FIR
UNIVERSITY OF ECONOMICS, PRAGUE
CZECH REPUBLIC
FACULTY OF INTERNATIONAL RELATIONS

Global Business and International Trade

Introduction; Tools of analysis for international trade models

About the lecturer

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    Tuesday 1.30pm – 3pm
    - in the room 208 NB

Outline of today‘s lecture

- Program of the course
- Requirements to pass
- Basic rules
- Tools of analysis for international trade models

Program of the course in brief

- International trade theories, development of international trade
- International competitiveness of countries
- Trade policy
- Nature, ways of conducting and different aspects of international business
- Sociocultural aspects, CSR and business ethics
- Multinational corporations, investment
- Strategies of international business

Requirements

- Assessment criteria and structure:
  - Active lecture/seminar participation (40%)
    - Attendance – 20%
    - Case study – 10%
    - Active participation – 10%
  - Term paper (10%)
  - Presentation (10%)
  - Test (40%)

Requirements

- Team presentation (each team 3 members – depending on number of students/seminars)
  - 10 points
  - 30 minutes
  - Topics to choose will be sent next week
  - You can come up with your own topic (subject to approval)
  - Weeks 9 – 12 (seminars)
- Test
  - Last week
- 60% are needed to pass
- Paper
  - On the same topic as presentation
  - Due on Monday evening before your presentation
  - 15 pages

Basic rules

- Everyone comes to class in time (including me)
- Mobile phones should be placed in your bags, not on your desks
- Computers can only be used for class activities

- There is no penalty system, but my memory is very good ☺

The basic model

- It is a model of an economy that engages in international trade
- Known as the **general equilibrium model**
  - Production, consumption, prices and international trade are all determined simultaneously for all goods produced in the country
- Advantage – covers all processes in the economy
- Drawback – too large and complicated for ***all*** goods and ***all*** countries
  - We have to make some simplifying assumptions

The basic model: ASSUMPTIONS

- **Assumption 1**
  - All economic agents, in particular firms and consumers, exhibit rational behavior
  - Economic agents are goal oriented (firms make production decisions in an attempt to maximize profits, consumers maximize utility – satisfaction – through their consumption decisions)

The basic model: ASSUMPTIONS

- **Assumption 2**
  - There are only *two countries* in the world, ***A*** and ***B***, and only *two goods*, let‘s say soybeans (denoted by ***S***) and textiles (denoted by ***T***). Each good is identical in its characteristics in the two countries, and some of each is always consumed in each country.
  - ➢ Assumption is made for geometric convenience (when expressing the model algebraically, there is no limitation)

The basic model: ASSUMPTIONS

- **Assumption 3**
  - There is *no* **money illusion**
  - Money illusion is a situation in which individuals make decisions based on changes in some prices without taking into account changes in others
  - We assume that when firms make their production decisions and when consumers make their consumption choices, they take into account the behavior of all prices rather than only a few

