

Offshoring of Goods and Services

1a. First, we calculate the cost of each activity in each country. These calculations are shown in the following table:

	a	b	c
Home	$\$4 \cdot 1 + \$2 \cdot 4 = \$12$	$\$4 \cdot 2 + \$2 \cdot 3 = \$14$	$\$4 \cdot 3 + \$2 \cdot 2 = \$16$
Foreign	$\$5 \cdot 1 + \$1 \cdot 4 = \$9$	$\$5 \cdot 2 + \$1 \cdot 3 = \$13$	$\$5 \cdot 3 + \$1 \cdot 2 = \$17$

In the absence of transport costs, Foreign is the cheaper producer for activities a and b, whereas Home is the cheaper producer in activity c. With transport costs of \$2, the gap in costs would have to be at least this large to induce Home firms to offshore the activity to Foreign. Hence only a is produced in Foreign and b and c are produced in Home.

- 1b. From the table in the answer to 1a, we see that if there are no transport costs, then a and b would be outsourced to Foreign and only c would remain in Home.
- 1c. Before the transport costs fall, the amount of Home's high-skilled labor used in the production of a good is $2 + 3 = 5$ and the amount of Home's low-skilled labor is $3 + 2 = 5$, so the ratio is 1. After the reduction in transport cost, the ratio increases from 1 to 1.5. In Foreign the ratio is initially 1:4 but rises to $(1 + 2):(4 + 3)$ or 3:7. Hence, relative demand rises in both countries.
- 1d. No, only the interpretation of the trading pattern would be different.
2. Banning foreign investment may keep the stock of capital in the country low and the rental high. The high rental to capital would raise the cost of performing each production activity and so limit the amount of offshoring.
3. If only trade in final goods were allowed, then comparing the factor intensities of goods makes sense. However, once activities can be split into pieces, it is only the factor intensities of the activities that matter for the location of production, not the factor intensities of goods.
- 4a. The actual assembly-line kinds of jobs done by blue collar workers increasingly may have been offshored to lower-wage countries, leaving primarily white collar jobs in the United States.
- 4b. The relative wage of white collar workers has risen over this same time. In the Heckscher-Ohlin model this would mean that firms would substitute blue collar workers for white collar workers. But exactly the opposite appears to be happening.

(H)

before

produce b & c

$$\frac{2+3}{3+2} = 1 \quad \begin{array}{l} \text{high L} \\ \text{low L} \end{array}$$

after

produce only c

$$\frac{3}{2}$$

before

$$\frac{1}{4} \quad \text{only a}$$

after

a & b

$$\frac{1+2}{4+3} = \frac{3}{7}$$