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Subject : Economics – I

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Exam : Mocks – 25.

PART-II

Q7. Elaborate the own-price, cross-price and income elasticity both theoretically and emperically. Also explain the relation between the total revenue and own-price elasticity?

Ans:

ELASTICITY:

Definition :

Elasticity means the rate of change of one unit in response to another. Elasticity can be measured by calculating the change induced in one thing, due to any exogenous variables — like price levels.

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- Elasticity can be of three types :

- **E < 1 :**

Elasticity is less than one when the good is a necessity. Change in price levels does not induce a huge change in its consumption.

- **E > 1 :**

It is less than one when the good is a luxury good. Price levels do effects its consumption levels.

- **E = 1 :**

When the good is an inferior good, price levels do not effect it.

E < 1	E > 1	E = 1
Normal goods	Luxury goods	Inferior goods
Examples :	Examples :	Examples :
Food, housing, medicines, car, etc	Latest phones, new houses, expensive cars etc	canned food, old fashioned clothes, etc.

- Factors Effecting Elasticity :

→ In short Run :

Price is the only factor effecting

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elasticity in the short run.

→ In long run:

- Income levels.
- Tastes and preferences
- Fashion trends
- Demand for goods
- Marginal propensity to consume.
- Utility.

TYPES OF ELASTICITY:

The types of elasticity include:

1. Own-price elasticity.
2. Cross-price elasticity.
3. Income elasticity.

a) CROSS-PRICE ELASTICITY:

- **Definition:**

Cross-price elasticity is the change in demand of one good, due to change in price of another good.

- **Formula:**

Empirically, it can be shown as:

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$$E_c = \frac{\Delta d / d}{P / \Delta p}$$

- Δd : % Change in demand
- d: original demand of good 1
- ΔP : % Change in price
- P: Original demand of good 2.

Price of wheat (KG)	Demand for Rice (Kilo)
40 Rs	200
60 Rs	300

Putting in formula:

$$E_c = \frac{100/200}{40/20}$$

$$E_c = 0.5/2$$

$$E_c = 0.25$$

The cross-price elasticity is 0.25.

In a goods market, there is an inter-relation between the commodities as well. In a general equilibrium, change in one sector has an effect on the other sectors. Cross-price elasticity is an example of that. An effect in

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the price of one commodity influences the level of demand for another.

b) OWN-PRICE ELASTICITY:

- Definition:

Own-price elasticity is the change in the demand of a commodity due to change in its own price levels.

- Formula:

Mathematically, it can be written as

$$E_o = \frac{\Delta d / d}{\Delta p / p}$$

Δd : % Change in demand
d : demand of good before price change
Δp : % Change in price
p : Original price.

Price levels (apples) (kg)	Quantity demanded
200 Rs.	40
400 Rs.	30

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Putting in formula:

$$E_o = \frac{\Delta d / d}{\Delta P / p}$$

$$= \frac{200/200}{10/40}$$

$$= \frac{1}{0.25}$$

$$E_o = 4$$

In economics, demand and supply are the two core mechanisms. Here too, the demand change in the good will occur due to its increase in price levels. This is because demand and price are inversely related and effect each other.

c) INCOME ELASTICITY:

Definition:

Income elasticity is the change in income levels of a consumer, which directly impacts their level of demand. It is the change in demand due to change in the income levels.

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- Formula:

Mathematically, it is written as:

$$E_i = \frac{\Delta d / d}{\Delta I / I}$$

Δd : % Change in demand

d : Demand

ΔI : % Change in income

I : Income

Change in Income (Rs)	Change in demand (Shoes)
15,000 Rs	400
20,000 Rs	500

Putting in formula,

$$E_i = \frac{100/400}{5000/15000}$$

$$= 0.25/0.33$$

$$E_i = 0.75$$

The income elasticity is 0.75.

The shows that an increase in the ~~price~~ income of an consumer will increase his demand for a normal good. This is known as the income elasticity of demand.

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* RELATIONSHIP BETWEEN THE CROSS-PRICE ELASTICITY AND TOTAL REVENUE

- **TOTAL REVENUE:**

  Definition:

  Total revenue is the amount of revenue generated by a market due to selling of its goods.

- **CROSS - PRICE ELASTICITY**

  Definition:

  Cross - price elasticity is the change in demand of one good, due to change in price of another good.

- **RELATIONSHIP:**

  - Total Revenue is:

    $$TR = P \times Q$$

  - Cross - Price Elasticity is:

    $$E_c = \frac{\Delta d / d}{P / \Delta p}$$

Revenue is calculated via the quantity supplied at a price

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level. Elasticity, on the other hand, is the response to change in price levels. In cross-price elasticity, the demand is effected by price levels as well, causing a substantial change in its supply levels. The total revenue, as a result, is effected as the producer faces a cost of increasing their good's price level. This is because price has a direct effect on demand — its increase will hamper the consumer demand.

Q8. Point out the major sources of inflation in Pakistan: Justify these sources empirically, and how this issue was managed in the past three decades in the country?

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INFLATION:

Definition:

An increase in the overall price levels of goods and commodities is called inflation.

It is denoted by π.