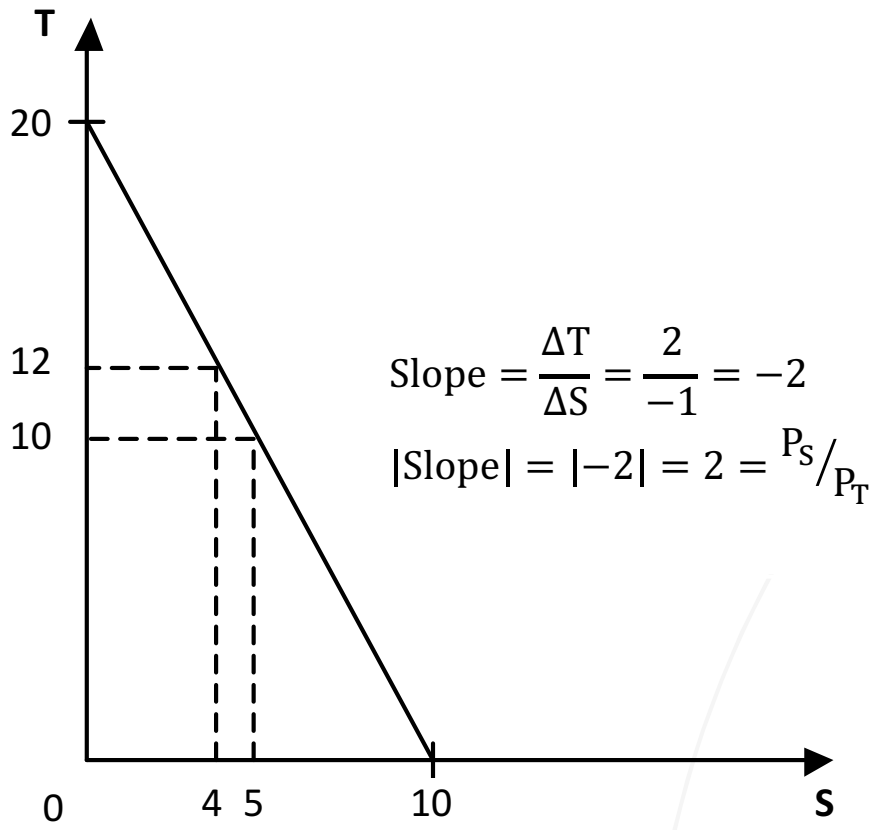
The basic model: ASSUMPTIONS

- **Assumption 3**
  - There is *no* **money illusion**
  - All economic decisions are based on **relative** rather than **nominal** prices
  - Nominal prices refer to money prices, such as the price of soybeans, denoted as $\mathbf{P_S}$, or the price of textiles, $\mathbf{P_T}$
  - Relative price refers to a price ratio, say $\mathbf{P_S/P_T}$

The basic model: ASSUMPTIONS

- **Assumption 3**
  - There is *no* **money illusion**
  - The notion of relative prices can be also illustrated **graphically**
  - On vertical axis we measure textiles in physical units, on horizontal axis we measure soybeans in physical units
  - Then all possible combinations of those two goods that can be purchased with a fixed amount of money are represented by the ***price line***

Example of a price line



$$\text{Slope} = \frac{\Delta T}{\Delta S} = \frac{2}{-1} = -2$$

$$|\text{Slope}| = |-2| = 2 = {}^{P_S}/_{P_T}$$

Source: Husted S., Melvin M.: International Economics; Pearson 2010, p. 34

The basic model: ASSUMPTIONS

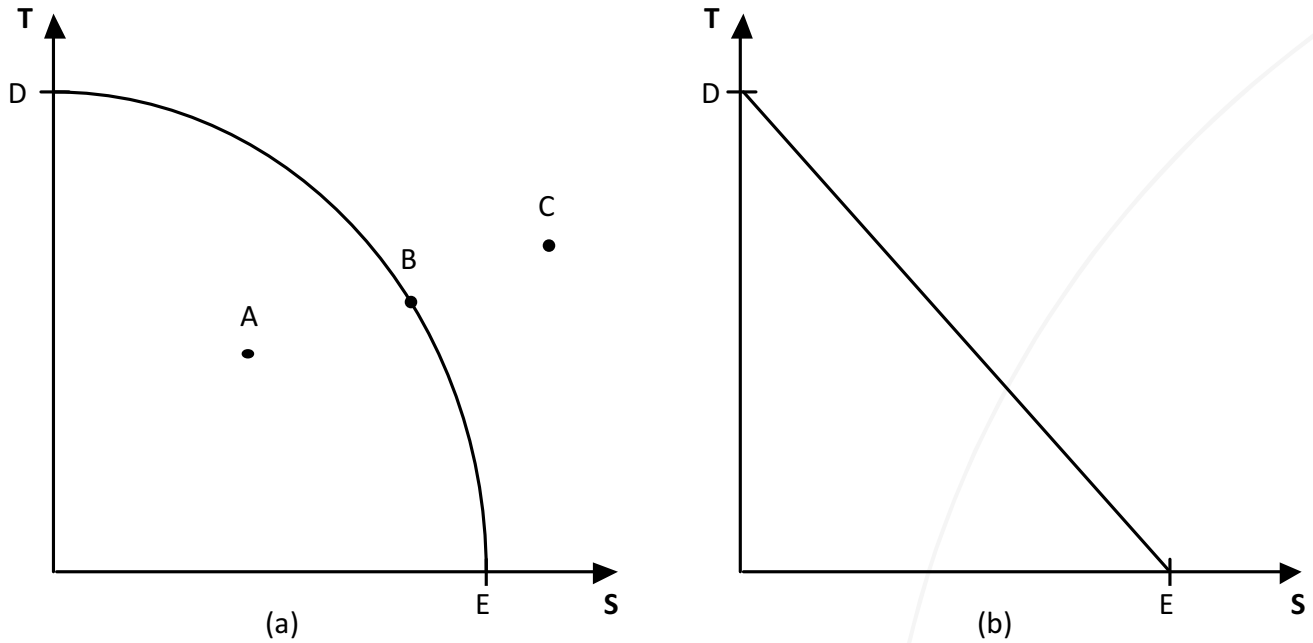
- **Assumption 3**
  - There is *no* **money illusion**
  - The most important feature of the price line is that the **slope** of the line (in absolute value) tells us the relative price $\mathbf{P_S/P_T}$
  - Selling 1 unit of **S** means that the revenue from it can be exchanged for 2 units of **T**
  - Thus, movements along the line reflect trades of equal value (rate at which good can be exchanged for the other in the market)

