysis)? Does Mrs. K have less ability to pay income tax than Mr. L?

4. Is the economic benefit of the certainty and stability resulting from the moratorium negated by the fact that Country C cannot use its tax system as an instrument of fiscal policy (lower rates, new tax breaks to combat unemployment, etc.) in its attempt to combat the recession?

5. Does the complexity of the new provision undermine the provision's tax policy goal (a subsidy for families with high utility bills)? Is the new provision, in fact, inequitable because it benefits only a subgroup of individual taxpayers?

6. Could Jurisdiction J provide the same level of clean-up services directly (through a government program) for less than $1.9 million?

Research Problems

1. The CBO's estimate of the U.S. government's total budget surplus (deficit) for the current fiscal year is updated monthly. Monthly Treasury Statements provide annual surplus (deficit) estimates that include both Social Security and Postal Service receipts. However, the CBO also restates the annual surplus (deficit) estimates by excluding these "off-budget" items.

2. "The Tax Foundation is the nation's leading independent tax policy research organization. Since 1937, our principled research, insightful analysis, and engaged experts have informed smarter tax policy at the federal, state, and local levels." Mission statement: "We improve lives through tax policy research and education that leads to greater economic growth and opportunity."

    a. Tax Freedom Day is the day when individual taxpayers stop working to pay their annual local, state, and federal taxes and begin working to provide after-tax disposable income for themselves. Tax Freedom Day in 2017 was April 23.

    b. Americans would have to work an additional 14 days (until May 7) to pay off the 2017 federal budget deficit.

3. The answer to this problem depends on which day the students access the website.

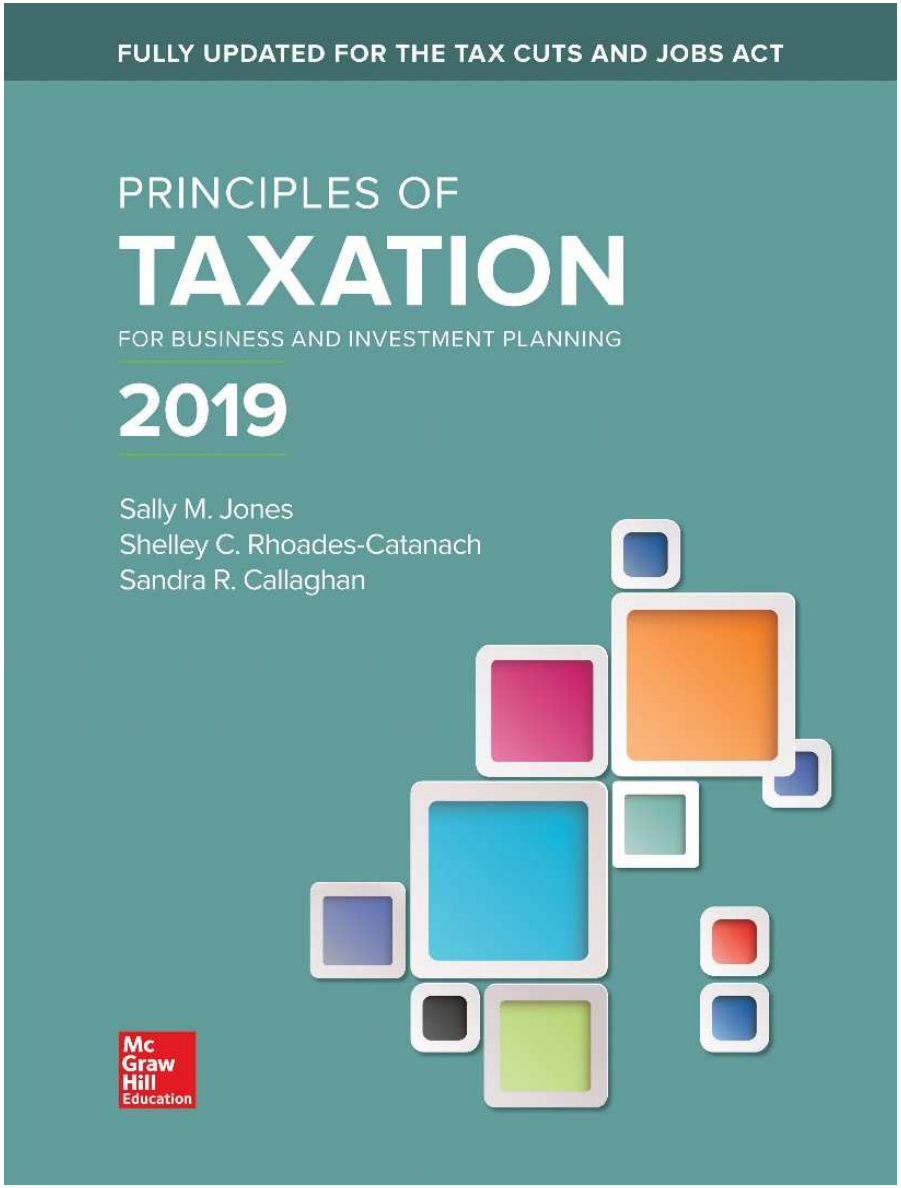
Tax Planning Cases

1. Based on a static forecast, a 1 percent increase in the sales tax rate would increase Jurisdiction B's annual revenue by $5 million. A new 2 percent corporate income tax would also increase revenue by $5 million (2 percent of a $275 million tax base less $500,000 cost of the new agency).

