

Elaboration of page 76

Table 4.1: Production requirements:

one machine: 10 K + 4 L	capital-intensive	ratio $4/10 = 0.4$ workers per unit of K
10 yards cloth: 4 K + 8 L	labor-intensive	ratio = $8/4 = 2$ workers per unit of K

Suppose US cloth factories are producing 100 yards per day

$$\text{using } 10(4K+8L) = 40K + 80L$$

Now trade opens up and some US cloth factories reduce production by 20% due to Indian competition.

$$80\% \text{ of } (40K + 80L) = 32K + 64L \text{ remain in cloth industry}$$

$$20\% \text{ of } (40K + 80L) = 8K + 16L \text{ released for use by machine industry, which is expanding}$$

Machine industry is glad to take all 8K but needs only a few workers: $0.4 \cdot 8 = 3.2$

Remaining workers ($16 - 3.2 = 12.8$) are unemployed

Unemployment (assuming a functioning labor market) is cured by falling wages (draw a S/D graph)

Long term: the machine industry will increase its demand for capital. More capital will be forthcoming if rents (interest or dividends) rise (draw a S/D graph)

Increased K will require hiring more workers (0.4 for each unit of K)

Conclusion: opening of trade reduces wages in the US, increases rents

Generalizing (Stolper-Samuelson): Opening of trade

- reduces the income of the scarce factor of production
- increases the income of the abundant factor of production

Homework: repeat the above analysis from India's point of view