**PAI 897 Notations Used in the Lecture Notes up to Lecture 6**

**Lecture 2**

D – Demand

 D’ – A contrasting demand curve.

Q or q – quantity

f(.) – a function that will transform inputs into output

pb – price per unit of beef

pc – price per unit of chicken

Y – income

pp – price per unit of processed pork

S – Supply

 S’- A contrasting supply curve.

Ph- price per unit of the input hogs

**Lecture 3**

P\*- the equilibrium price, the perfectly competitive price, the market clearing price

q\*- the equilibrium quantity

$\overline{p}$ – a price floor (minimum price)

$\overbar{p}$ – a price ceiling (maximum price)

**Lecture 4**

Qs - the quantity supplied

η – the supply elasticity

∆ - change

∞ - infinity

-∞ - negative infinity

ε – the demand elasticity

ξ – the income elasticity

ε12 – the cross price elasticity: percent change in quantity of good one in response to a percent change in price of good two.

τ – a tax

$α\in \left[0,1\right]$ The tax rate α is an element of the set (∈) bounded from below and including 0/ 0% and bounded from above and including 1 / 100%.

pc – price paid by the consumer

ps – price received by the seller

qτ – the quantity in the market with the tax imposed

CI is consumer incidence and is defined as the elasticity of supply / (elasticity of supply-elasticity of demand) or $\frac{E\_{s}}{(E\_{s}-E\_{D})}$ which could also be written as $\frac{η}{η-ε}$

σ- size of the subsidy

qσ – the quantity in the market with the subsidy imposed

**Lecture 5**

A,B,C,D,E – different consumption bundles with differing quantities of rice and beans.

I – an indifference curve

Origin – the point (0,0) units of the commodities.

I1 , I2,… Indifference curves labeled in order by distance from the origin

MRS – Marginal Rate of Substitution

MU – Marginal Utility

U – Utility

p1 – price per unit of good one

p2 – price per unit of good two

x1 – quantity of good one

x2 – quantity of good two

Y – income of the consumer

B – the budget line

MRT – the Marginal Rate of Transformation

FS – the cash value of food stamps

f- units of food consumed

pf – price per unit of food

o – units of other consumed

po – price per unit of other

S – substitution effect

I – income effect

T – total effect

CPI – consumer price index

y1 – income in year one

y2 – income in year two

$p\_{1}^{c}$ price of clothing in year 1

$p\_{2}^{c}$ price of clothing in year 2

$p\_{1}^{f}$ price of food in year 1

$p\_{2}^{f}$ price of food in year 2

c1 – units of clothing in year one

c2 – units of clothing in year two

f1 – units of food in year one

f2 – units of food in year two

w – hourly wage before tax taken

w1 – hourly wage at marginal tax rate 1

w2 – hourly wage at marginal tax rate 2

H – hours per day of work

N – hours per day of leisure / non work.

**Lecture 6**

Π, π – profit

Q=f(K,L,E,M) Output Q is a function f(.) of inputs K – capital, L – labor, E-energy, M-materials.

$\overbar{K}$ – capital level held fixed in the short run.

AP – average product

MP – marginal product

SR- short run

LR – long run

MRTS – marginal rate of technical substitution

IRS – increasing returns to scale

CRS – constant returns to scale

DRS- decreasing returns to scale

MC – marginal cost

r – the rental rate of capital

w – the wage rate of labor

C or TC – Total cost

FC – fixed costs

VC – variable costs

AC-average cost

MC – marginal cost

AFC – average fixed cost

AVC – average variable cost

MR – Marginal revenue

MWTP – marginal willingness to pay

CS – Consumer surplus

PS- Producer surplus

TSW – Total Social Welfare (also Total Social Surplus)

DWL – Deadweight Loss