The basic model: ASSUMPTIONS

- **Assumption 4**
  - In each country, factor endowments are fixed and the set of technologies available to each country is constant
  - Supply conditions of a country can be illustrated by a **production possibility frontier (PPF)**
  - It tells us the maximum amount of output of one type of good, say ***T***, that can be produced in a country, given the technology of that country, that country's factors of production (e.g. land, labor, capital), and the level of output of the other good, ***S***.

Examples of production possibility frontiers

(a) Increasing opportunity costs
(b) Constant opportunity costs



Source: Husted S., Melvin M.: International Economics; Pearson 2010, p. 35

The basic model: ASSUMPTIONS

- **Assumption 4**
  - In each country, factor endowments are fixed and the set of technologies available to each country is constant
  - Given the country‘s resources, production can occur anywhere along or inside the curve ***DE***
    - B – resources are fully employed and productions is said to be efficient (it is not possible to increase output of one good without lowering the output of the other)
    - A – inefficiency in production (idle resources)
    - C – not achievable (outside frontier)

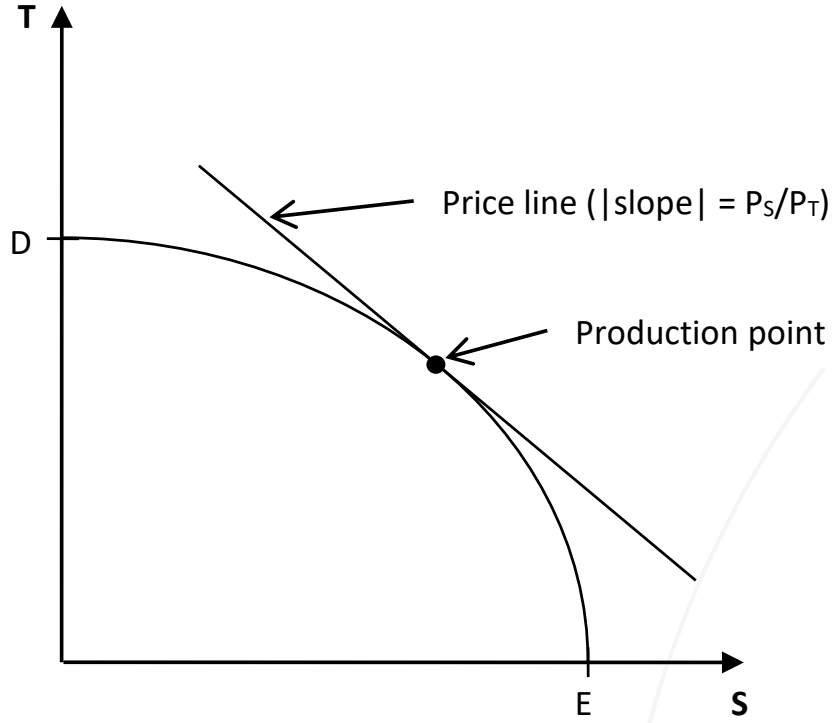
The basic model: ASSUMPTIONS

- **Assumption 4**
  - In each country, factor endowments are fixed and the set of technologies available to each country is constant
  - **Opportunity costs**: the amount of production of one type of good that must be sacrificed to produce one more unit of the other
    - Increasing opportunity costs – for each additional unit of ***S*** produced in the economy, the amount of ***T*** produced falls by an increasing amount (concave curve) – better approximation of reality
    - Constant opportunity costs – as the production of ***S*** expands, the output of ***T*** falls at a constant rate – easier to work with

