4.1: Factor Mobility Overview

Learning Objectives

1. Identify the three dimensions across which factors of production may be mobile.

**Factor mobility** refers to the ability to move factors of production—labor, capital, or land—out of one production process into another. Factor mobility may involve the movement of factors between firms within an industry, as when one steel plant closes but sells its production equipment to another steel firm. Mobility may involve the movement of factors across industries within a country, as when a worker leaves employment at a textile firm and begins work at an automobile factory. Finally, mobility may involve the movement of factors between countries either within industries or across industries, as when a farm worker migrates to another country or when a factory is moved abroad.

The standard assumptions in the trade literature are that factors of production are freely (i.e., without obstruction) and costlessly mobile between firms within an industry and between industries within a country but are immobile between countries.

The rationale for the first assumption—that factors are freely mobile within an industry—is perhaps closest to reality. The skills acquired by workers and the productivity of capital are likely to be very similar across firms producing identical or closely substitutable products. Although there would likely be some transition costs incurred, such as search, transportation, and transaction costs, it remains reasonable to assume for simplicity that the transfer is costless. As a result, this assumption is rarely relaxed.

The assumption that factors are easily movable across industries within a country is somewhat unrealistic, especially in the short run. Indeed, this assumption has been a standard source of criticism for traditional trade models. In the Ricardian and Heckscher-Ohlin models, factors are assumed to be homogeneous and freely and costlessly mobile between industries. When changes occur in the economy requiring the expansion of one industry and the contraction of another, it just happens. There are no search, transportation, or transaction costs. There is no unemployment of
resources. Also, since the factors are assumed to be homogeneous, once transferred to a completely different industry, they immediately become just as productive as the factors that had originally been employed in that industry. Clearly, these conditions cannot be expected to hold in very many realistic situations. For some, this inconsistency is enough to cast doubt on all the propositions that result from these theories.

It is important to note, however, that trade theory has attempted to deal with this concern to some extent. The immobile factor model (in Chapter 4: Factor Mobility and Income Redistribution) and the specific factor model (in Chapter 5: The Heckscher-Ohlin (Factor Proportions) Model, Section 5.15: The Specific Factor Model- Overview) represent attempts to incorporate factor immobility precisely because of the concerns just mentioned. Although these models do not introduce resource transition in a complicated way, they do demonstrate important income redistribution results and allow one to infer the likely effects of more complex adjustment processes by piecing together the results of several models. (See Chapter 5: The Heckscher-Ohlin (Factor Proportions) Model, Section 5.17: Dynamic Income Redistribution and Trade, especially.)

Another important aspect of factor mobility involves the mobility of factors between countries. In most international trade models, factors are assumed to be immobile across borders. Traditionally, most workers remain in their country of national origin due to immigration restrictions, while government controls on capital have in some periods restricted international movements of capital. When international factor mobility is not possible, trade models demonstrate how national gains can arise through trade in goods and services.

Of course, international mobility can and does happen to varying degrees. Workers migrate across borders, sometimes in violation of immigration laws, while capital flows readily across borders in today’s markets. The implications of international factor mobility have been addressed in the context of some trade models. A classic result by Robert A. Mundell (1957) demonstrates that international factor mobility can act as a substitute for international trade in goods and services. In other words, to realize all the gains from international exchange and globalization, countries need to either trade freely or allow factors to move freely between countries. Robert A. Mundell, “International Trade and Factor Mobility,” American Economic Review 47 (1957): 321–35. It is not necessary to have both. Mundell’s result contradicts a popular argument that free trade can only benefit countries if they also allow workers to move freely across borders.

Key Takeaways

- Factors of production are potentially mobile in three distinct ways:
  - Between firms within the same industry
  - Between industries within the same country
  - Between firms or industries across countries
- A standard simplifying assumption in many trade models is that factors of production are freely and costlessly mobile between firms and between industries but not between countries.
- The immobile factor model and the specific factor model are two models that assume a degree of factor immobility between industries.

Exercise \(\PageIndex{1}\))

1. Name several impediments to the free movement of workers between two industries.
2. Name several costs associated with the movement of workers between two industries.