EE451

Chapter 3:

Neoclassical Trade Theory

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Recall Basic Tools

Consumer indifference curve – Budget Constraint and Consumer Equilibrium

Isoquant – Isocost and Producer Equilibrium

Derivation of General Equilibrium in Autarky

Then, identify the pattern of trade

Offer curves and terms of trade

Introducing Trade

Given small country

Hold assumptions of perfect competition

Identifying Trade Triangles

Let's do it together …. It's good fun ☺

Gains from Trade

Trade creates mutual benefits in at least three forms:

- Production gains
- Consumption gains
- Income gains

Gains from Trade (cont.)

Production gains

- Trade leads to specialisation and economies of scale, which allows innovation of new methods of production as well as new products.
- Overall producer surplus is increased.

Gains from Trade (cont.)

Consumption gains

- Consumers are able to consume imported merchandise at lower price (compared to those of domestically produced).
- More varieties of output available.
- Overall consumer surplus is increased.

Gains from Trade (cont.)

Income gains

- Export is an income-generating source.
- Higher income may lead to greater import and hurt trade balance.
- Net effect depends on their relative forces, which are largely determined by price elasticities of demand for exports and imports.

Graphical Illustration of Gains from Trade

Offer Curve

Or Reciprocal Demand

Shows the quantity of import and export that a country is willing to buy and sell on world markets at all possible relative prices

In other words, it shows a country's willingness to trade at various terms of trade

A combination of a demand for import and a supply of export

Derivation of Home’s Offer Curve

Let’s start from identifying trade triangles associated with different terms of trade.

Derivation of Foreign's Offer Curve

Let's attempt by your own.

Determination of Equilibrium TOT

Now we bring in home and foreign offer curves.

Let's identify

- Equilibrium TOT
- Amount of trade in world market
- Trade balances in each country
- Anything else? Like assessment of welfare?

Shifts in Offer Curves

Changes in tastes for imported goods

A rise in income that raises demand for imports

An improvement in production in A’s exporting sectors

Increased willingness to trade ➔ country is willing to supply more exporting goods and demand more imported products.

Effects of change in TOT: when P_x/P_y rises

Substitution effect (S.E.): X is relatively more expensive. So domestic consumption would shift away from X toward Y. And more X will be available for export.

Production effect (P.E.): producers have an incentive to produce more X and less Y. This will reinforce SE, which means more X will be available for export.

Effects of change in TOT: when P_x/P_y rises

Income effect (I.E.): real income of the country that exports X would rise. This results in greater purchases of both X and Y.

Ceteris paribus, greater domestic consumption of X reduces amount of X available for export.

- If S.E. + P.E. > I.E. ➔ upward-sloping
- If S.E. + P.E. < I.E. ➔ backward-bending

Elasticity of Offer Curves

Determined by elasticity of demand for imported product, Y

$$\varepsilon = \frac{\%\Delta Y}{\%\Delta\left(P_Y / P_X\right)}$$

Relative price (Py/Px) represents amounts of exported good X given up to obtain 1 unit of Y.

Elasticity, Shape of Offer Curves and the Equilibrium

Multiple Equilibria and Stability of Equilibrium TOT

An equilibrium is said to be stable if small disturbances to that equilibrium at unchanged values of the underlying parameters are self-correcting, in the sense that the economy reverts to its initial position.

In order for the equilibrium to be stable,

- The offer curves cannot be both inelastic.
- The summation of absolute elasticities must exceed one.

Other concepts of the TOT (I): Income TOT

Income TOT = commodity TOT multiplied by a quantity index of exports:

$$(P_x/P_y) * Q_x \quad \text{OR} \quad (P_x * Q_x) / P_y$$

Which means an index of total export earnings divided by the price index of imported good.

A rise in income TOT indicates greater export earnings and thus permits a country to purchase more imports.

Commodity TOT and income TOT need not to move together.

Other concepts of the TOT (II): Single Factoral TOT

Single factoral TOT = commodity TOT multiplied by an index of productivity in the exportable sectors: $(P_x/P_y) * O_x$

If this rises, a greater quantity of imports can be obtained for a given unit of work effort in producing exports

Other concepts of the TOT (III): Double Factoral TOT

Double factoral TOT = single factoral TOT divided by the index of productivity in the export sector of trading partner:

$$(P_x/P_y) * (O_x /O_y)$$

If it rises, exchange of factors between the partners has become more favourable for the home country.