The basic model: ASSUMPTIONS

- **Assumption 5**
  - Perfect competition prevails in both industries in both countries. In addition, there are no externalities in production.
  - ➢ Perfect competition requires that price equals marginal cost
    - ➢ The price of S in terms of T must equal the cost of producing S in terms of T (the absolute value of the slope of the PPF at the production point must equal the relative market price ratio)

Relationship between price line and production point (= optimum production)



Source: Husted S., Melvin M.: International Economics; Pearson 2010, p. 37

The basic model: ASSUMPTIONS

- **Assumption 6**
  - Factors of production are perfectly mobile between the two industries within each country

The basic model: ASSUMPTIONS

- **Assumption 7**
  - Community preferences in consumption can be represented by a consistent set of community indifference curves
  - Consumers will prefer the bundle of goods that yields the highest possible level of satisfaction (utility)
  - Indifference curve is a locus of bundles of goods that each yields the same level of satisfaction to an individual consumer (it expresses consumption preferences of an individual consumer)

The basic model: ASSUMPTIONS

- **Assumption 7**
  - Community preferences in consumption can be represented by a consistent set of community indifference curves
  - Important properties of indifference curves:
    - They are individual specific
    - They are downward sloping
    - They are convex to the origin
    - They never intersect

The basic model: ASSUMPTIONS

- **Assumption 7**
  - Community preferences in consumption can be represented by a consistent set of community indifference curves
  - We assume that there is a set of **community indifference curves (CICs)** that expresses the preferences of the community over the consumption of various bundles of goods in exactly the same manner as a set of indifference curves expresses the preferences of an individual
  - When is this assumption consistent?
    - One-person economy
    - Strict dictatorship
    - Identical tastes and incomes of all individual in the economy

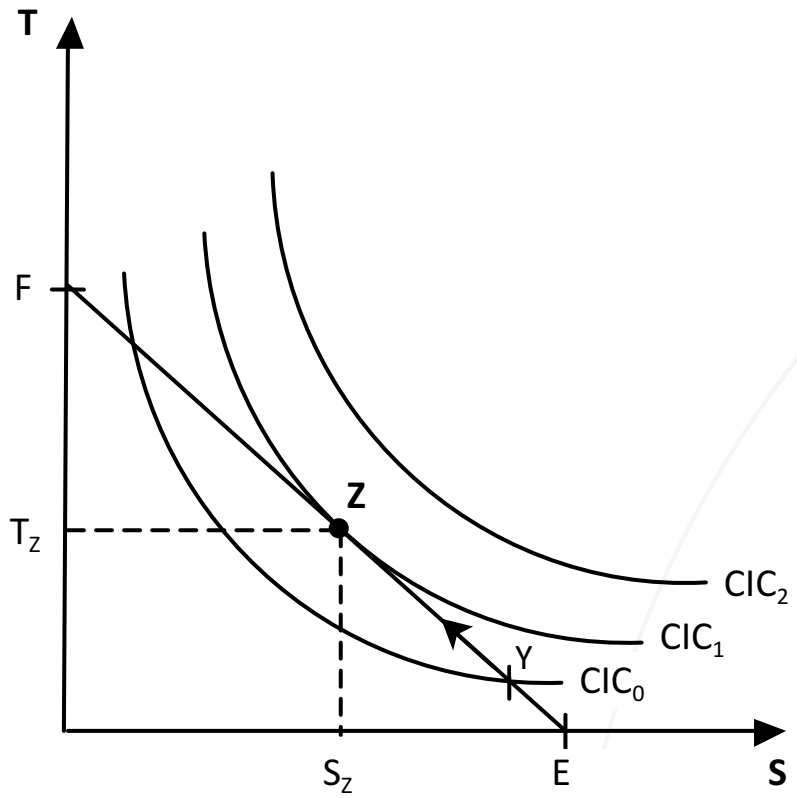
The basic model: SOLUTIONS

- We are seeking for an **equilibrium** (we combine elements of supply and demand to find production, consumption and prices)
- Autarky – a situation in which a country does not take part in international trade (it means self-sufficiency)
- Thus, the autarky solution we find is the general equilibrium solution for a closed economy

