

Economics Higher Level – MBQ Formulas

Section 1.2: Elasticities

Price Elasticity of Demand – responsiveness of the quantity demanded of a commodity to changes in its price.

$$PED_{\text{Good A}} = \frac{\text{Percentage change in Qd of Good A}}{\text{Percentage change in P of Good A}}$$

Cross Elasticity of Demand – responsiveness of the quantity demanded for one good to changes in the price of another good.

$$XED_{AB} = \frac{\text{Percentage change in Qd of Good A}}{\text{Percentage change in P of Good B}}$$

Income Elasticity of Demand – responsiveness of the quantity demanded for a good to changes in income.

$$YED_{\text{Good A}} = \frac{\text{Percentage change in Qd of Good A}}{\text{Percentage change in income}}$$

Price Elasticity of Supply – responsiveness of the quantity supplied of a good to changes in its own price.

$$PES_{\text{Good A}} = \frac{\text{Percentage change in Qs of Good A}}{\text{Percentage in P of good A}}$$

Section 1.5: Theory of the Firm

Total Product – sum of all products from the start until now

Average Product – a measure of productivity.

$$AP = \frac{\text{Total Product}}{\text{Quantity of Labor}}$$

Marginal Product – change in total product.

Total Profit – Total Revenue – Total Cost

Accounting Profit – Total Revenue – Explicit Cost

Economic Profit – Total Revenue – (Explicit and Implicit Costs)

Average Cost – cost per unit of output produced.

$$AC = \frac{\text{Total Cost}}{\text{Total Output}}$$

$$AC = \text{Average Fixed Cost} + \text{Average Variable Cost}$$

Average Fixed Cost – total fixed cost per unit of output produced.

$$AC = \frac{\text{Total Fixed Cost}}{\text{Total Output}}$$

Average Variable Cost – total variable cost per unit of output produced.

$$AC = \frac{\text{Total Variable Cost}}{\text{Total Output}}$$

Marginal Cost – addition to total cost as a result of producing an additional unit of output.

$$MC = \frac{\text{Change in (Total or Total Variable) Cost}}{\text{Change in Total Output}}$$

Section 2.1: Level of Economic Activity

GNP – GDP + net property (or factor) income from abroad

GDP Deflator – measuring the current year level of prices relative to the level of prices in the base year.

$$\text{GDP Deflator} = \frac{\text{Current Year Price}}{\text{Base Year Price}} \times 100$$

$$\text{Real GDP} = \frac{\text{Nominal GDP}}{\text{GDP Deflator}} \times 100$$

GDP Per Capita – per person or head

$$\text{Per Capita GDP (real)} = \frac{\text{GDP}}{\text{Total Population}}$$

Purchasing Power Parity Rate – rates of currency conversion that equalize the purchasing power of different currencies by eliminating differences in domestic price levels.

$$PPP = \frac{\text{Average price of a basket of goods and services in USA}}{\text{Average price of a basket of goods and services in UK}} = \$X \text{ per } \pounds 1$$

Section 2.2: Aggregate Demand and Aggregate Supply

Keynesian Multiplier – impact on Real GDP due to a change in any of the AD components.

$$K = \frac{\text{Change in real GDP}}{\text{Initial change in injections}}$$

$$K = \frac{1}{1 - \text{Marginal Propensity to Consume}}$$

$$K = \frac{1}{\text{Marginal Propensity to Save}}$$

$$K = \frac{1}{\text{Marginal Propensity to Withdraw}}$$

Section 2.3.1: Unemployment

Unemployment Rate – people who are not working but seeking employment.

$$\text{Unemployment Rate} = \frac{\text{Number of unemployed}}{\text{Labor force}} \times 100\%$$

Labor Force Participation Rate – people who are employed plus people who are unemployed.

$$\text{LFPR} = \frac{\text{Labor force}}{\text{Working-age population}} \times 100\%$$

Section 2.3.2: Low and Stable Inflation

Consumer Price Index – changes in prices of a basket of goods and services consumed by the average household.

$$\text{Inflation/Deflation rate over a year} = \frac{\text{CPI Year 1} - \text{CPI Year 2}}{\text{CPI Year 1}} \times 100\%$$

$$\text{CPI} = \frac{\text{Price of basket of goods and services in current year}}{\text{Price of basket in base year}} \times 100\%$$

Weighted Price Index (page 103) – reflecting the relative importance of various items in the basket of goods and services.

$$\text{Weighted CPI} = \text{Given Year's Price Index} \times \text{Weights}$$

Section 2.3.3: Economic Growth

Actual Growth – percentage increase in actual output produced during the given time period considered, usually a year.

$$\text{Actual Growth} = \frac{\text{Real GDP Year 2} - \text{Real GDP Year 1}}{\text{Real GDP Year 1}} \times 100\%$$

Section 2.3.4: Equity in Income Distribution

Gini coefficient – a summary measure of the ratio of the area between the Lorenz curve and the 45-degree line to the whole area below the 45-degree line.

$$\text{Gini coefficient} = \frac{\text{Area A}}{\text{Area (A+B)}}$$

Average Tax Rate – total taxes paid by a person divided by total income.

$$\text{ATR} = \frac{\text{Total Taxes}}{\text{Total Income}}$$

Marginal Tax Rate – additional taxes paid per additional dollar of income.

$$\text{MTR} = \frac{\text{Change in Total Taxes}}{\text{Change in Total Income}}$$

Section 3.1: International Trade

Absolute Advantage – producing more of a good with the same resources or producing one unit of good with less resources.

Comparative Advantage – producing a particular good at a lower opportunity cost than another country.

Section 3.3: Balance of Payments

Current Account – sum of balance in trade in goods, balance of trade in services, net income flows and net current transfers.

Capital Account – inflows minus outflows of funds for capital transfers and transactions in non-produced, non-financial assets.

Financial Account – inflows minus outflows of funds for capital transfers and transactions in financial assets.

Marshall-Lerner Condition – devaluation/depreciation will improve the current account balance only if the sum of price elasticities of demand for imports and exports is greater than one.

$$|PED_x + PED_m| > 1$$

Section 3.5: Terms of Trade

Terms of Trade – an index that shows the value of a country's average export prices relative to their average import prices.

$$\text{TOT Index} = \frac{\text{Weighted index of Average Export Prices}}{\text{Weighted index of Average Import Prices}} \times 100$$