## Session 2. General equilibrium trade analysis

3. General equilibrium trade modeling: Ricardian $2 \times 2 \times 1$ 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

| Goods | Production possibilities in: |  | Closed market equilibrium:$\mathrm{Q}=\mathrm{C}$ |  | Pre-trade prices (bread in terms of wine or wine in terms of bread) |  | World price or terms of trade (TOT) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | North | South | North | South | North | South |  |
| Bread | 100 | 20 | 60 | 10 | $1 \mathrm{~B}=1 / 2 \mathrm{~W}$ | $1 \mathrm{~B}=5 \mathrm{~W}$ | $1 \mathrm{~B}=$ |
| Wine | 50 | 100 | 20 | 50 | $1 \mathrm{~W}=2 \mathrm{~B}$ | $1 \mathrm{~W}=1 / 5 \mathrm{~B}$ | $1 \mathrm{~W}=$ |

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
Step 6. Trade and welfare implications: gains from trade

Pre-trade general equilibrium



