International Factor Movements

Chapter 7
Intermediate International Trade
International Economics, 5th ed., by Krugman and Obstfeld
International labor mobility

• **two countries**: home and foreign
• **two goods**: land $T$ and labor $L$
• **one good**: “output”
• **technology**: production function $Q(T,L)$
• there is *no trade in output*, but *labor is mobile*
• **assumption**: countries have the same technology but differ in land-labor ratios: home is labor abundant and foreign is land abundant
• workers at home earn less than in foreign, so they have incentives to move to foreign

• results of migration from home to foreign: 1) labor force at home decreases, and so real wage increases; 2) labor force increases in foreign, and real wage decreases; 3) migration stops when real wages are equal across countries (factor price equalization)

• one more interesting result: world’s output as a whole increases: home output decreases, but foreign output increases by more
• is that good or bad? 1) for the world as a whole is good (more output); 2) at home: workers that did not move win, and landowners lose; 3) at foreign: workers that did not move lose, and landowners win

• conclusions so far: 1) labor mobility is originated by the same reason as trade emerges in the Heckscher-Ohlin model: differences in resources across countries; 2) labor mobility is overall beneficial, but it has income distribution effects
How are trade in goods and labor mobility related? Some ideas…..

• recall that if home is labor-abundant, then according to the Heckscher-Ohlin model, it will export labor-intensive goods: then, exporting goods is like “indirectly exporting labor”

• in Heckscher-Ohlin model, under certain conditions, there is factor price equalization: in this sense, trading goods produces the same outcome as our labor mobility model
International borrowing and lending

- borrowing and lending refers to movement of financial capital across countries, and not to mobility of physical capital

- movement of financial capital can be understood as trade over time or intertemporal trade: when home lends to foreign, foreign is “buying” the right to spend more today under the promise of repaying in the future
• one good: consumption good (output)
• two periods: present and future
• intertemporal production possibility frontier: shows the trade-off between present and future production of the consumption good

what is the slope of the intertemporal production possibility?
• let $r$ be the real interest rate
• this means that, 1 unit of present consumption can be exchanged for $(1+r)$ units of future consumption
• relative price of future consumption: $1 / (1+r)$
• slope of intertemporal production possibility is the ratio of price of present to future consumption: $- (1+r)$
• **two countries**: home and foreign
• countries differ in the shape of the intertemporal production possibility:

  (1) **home is biased toward current or present output:**
  - home has a comparative advantage in present production
  - relative price of present consumption is low
  - relative price of future consumption is high
  - real interest rate is low
  - home lends to other countries, because investing resources at home to produce in the future is not highly productive
    (real interest rate is low)
(2) **foreign is biased toward future output:**

- foreign has a comparative advantage in future production
- relative price of present consumption is high
- relative price of future consumption is low
- real interest rate is high
- foreign borrows because this loan can be used to increase future production

- **difference in prices (real interest rate) across countries** opens the possibility of intertemporal trade: home exports present consumption (*lends in the present*) and imports future consumption (*gets payment back in the future*)
Direct foreign investment and multinational firms

- **direct foreign investment** occurs when a firm in one country creates or expands a subsidiary in another.
- Direct foreign investment differs from borrowing and lending in that the former might not be a source of net capital flow from one country to another.
- Main purpose of direct foreign investment is to allow for formation of multinational firms.
Two types of reasons for the existence of direct foreign investment:

(1) location:
* firms decide to create subsidiaries in other countries because the supply of certain input materials can be large in that country
* firms can choose locations in foreign countries to reduce transportation costs

(2) internalization:
* technology transfer: firms find it more profitable to create subsidiaries that use the same technology in other countries
* vertical integration: firms find it profitable to create subsidiaries in different locations that can produce special inputs to satisfy the demands for all subsidiaries around the world
• about 50% of U.S. imports are transactions between subsidiaries of “the same firm” in other locations
• about 24% of U.S. assets abroad corresponds to the value of foreign subsidiaries of U.S. firms
• multinational firms play the role of shifting labor-intensive production to labor-abundant countries, and bringing capital from capital-abundant to capital-scarce countries
• as with trade, the existence of multinational firms in a country has income distribution effects