2. In developing a dynamic forecast of the incremental revenue from the sales tax rate increase, sales tax rates in the neighboring jurisdictions would be an important fact. If these rates are less than 7.5 percent, residents of Jurisdiction B might react to the rate increase by traveling to a neighboring jurisdiction to make their purchases. The extent of this behavioral reaction might depend on whether Jurisdiction B has a use tax (which would also be increased to 7.5 percent) and an effective mechanism for collecting such tax. A second important fact is based on geography. Are the neighboring jurisdictions within a reasonable travel distance for Jurisdiction B shoppers?

   The corporate income tax rates in the two neighboring jurisdictions would be important factors in a dynamic forecast of the incremental revenue from Jurisdiction B's new net income tax. The nontax costs and benefits of operating a business in Jurisdiction B compared to the nontax costs and benefits of operating in the neighboring jurisdictions would be important information. For example, does Jurisdiction B offer a more skilled labor force or cheaper electrical power than neighboring jurisdictions? These facts are relevant in estimating the extent to which corporations would maintain their current level of business activity within Jurisdiction B, in spite of the new tax cost.

Chapter 2
Policy Standards for a Good Tax



Objectives

- Explain the concept of sufficiency of a good tax
- Differentiate between the income effect and the substitution effect
- Describe the characteristics of a convenient tax
- Contrast the classical and the modern concepts of tax efficiency

Objectives (Pt. 2)

- Define horizontal and vertical equity
- Differentiate among regressive, proportionate, and progressive rate structures
- Explain the difference between marginal and average tax rates
- Discuss distributive justice as a tax policy objective

Tax Policy Issues

"The art of taxation consists in so plucking the goose as to obtain the largest possible amount of feathers with the least possible amount of hissing."

Jean Baptiste Colbert

Standards for a Good Tax

- Every tax can be evaluated on four standards. A good tax should be:
  - Sufficient to raise necessary government revenues
  - Convenient to administer
  - Efficient in economic terms
  - Fair to taxpayers required to pay

Tax Policy and Business Managers

- Business managers and their tax advisors share a keen interest in tax policy
  - They know that many complex tax rules have an underlying policy rationale
    - If they understand this rationale, the rule is easier to interpret and apply
  - They know that today's policy issues shape tomorrow's tax environment
    - By paying attention to current policy debate, they can anticipate developments that might affect their firm's long-term strategies

Standards – Sufficiency

- A tax is sufficient if:
  - It generates enough funds to pay for the public goods and services provided by the government
  - It allows a government to balance its budget

Standards – Sufficiency (Pt. 2)

- Is our federal tax system sufficient? No!
  - The federal government has operated at a deficit for every fiscal year since 1970, except for 2000 and 2001 when small surpluses were generated.

Standards – Sufficiency (Pt. 3)

- Consequence of an insufficient tax system?
- Government must make up its revenue shortfall from other sources
  - Legalized gambling
  - Leasing or selling of government owned assets or property rights
  - Borrowing money in the capital markets

Standards – Sufficiency (Pt. 4)

- How can governments increase tax revenues?
  - Exploit a new tax base – most radical and politically sensitive
  - Increase the rate of an existing tax – most obvious and likely to anger the greatest number of voters
  - Enlarge an existing tax base – most subtle and less likely to attract public attention
- Why is it hard to determine the effect of such changes?

Standards – Sufficiency (Pt. 5)

- Forecasting revenue:
  - Static forecast - assumes base stays the same
    - If rate is 5% and base is $100,000, a rate increase of 1% should generate $1,000 more revenue
  - Dynamic forecast - estimate change in base due to change in rate
    - If rate is 5% and base is $100,000, a rate increase of 1% may decrease the base so that <u>less</u> than $1,000 more revenue is generated

Standards – Sufficiency (Pt. 6)

- Income versus substitution effect
  - Taxpayers change their behavior in reaction to increased tax rates. These changes result in either an *income* effect or *substitution* effect.
- Remember:

$$\text{Tax} = \text{Rate} \times \text{Base}$$

Standards – Sufficiency (Pt. 7)

- Income effect:
  - Tax increase → base increase
  - Tax decrease → base decrease
- Taxpayers work to maintain *after-tax* income (Running faster just to stay in the same place!)

