Chapter 3:
Neoclassical Trade Theory

Nitinant Wisaweisuan
4 September 2019

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

- 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.

- 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**

Elasticity and Shape of Offer Curves

Determination of Equilibrium TOT

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.