MAJOR SOURCES OF INFLATION IN PAKISTAN:

Inflation is one of the most pressing issues in the economy of Pakistan. It has fueled many other economic crises in the country, creating an endless labyrinth of economic recession. Some of the major causes of inflation in Pakistan are as follows:-

a) LOW GDP GROWTH RATE:

A GDP refers to the Gross Domestic Product of a country. Mathematically it can be shown as:

$$GDP = C + I + G + (X - I)$$

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Where

C = Consumption

I = Investment

G = Government Spending

X - I = Net exports (Exports - imports)

A GDP shows the economic state of a country. In FY 2024-2025, Pakistan recorded a GDP of 342 billion, which is still less than its imported rates. GDP of Pakistan is less because of the price levels as the consumers' are not able to afford it. When the government invests less on innovation, agricultural and industrial sectors, budget allocation, and factors of production, the economy lags behind. This is the very case in Pakistan. Our net imports have exceeded our net exports, suggesting an inability of the state to earn more from its domestic goods. Thus, in the presence of imported commodities, the rate of price occurs and becomes unaffordable for many.

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b) INTERESTED RATES:

As shown in the IS model, it is known that investment and saving go side by side. An increase in the levels of interest imposed in the state, has discouraged investments. Other than that, the recurring economic recession and unstable economy also discourages investment.

c) CURRENCY DEPRECIATION:

In 2021, Pakistan experienced a significant decline in its currency with dollar reaching upto 350Rs. in the last years that followed. The by-product of such a situation causes a rise in inflation levels as well. It also discourages FDI of a country and makes the goods basket expensive for production as well as consumption for the country as a whole.

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d) **COST-PUSH:**

The cost of production has increased in Pakistan. The four factors of production are:

- Land.
- Labor.
- Capital.
- Enterpreneurship.

When investment is lesser, the use of capital is fewer, no innovation and spending is being done in this economy, the cost of production has increased. This effected the production capacity of producers and even effected labor demand. This is because many firms are unable to provide minimum after their own expenses, and hence inflation occurs.

e) **UNEMPLOYMENT:**

The unemployment level refers to the number of people who are actively seeking a job but not getting it. The Ue level in Pakistan is at startling 38%.

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This is concerning as Pakistan's youth bulge is around 60%. In such situations, its not just the economy that suffers, but also the demand for labour as firms are unable to afford it.

f) HIGH TAXATION RATES :

The nominal tax imposed on the domestic goods increases its price. In Pakistan, Pakistani products always have high taxes imposed on them. Other than that, crimes like tax evasion, money laundering, corruption are also common practices. High taxation causes inflation as well.

g) UNSTABLE GOVERNANCE :

In the pursuit for power, Pakistan's political parties are facing an ongoing disagreements. The country has experienced some protests and riots as well, leading to hostile and unrest environment. This, indirectly and directly both,

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effected the county and its ability to grow economically.

Q. Explain the (total cost minus total revenue) TR-TC approach of the producer equilibrium. How is it different from any other approach?

Ans: **TR-TC :**

The formula to calculate the profit of a good(s), by any firm, is :

$$P = TR - TC$$

P = is the profit.

TR = Total revenue

TC = Total costs of production.

On the other hand, the producers also seek to attain equilibrium, in which the attain the maximum level of

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profit.

Producer equilibrium can be shown as :

$$P = TR = TC$$

The point when the total costs of the production are equal to the total revenue generation done by a firm, it is known as producer equilibrium. At this level, the maximum utility is attained by the producers.

FACTORS EFFECTING THE PROFIT MAXIMIZATION FOR A PRODUCER :

Several factors can contribute to a producer's ability to maximize profit :

1. market competitive prices.
2. meeting demand levels
3. High supply levels
4. Up to the market and the fashion trends.

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5. Good Market Reseach
6. Low Inflation
7. High employment rates.
8. Consumer preferences.
9. marginal propensity to consume (MPC)
10. Income levels.

• HOW THIS APROACH IS ANY DIFFERENT:

There are ~~three~~ many approaches to attaining profit maximization. But, environmental factors, market conditions and consumer preferences and affordability effect them in a way.

Three aspects of profit:

a. TR < TC:

When total costs of production exceed the revenue generation. In such a scenario, a firm faces a net loss and there is no accumulation of any profit.

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b. **TR > TC** :

Sometimes, when price levels falls, inflation levels decrease and market conditions change. Then, a firm can afford to generate profit at a greater level.

The setback of such a scenario is at it causes the market of the producer to reach a disequilibrium. The costs of production are overpowered by the revenue that is being produced. This means that the demand for the goods is larger than its supply. In such cases, price levels are not reduced ~~to~~ but rather increased. This, in a response, brings down the demand for that good. It creates a considerable loss for the firm and also creates producer disequilibrium.

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c. TR = TC :

The profit is maximized by a firm when its total revenue is equal to its total costs. This means that the amount instilled by a producer in its factors of production has been equivalent to its amount of revenue generation. It is an ideal scenario for a producer as it brings him an utmost benefit at this level.

A close overview of the three scenarios; TC < TR, TC > TR and TC = TR, showed that TC = TR is the most ideal state for a producer. It is a point where a producer manages to reach equilibrium and attain the maximum benefit

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from his production. Hence, it is an ideal scenario.

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