

Chapter 4

- I. Black Markets and the Importance of the Legal Structure
 - i. Exchanges at prices outside of the range set by the Gov. (when price controls are in place) are illegal
 - ii. Controlling prices and making a good/service illegal doesn't eliminate market forces
 1. Actually are created in spite of the restrictions
 2. Created to avoid taxes
 - iii. **Black Markets**- a market that operates outside the legal system in which either illegal goods are sold or legal goods are sold at illegal prices/terms
 1. Enforcement of contracts and the dependability of quality will be less certain
 2. Greater risks- for suppliers
 3. No legal channels for peaceful settlement of disputes
 4. Violence is often used to settle disputes
 - a. Sometimes associated with crimes gone bad
 - b. Or competition among dealers
 - iv. **A legal system that provides for secure private-property rights, contract enforcement and access to an unbiased court system for settling disputes is vitally important for the smooth operation of markets**
- II. The Impact of the Tax
 - a. **Tax Incidence**: the way the burden of a tax is distributed among economic units
 1. How shared between buyers (who pay more for what they purchased) and sellers (who receive less for what they sell)
 - ii. **Statutory Incidence**: the legal assignment of a tax
 1. Where the government says who (buyer/seller) pays the tax
 2. When a tax is imposed statutorily on the seller, the **supply** curve shifts **upward** (*The price will go up and quantity will go down*)
 - iii. **Actual Incidence**- could be felt elsewhere
 1. **Example: a tax could be statutory placed on a seller, and in return the seller raises the prices to make up for paying the tax, in this case the buyer feels the burden of the tax.**
 - iv. **Tax base**: the level or quantity of an economic activity that is taxed
 1. Higher tax rates reduce the level of tax base because they make the activity less attractive.
 - v. **Tax Rate**: the per-unit amount of the tax or the percentage rate at which the economic activity is taxed
- b. The Deadweight Loss caused by Taxes
 - i. Trade results in mutual gains for buyers and sellers
 1. The difference in quantity exchanged is the *loss of the mutual benefit*.
 - ii. **Deadweight Loss or Excess Burden of Taxation**: The loss of gains from trade to buyers and sellers that occurs when a tax is imposed

1. A burden imposed on buyers and sellers over and above the cost of the revenue transferred to the government.
 2. Excess Burden of Taxation is a reflection of the losses that occur when beneficial activities are forgone because they are taxed.
 3. Deadweight loss to sellers includes an indirect cost imposed on the people who supply resources to that industry
- c. Actual Vs. Statutory Incidence
- i. **Economic analysis indicates that the actual burden of a tax- the split of the burden between buyers and sellers- does not depend on whether the tax is statutorily placed on the buyer or the seller.**
 - ii. How market will respond to a statutorily tax placed on buyers
 1. Buyers will have to pay an extra amount to the government after paying for the price of the good.
 2. Imposing a tax on buyers will shift the demand curve downward by the amount of the tax
 - a. The height of the demand curve represents the MAX. the buyer is willing to pay
 - i. Purchase price + tax = total cost
 - b. Sellers will be forced to lower the price because the demand is much lower
 - iii. The revenue derived by the government, the number of sales eliminated by the tax and the size of the deadweight loss are IDENTICAL whether the law requires payment of the tax by sellers or buyers
- d. Elasticity and the Incidence of a Tax
- i. The incidence of a tax depends on the responsiveness of buyers and sellers to the change in price.
 - ii. The burden of the a tax- it incidence- tends to fall more heavily on whichever side of the market has the least attractive options elsewhere
 1. The side of the market that is less sensitive to price changes.
 - iii. Inelastic demand/supply curves are steeper → less responsiveness to a change in price
 - iv. Elastic demand/supply curves are flatter → a higher responsiveness to a change in price
 - v. **When demand is relatively inelastic or supply is relatively elastic, BUYERS will bear the larger share of the tax burden.**
 - vi. **When demand is relatively elastic or supply is relatively inelastic, SELLERS will bear the larger share of the tax burden.**
- e. Elasticity and the Deadweight Loss
- i. Elasticity's influence the size of the deadweight loss caused by the tax because *they determine the total reduction in the quantity exchanged*

Demand/Supply	Inelastic → fewer trades	Deadweight loss smaller
Demand/Supply	elastic → more trades	Deadweight loss larger

- III. Tax Rates, Tax Revenues, and the Laffer Curve
- a. **Average Tax Rate:** tax liability divides by taxable income.
 - i. $ATR = \frac{\text{Tax liability}}{\text{Taxable income}}$
 - ii. The percentage of income paid in taxes
 - b. **Progressive (income tax) tax:** a tax in which the average tax rate rises with income
 - i. *Type equation here.*
 - ii. People with higher incomes will pay a higher percentage of their income in taxes
 - c. **Proportional tax:** a tax in which the average tax rate is the same at all income levels
 - i. Everyone pays the same percentage, but the amount will vary based on the income
 - d. **Regressive tax:** a tax in which the average tax rate falls with income.
 - i. people with higher incomes will pay a lower percentage of their income in taxes
 - ii. **Example: If someone is making 100k per year and #30k in tax (ATR of 30%) while someone else is making \$30k and paid \$15k in taxes (ATR of 50%)**
 - iii. The percentage paid in taxes declines with income
 - e. **Marginal Tax Rate (MTR):** the additional tax liability a person faces
 - i. $MTR = \frac{\text{Change } \in \text{ tax liability}}{\text{Change } \in \text{ taxable income}}$
 - ii. Determines how much of an additional dollar of income must be paid in taxes
 - iii. Relevant in *personal* decision making
 - iv. **Example: MTR is 25%, \$25 of every \$100 of additional earnings must be paid in taxes. Only allowed to keep \$75 of earnings**
 - v. Affects the incentive to earn additional income
 - f. When an activity is taxed heavily, people will choose to do less of it.
 - g. **Laffer Curve:** A curve illustrating the relationships between the tax rate and tax revenues
 - i. **Beyond some point, higher tax rates will shrink the tax base so much that revenue will eventually decline a tax rates are pushed to higher and higher levels**
 - ii. **Higher tax rates \neq more revenue**
 - iii. **When tax rates are already high, a rate reduction may increase tax revenues. Increasing high tax rates may lead to less revenue.**
- IV. The Impact of a Subsidy
- a. **Subsidy:** a payment the government makes to either the buyer or the seller, when a good or service is purchases or sold
 - i. Usually per-unit
 - b. Elasticity and the Benefit of Government Subsidy Programs