Ch 8. The Costs of Taxation

- **The effects of Tax**: If government impose tax, what happen to CS, PS, and TS?

- A tax – Raises the price buyers pay and lowers the price sellers receive

- Reduces the quantity bought and sold

- Without a tax, TS = (A+B+C) + (D+E+F)

- With a tax, TS = CS(A)+ PS(F) + Tax revenue (B+D)

- The tax reduces total surplus by C + E

- '**Deadweight loss, DWL**'
    - The fall in total surplus that results from a market distortion, such as a tax.

- **Determinants of Deadweight Loss**
- The greater the elasticities of supply and demand, the greater the deadweight loss of a tax
    - (With a given demand curve) The more elastic is supply, the easier for firms to leave the market when the tax reduces Ps, the greater Q falls below the surplus maximizing quantity, the greater the DWL.

    - (With a given supply curve) The more elastic is demand, the easier for buyers to leave the market when the tax increases P_B, the more Q falls below the surplus-maximizing quantity, and the greater the DWL.

- <u>Examples</u>: Would the DWL of a tax be larger if the tax were on:

  - A. **Breakfast cereal** or sunscreen?

  - B. Hotel rooms in the short run or hotel rooms **in the long run**?

  - C. Groceries or **meals at fancy restaurants**?

- **Tax size and DWL**

  - As the tax increases, Deadweight loss increases even more rapidly than the size of the tax.

- **Tax size and Tax revenue**

  - Tax revenue increases initially, then decreases
  - When tax rates are low, raising them doesn't cause much harm, and lowering them doesn't bring much benefit.
  - When tax rates are high, raising them is very harmful, and cutting them is very beneficial.

- **Laffer Curve: Relationship between the size of the tax and tax revenue.**