Notes on Chapter 4

Elasticity:

We introduced the concepts of demand and supply elasticity. In simple words, elasticity is a measure of demand or supply sensitivity. When price changes, quantity demanded changes. When income changes, demand changes. But how strong are these effects? Price Elasticity of Demand provides us with a measure of how responsive our demand is to changes in its own price. Similarly income elasticity provides us with a measure of how responsive our demand is to changes in income. We can also have cross price elasticity which measures how responsive the demand of a commodity is when price of another commodity changes. The same thing applies for supply.

For demand and supply curve we showed, that the flatter the curve, the more sensitive demand/supply is to price changes and the steeper it is the less responsive it is to price changes. We talked about the factors, which influences or determines the demand elasticity.

You need to remember the mathematical formula to compute elasticity.

\[ e_d = \frac{\text{percentage change in quantity demanded}}{\text{percentage change in price}} \]

This is a easy formula to remember. If we want to measure income elasticity of demand, the numerator becomes \( \text{percentage change in demand} \) and the denominator becomes \( \text{percentage change in income} \). If we are interested in cross price elasticity, the denominator changes to \( \text{percentage change in the price of the other commodity} \).

When we are trying to find the percentage changes, we use the following formula. The one I am writing is for price elasticity of demand, however, it can be easily modified to present income elasticity or cross price elasticity.

\[ e_d = \frac{\text{Change in quantity demanded}}{\frac{\text{Quantity average}}{\text{Change in price}}} = \frac{\frac{Q_2 - Q_1}{Q_{\text{avg}}}}{\frac{P_2 - P_1}{P_{\text{avg}}}} \]

We have discussed how to compute different types of elasticity. We discussed the price elasticity of demand and how it varies along a single demand curve. We also discussed the relationship between price elasticity of demand and total revenue. For example, I would expect you to realize that if demand is in an elastic range (meaning that the absolute value of elasticity is larger than 1), then a reduction in price would lead to an increase in total revenue. By looking at the sign of the cross price elasticity you should also be able to identify if the two goods in question are substitutes or complements. The income elasticity of demand also can tell us if a good is a normal good or an inferior
good. It can also tell us if it is a **necessity (basic good)** or a **luxury**. Make sure you know what the **Engel's law** says.

**Supply Elasticity:**
The idea of supply elasticity is very similar to Demand elasticity. Like demand, supply can also be elastic and inelastic, perfectly elastic or perfectly inelastic. The method of computation is also very similar.

**Per Unit Tax and Elasticity:**
We spent quite some time demonstrating how the burden of taxation is divided between the producers and the consumers depending on the relative demand and supply elasticities. If demand is more elastic than supply, then larger portion of the tax burden has to be borne by the producers. If supply is more elastic than the demand, then most of the tax burden is borne by the consumers. We used curves of different steepness to demonstrate these features of tax.

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**Notes on Chapter 5**

**Marginal Utility and Consumer Choice:**
We discussed how **Utility** is synonymous to satisfaction. We emphasized that in economics we are concerned only with market-derived contributions to our happiness or utility. We introduced **Utils** as a measure of utility. We stressed that utils are simply a hypothetical measure which can be used to rank commodities and should never be used to do interpersonal comparison of utility. We discussed the difference between **Total Utility** and **Marginal Utility**. We talked about the **Law of Diminishing Marginal Utility** and showed the relationship that exists between Total Utility and Marginal Utility. We discussed the **Water-Diamond Paradox** and how it is the marginal utility which determines the value/price of a product not the total utility. We used several examples and tables to understand how we make product selections under a fixed budget. As a byproduct we get some insight regarding the Law of Demand. We showed that as the price of a product falls, the MU/P ratio increases and makes the product more attractive. This then leads to a reallocation of our spending and we buy more of that product. We discussed the **MU/P Equalization Principle** and emphasized its importance. We finished the chapter with a discussion of **Consumer Surplus**.

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**Notes on Chapter 6**

**Price Ceiling and Price Floor:**
We discussed the distinction between **Market Price** and **Equilibrium Price**. So far we have been assuming that Equilibrium price is the price that exists in the market and that is the Market Price. But that is only true without any sort of Government intervention in the market. However, sometimes the government does interfere with the working of the market and creates distortions. In those times the market price can be different from
the equilibrium price. So it is important to remember the distinction between Market price and Equilibrium price.

**Equilibrium Price:** The price at which the market clears. That is the price at which there is no excess demand and no excess supply. At this price the quantity demanded is always exactly met by quantity supplied.

**Market Price:** The price at which goods are exchanged in the market. The market price may or may not equal the Equilibrium Price.

The government can impose different types of price controls. If the government believes that the equilibrium price is too high, it may try to lower the price. In this situation it may impose a **price ceiling.** The purpose of imposing a price ceiling is to protect the consumers from paying a higher price. Since *the price ceiling is imposed below the equilibrium price,* it creates chronic excess demand in the market. To ensure the lower market price (ceiling price), the government has to adopt some sort of rationing mechanism to distribute the small quantity that is available in the market. We discussed the different problems and inefficiencies associated with this type of price ceilings and specifically discussed rent control and its adverse consequences.

The other type of price control that the government can impose is known as setting a **price floor.** Price floors are used to protect the producers. It does not allow the price to fall below a certain floor level, set by the government. Since *the floor price is set above the equilibrium price,* there is always an excess supply in the market. To ensure a market price above the equilibrium price, the government has to remove the excess supply from the market. This creates all sorts of problems for the government, which was discussed in class.

**Notes on Chapter 8**

**Costs of Production:**

This chapter devotes itself to the analysis of cost. We talked about Fixed Cost and Variable Costs. We discussed the shape of the Total, Variable and the Fixed Cost curves and emphasized the role of the labor component of the cost (mainly how labor productivity varies with output and the scale of operation) in determining the shape of the total cost curve. We discussed Average Total Cost, Average Variable Cost and Average Fixed Cost and how they look in graph. We started from the Total cost curve and showed how we can derive the Average Total Cost, Average Variable Cost and Marginal Cost from there and in the process showed the interrelationship that exists between these. We showed and discussed why the marginal cost curve always cuts the average total cost curve and average variable cost curve from below and at the lowest points of those curves. We discussed the economies and diseconomies of scale and how the long run average total cost curve is the envelope of all the short run average total cost curves.

We did several exercises involving cost. One of these is like the one, which follows.
Fill in the blanks in the following table.

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