The basic model: SOLUTIONS

- **Constant opportunity costs**
  - EF line represents the economy‘s PPF
  - CIC denote several of the economy‘s community indifference curves
  - Consumers want to maximize their satisfaction – they do that (collectively) at point **Z**, the point of tangency of their CIC with the price line
  - **Z** is the ideal consumption, but also production point
  - Producers maximize their profits by producing goods in the combinations desired by society

General equilibrium for a closed economy (constant opportunity costs)



Source: Husted S., Melvin M.: International Economics; Pearson 2010, p. 42

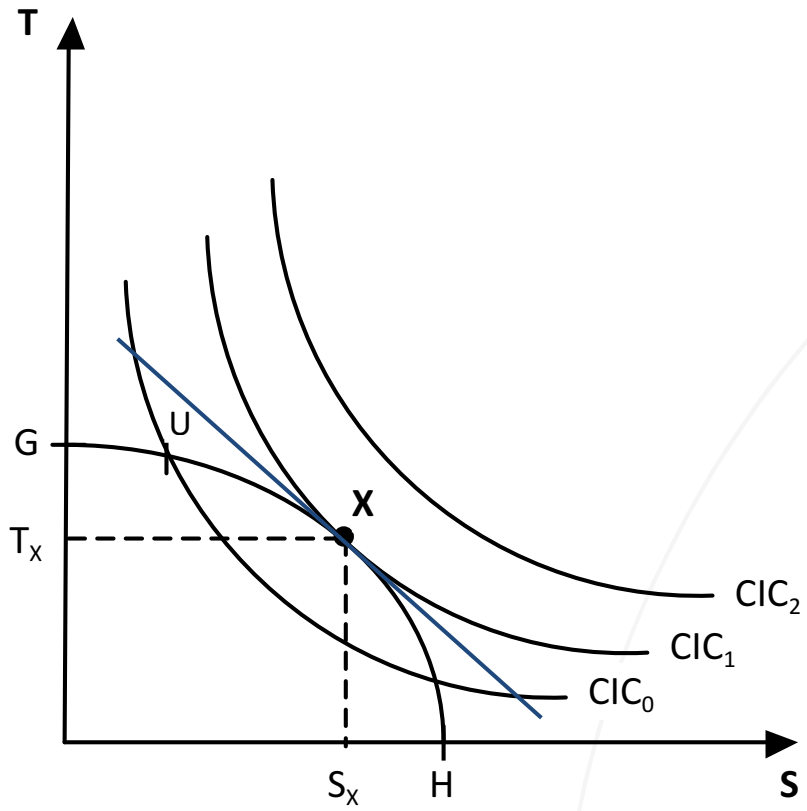
The basic model: SOLUTIONS

- **Constant opportunity costs**
  - How about relative price?
    - The price ratio is determined by the slope of the PPF at the production point
    - In our case, price ratio corresponds to the slope of the line segment EF, which means that so long as some of both goods are produced (under the condition of constant opportunity costs), then demand plays no role in determining relative prices
    - The only role for demand in such a world is in picking out the precise combination of outputs of the two goods

The basic model: SOLUTIONS

- **Increasing opportunity costs**
  - GH line represents the economy‘s PPF (supply conditions)
  - CIC denote several of the economy‘s community indifference curves (demand conditions)
  - Consumers want to maximize their satisfaction – they do that (collectively) at point **X**, the point of tangency of their CIC with the price line

General equilibrium for a closed economy (increasing opportunity costs)



Source: Husted S., Melvin M.: International Economics; Pearson 2010, p. 43

The basic model: SOLUTIONS

- **Increasing opportunity costs**
  - What would happen at other points than X, say U?
    - T production exceeds (and S production falls short of) the general equilibrium level
    - Consumers are willing to pay a higher price for S (CIC slope) than the prevailing market price (PPF slope)
    - Pressure from consumer demand will push the relative price of S up, encouraging S producers to expand their production levels and encouraging T producers to contract their production, which will move the economy to point X, where the price consumers are willing to pay equals exactly the market price (the price they have to pay)