Standards – Sufficiency (Pt. 8)

Substitution effect:

- Tax increase → base decrease
- Tax decrease → base increase
- Substitute between labor and leisure

Theoretically, income effect is more powerful for lower-income taxpayers and substitution effect is more powerful for higher-income taxpayers

Example of Income Effect

Self-employed taxpayer works 30 hours a week, earns $100 an hour, and pays 20% income tax. Disposable (after-tax) weekly income is $2,400

Assume that tax rate increases to 25%

If taxpayer increases his hours to 32 per week, he will maintain his disposable income at $2,400 per week

$$\$3,200 - \$800 \text{ tax} = \$2,400$$

Government will collect an additional $200 revenue

$$(\$3,200 \times 25\%) - (\$3,000 \times 20\%) = \$200$$

Example of Substitution Effect

Self-employed taxpayer works 30 hours a week, earns $100 an hour before taxes, and pays a 20% income tax.

Disposable (after-tax) weekly income is $2,400

Assume that tax rate increases to 25%

If taxpayer decreases his hours to 28 per week, government will collect only $100 additional revenue

($2,800 × 25%) – ($3,000 × 20%) = $100

Standards - Convenience

A tax is convenient if:

- Government's view
  - Tax is easy to administer, easy to understand, and offers few opportunities for noncompliance
- Taxpayer's view
  - Tax is easy to pay, easy to compute, and requires minimal time to comply

Standards – Convenience (Pt. 2)

Is the federal income tax system convenient for the taxpayer?

Answer: No!

- Taxpayers devote over six billion hours at a cost of $400 billion to comply with federal tax laws

Standards - Efficiency

A tax is efficient if:

- Judged by the classical standard of efficiency, it is neutral in effect on the market so that it doesn't distort the market, create suboptimal allocation of goods and services, or modify taxpayer behavior
- Judged by Keynesian (modern) standards, it is an effective fiscal policy tool for regulating the economy. Governments should use taxes to move the economy in the desired direction

Standards – Efficiency (Pt. 2)

Which standard of efficiency does the U.S. government advocate?

Answer: the Keynesian standard

- The Employment Act of 1946 charged the Executive Branch with promoting full employment and a stable dollar

Standards - Fairness

A tax is fair if:

- Taxpayer has the *ability to pay* the tax
- Tax enhances *horizontal equity*
  - Persons with the same ability to pay owe the same tax
- Tax enhances *vertical equity*
  - Persons with greater ability to pay owe more tax than persons with lesser ability to pay

Tax Policy Issues - Equity

Horizontal equity is:

- Achieved when persons with the same ability to pay owe the same tax
  - Ability to pay varies with marital status, number of dependents, health, etc.
- Concerned with a rational and impartial measure of the tax base
- Enhanced by refining the calculation of taxable income to include significant variables affecting economic circumstances
  - Tax loopholes or preferences vary across taxpayers

Tax Policy Issues – Equity (Pt. 2)

Simple solution is to eliminate all tax preferences.

This solution would increase horizontal equity at the expense of the economic or social benefits that tax preferences are designed to achieve.

Increased precision in measuring ability to pay improves horizontal equity but increases complexity of the law.

Tax Policy Issues – Equity (Pt. 3)

Vertical equity is:

- Achieved if persons with greater ability to pay owe more tax than persons with lesser ability to pay
- Concerned with a fair rate structure

Tax Policy Issues – Equity (Pt. 4)

What should the rate structure look like?

- The policy issue is not whether the rich should pay more tax than the poor, but how much more they should pay.
  - Relative tax burdens of taxpayers with different abilities to pay depends on the rate structure.
  - Rate structures can be regressive, proportionate, or progressive.

Tax Policy Issues – Equity (Pt. 5)

Regressive: rate decreases as base increases

Smith pays $2,000 tax (10%) on $20,000 income and Jones pays $3,000 tax (5%) on $60,000 income.

Proportionate: single rate applied to taxable income

Smith pays $2,000 tax (10%) on $20,000 income and Jones pays $6,000 tax (10%) on $60,000 income.

Progressive: rate increases as base increases

Smith pays $2,000 tax (10%) on $20,000 income and Jones pays $12,000 (20%) on $60,000 income.

Tax Policy Issues – Equity (Pt. 6)

Average tax rate = total tax paid divided by taxable income

Marginal tax rate = rate applied to the next dollar of taxable income

- In a progressive rate structure, marginal rate increases as taxable income increases
- In a proportionate rate structure, average and marginal rates are the same

Marginal and Average Rate Example

Tax rate structure

10% of the first $100,000; 12% of the second $500,000;
15% of income in excess of $500,000

Taxpayer has $1 million income and pays $130,000 tax

10% × $100,000	$10,000
12% × $500,000	60,000
15% × $400,000	60,000
	$130,000

What is the taxpayer's marginal rate?

15%

What is the taxpayer's average rate?

13% (130/1,000)

Tax Policy Issues – Equity (Pt. 7)

Distributive justice as a tax policy objective

- Current distribution of wealth across American households often is criticized as unjust
- This perception has increased in recent decades
- Individuals are increasingly likely to underreport their income

End of Presentation