## Session 2. General equilibrium trade analysis

- 3. General equilibrium trade modeling: Ricardian 2 x 2 x 1 trade model
  - 3.1 Key concepts and theoretical significance
    - 3.1.1 Contributions of Adam Smith: specialization, absolute advantage, gains from trade
    - 3.1.2 Contributions of David Ricardo: comparative advantage
  - 3.2 Model specifications and assumptions of the model
    - 3.2.1 General equilibrium analysis
    - 3.2.2 Model specifications: 2 countries, 2 goods, and 1 factor (labor, L)
    - 3.2.3 Assumptions of the model
      - [1] Identical goods and labor factor
      - [2] Competitive markets in goods and factor
      - [3] Perfect mobility of the labor factor between the two sectors
      - [4] Immobility of labor across national borders
      - [5] No transactions/transportation costs
      - [6] No government intervention
      - [7] Countries have different labor endowment
      - [8] Different technology: different L use per unit produced
      - [9] Constant opportunity cost in production: linear production possibilities curve
      - [10] Preferences may or may not be identical across countries
  - 3.3 Modeling of trade
    - 3.3.1 Example 1. Both countries have an absolute advantage in production of one good

|       | Production possibilities in: |       | equilil | market<br>brium:<br>= C | Pre-trade prices<br>(bread in terms of wine or<br>wine in terms of bread) |            | World price<br>or terms of<br>trade |
|-------|------------------------------|-------|---------|-------------------------|---------------------------------------------------------------------------|------------|-------------------------------------|
| Goods | North                        | South | North   | South                   | North                                                                     | South      | (TOT)                               |
| Bread | 100                          | 20    | 60      | 10                      | $1B = \frac{1}{2} W$                                                      | 1B = 5 W   | 1B =                                |
| Wine  | 50                           | 100   | 20      | 50                      | 1W = 2 B                                                                  | 1W = 1/5 B | 1W =                                |

- Step 1. Production possibilities and supply-side analysis
- Step 2. Closed economy equilibrium: supply and demand analysis
- Step 3. Determination of domestic (pre-trade) prices
- Step 4. Determination of a world price: terms of trade
- Step 5. Adjustment process: change in relative prices

Pre-trade general equilibrium

Step 6. Trade and welfare implications: gains from trade

## Bread Bread 90 90 80 70 70 60 $[Q_0]_N$ 50 50 40 40 $[SW_s]^0$ 30 **30** 20 20 $\left[Q_{0}\right]_{S} = \left[C_{0}\right]_{S}$ $[\mathbf{Q}_0]_{\mathbf{S}} = [\mathbf{C}_0]_{\mathbf{S}}$ 10 Wine 70 80 90 100 10 20 30 40 50 60 10 20 30 40 50 60

Free trade general equilibrium