DEMAND and ELASTICITY (INTRODUCTION)
CHAPTERS 10 and 5 (through page 123, skim remainder)

Note: Chapter 11 optional. For students majoring in economics, it would be worth getting familiar with this material, as it will be central in econ 100A

I  THEORY OF CONSUMER "BEHAVIOR"-----DEMAND
II THEORY OF THE FIRM----SUPPLY (of products vs factors)

DEMAND
⇒ All Consuming Units assumed to be maximizing their UTILITY, I.E., their well-being, satisfaction, happiness, whatever. Economists assume that we are all MAXIMIZERS.
⇒ Second crucial assumption: MORE IS BETTER

graphically:

3 possibilities, given below

A

B

C

X

X

X

A

B

C

X

X

X

A

B

C

X

X

X

A

B

C

X

X

X
Clearly, C (concave from below) makes the most sense! I.E. marginal utility declines for all commodities (eventually); at least, that is the economist’s basic assumption

Given this assumption, and if we "know" consumers preferences...not "specific" preferences, but just the proper characterization: that is: MORE IS BETTER and: there is DECLINING MARGINAL UTILITY, OR \[ dU/dX \ldots \text{we can characterize} \]

1. the combination of goods chosen, and
2. the amount of a given good, as its price changes

(i.e., the DEMAND CURVE for the commodity)...Central concept in micro-economics.

OPTIMAL COMBINATION OF GOODS CHOSEN

assuming all prices are the same: \[ MU_x = MU_y \ldots \]

if prices differ: \[ MU_x/P_x = MU_y/P_y \ldots \]

AND THE EQUATING OF MARGINAL UTILITIES PROVIDES THE GENERAL LAW OF DEMAND: That is, if the price of a given commodity falls, MORE will be demanded.....this holds for what we consider NORMAL GOODS, as opposed to SNOB GOODS AND INFERIOR GOODS....more on the latter with a discussion of income elasticity
A SUMMATION of individual demand curves gives MARKET DEMAND, which, since individual curves decline, will also decline. .....how much, etc, depends on consumers TASTES...next chapter.

This MARKET DEMAND CURVE assumes “other” things as given: ➔TASTES, INCOME PRICES OF OTHER GOODS and EXPECTATIONS..discussed below

➔MOVEMENTS ALONG THE CURVE VS SHIFTS IN THE CURVE

In A, a movement from a to b is the result of a price change (movement along the demand curve: in B, a movement from a to b results from a change in something else (a shift in the demand curve)
SHIFTS IN THE DEMAND CURVE AND ELASTICITY

THE MARKET DEMAND CURVE

**Shifts** in the Demand Curve (requires the introduction of the concept of ceteris paribus) as distinct from **Movements** along the demand curve.

- TASTES
- INCOME
- PRICES OF OTHER COMMODITIES (substitutes and complements---discussed below)
- EXPECTATIONS

ELASTICITY

Give generalized definition of elasticity---reaction to a "force"

Many "elasticities" in economics...

- output to increased labor
- sales to advertising expenditures
- major focus on two: **Price and Income**

PRICE ELASTICITY

defined as the percentage change in demand for a percentage change in price:

\[
\frac{dQ}{Q} = \frac{(dQ/dP)(P/Q)}{dP/P} \text{ i.e. (slope) times ( point on curve)}
\]
Our major interest in price elasticity is that it indicates what happens to TOTAL REVENUE when prices change…

An “elastic” demand suggests that when prices rise (FALL), demand falls (RISES) a lot, and thus revenue would decline (INCREASE)

THE REVERSE IS THE CASE WHEN DEMAND IS INELASTIC…

NOTE: TOTAL REVENUE IS SIMPLY THE AREA UNDER THE DEMAND CURVE, OR PQ

Notice: as the price falls on the demand curve around a, total revenue increases, and decreases around b. TOTAL REVENUE IS A MAXIMUM AT C (on a linear demand curve, the MID POINT)

The price elasticity is high (> 1, or < –1) on the demand curve above c, and is low (< 1, or > –1) below c. At c, the elasticity is exactly 1.

The conventional terms are elastic, inelastic, and unitary elasticity
EXTREME EXAMPLES—E = 0, AND E = INFINITY

Price Elasticity a function of:

1) availability of substitutes,

2) percentage of budget spent on commodity, and

3) **TIME** (short and long run issues).

4) and the more “specifically” good is defined (e.g., Art films, vs. The Terminator), the greater the possibility of substitution.

Note distinction between MARKET AND FIRM elasticity of demand....latter is **always more elastic**, and in the extreme, i.e. perfect competition, the firm's demand curve is COMPLETELY ELASTIC. WHY???
INCOME ELASTICITY

\[
\frac{dQ}{Q} \frac{dY}{Y}
\]

Could refer to what happens when an INDIVIDUAL (family) has more income.....but more relevant concept with respect to TIME. Here, changes in time **almost** always mean growth in income. Normal (E > 0), Inferior (Giffen, where E < 0), and Superior Goods (LUXURY, where E > 1)

EXAMPLES

Government Goods:
Education
Welfare

Private Sector Consumption Goods
basic necessities
basic raw materials
"luxury" goods

A brief comment on concepts of Substitute and Complimentary Goods ....can be defined by the CROSS-ELASTICITY  i.e., when the price of commodity X increases, the demand for substitutes of X grow, and the demand for compliments declines....butter/margarine--gasoline/autos--gasoline/roller skates?????

*(Note: more formal discussion of substitutes and compliments in optional Chapter 11, pp. 266-269)*
ILLUSTRATION OF SUPPLY ELASTICITY IN THE LABOR MARKET
(not unlike the Corn-Hog Cycle in agriculture) Chapter 5, p. 123 ff

Supply, once brought to market is THERE, and it takes a "while" for supply to RESPOND TO CHANGES IN PRICE .....short and long-run supply changes, inelastic in the short-run....much more elastic in the long-run "Problem" in many areas of highly skilled occupations.

Notice, in cases where there is a very slow supply response (where a long training or education period is required, an increase in demand (from \(d_1\) to \(d_2\)) can lead to a very rapid increase in wages----which in turn attracts lots of people to the occupation. After a while, with the increase in supply (from \(s_1\) to \(s_2\)) those entering the profession find wages a lot lower than anticipated. This is also the result of individuals acting without regard to collective response.
SUPPLY
(of the FIRM...note: individual as supplier of services to be discussed later)

what each firm is willing to put on the market is a function of the cost of producing the good in question:

\[ S_x = f(P_1, P_c, P_{rm}) \]

Introduce the concept of OPPORTUNITY COST

As distinct from monetary costs.....i.e., the PAYMENT to factors of production.....explicit and implicit......
implicit as a function of opportunity costs...easy example via the "ma and pa" grocery store.

SHORT RUN/LONG RUN
requires the introduction of "variable" vs "fixed costs."

The variable costs, assuming a given size plant, varies with the factors productivity:
A---------B considered the "efficient" range
LONG RUN as a series of SHORT RUNS

LONG RUN COSTS TURN UP BECAUSE
"organization/management/coordination" as the ultimate FIXED FACTOR.
LONG RUN COST CURVE AS AN INDICATION OF CONSTANT,
INCREASING, DECREASING RETURNS.
concept of MARGINAL COSTS:

\[ \frac{dC}{dO} \]

**falls at first**-------------------------increasing productivity and fall in fixed costs.

Then rises as falling productivity offsets the continued fall in fixed costs.

Concepts relevant in determining the actual Market Behavior of the Firm.