Terms of Trade: Different Concepts

Meaning of terms of trade (TOT)

In economics, terms of trade (TOT) refer to the relationship between how much money a country pays for its imports and how much it earns from exports. It is expressed as a ratio of import prices to export prices. The concept of terms of trade is important in economics as it throws light on the extent to which a nation can fund its imports based on the returns of its exports. The formula to calculate an economy's TOT is:

$$\text{Terms of Trade(ToT)} = \frac{\text{Index of Export Price}}{\text{Index of Export Price}} \text{x}100$$

Terms of Trade (TOT) can be illustrated with a numerical example as below:

1. Let prices be constant at $1 per unit across both countries and for both products.

2. Let Country-A can export 700 tons of rice to Country-B at $700 as export price.

3. Let Country-A needs to import 200 tons of wheat from Country-B at $200 as import price

We have;

$$\text{Terms of Trade(ToT)} = \frac{700}{200} \text{x}100 = 3.5 \text{ x } 100 = 350$$

Hence, the value for Country A’s terms of trade is 350.

Concepts of Terms of Trade

The following are the various concepts of Terms of Trade:

1. Net Barter Terms of Trade

2. Gross Barter Terms of Trade

3. Income Terms of Trade

4. Single factor Terms of Trade

5. Double Factorial Terms of Trade

6. Real Cost Terms of Trade

7. Utility Terms of Trade

1. Net Barter Terms of Trade: Net Barter Terms of Trade also called commodity Terms of Trade is defined as a ratio of export prices to import prices.

In symbolic terms: $T_n = P_x/P_m$

Where;

T_n stands for net barter terms of trade.

P_x stands for price of exports (x),

P_m stands for price of imports (m).

2. Gross Barter Terms of Trade: Gross Barter Terms of Trade is the ratio of physical quantity of import to physical quantity of export.

In symbolic terms: $T_g = Qm/Q$

Where;

Tg = gross barter terms of trade

Qm = quantity of imports

Qx = quantity of exports

3. Income Terms of Trade: Income Terms of Trade is defined as- commodity TOT multiplied by quantity of export.

Symbolically, income terms of trade can be written as: Ty = (Px/Pm) Qx.

Where;

T_y = Income terms of trade

P_x = Price of exports

Q_x = Volume of exports

P_m= Price of imports

4. Single factor Terms of Trade: Single factor Terms of Trade is calculated by multiplying Net Barter Terms of Trade with productivity index of domestic export sector.

Symbolically, Single factor Terms of Trade can be written as: Ts = (Px/Pm) Zx

Where;

T_s = Income terms of trade

P_x = Price of exports

P_m= Price of imports

Z_x = productivity index of domestic export sector

5. Double Factorial Terms of Trade: Double Factorial Terms of Trade is calculated by multiplying Net Barter Terms of Trade with the ratio of factor productivity of domestic industry and foreign export industry.

Symbolically, Double Factorial Terms of Trade can be written as: $T_D = T_C (Z_X/Z_M)$

Where;

T_D = Double Factorial Terms of Trade

T_C= Net Barter Terms of Trade

Z_X = Productivity index in the domestic export sector,

Z_M= Import productivity index.

6. Real Cost Terms of Trade: Real Cost Terms of Trade is measured by multiplying the single factor Term Of Trade by the index of the amount of disutility (pain , sacrifice,).

Symbolically, Real Cost Terms of Trade can be written as: Tr = Ts.Rx

Where;

Tr = Real Cost Terms of Trade

Ts = Single factor Terms of Trade

Rx= disutility, real cost in producing export goods.

7. Utility Terms of Trade: The utility terms of trade is calculated by multiplying the real cost terms of trade index with an index of the relative average utility of imports and of domestic commodities foregone.

Symbolically, Utility Terms of Trade can be written as: Tu = Tr. U

Where;

Tu = Utility Terms of Trade

Tr = Real cost terms of trade index

U = Index of relative utility of imports and domestically foregone commodities.