I. Summary from last class: Impact of Opening up to Trade on Labor

Recall that we are Japan. With trade, the relative price of manufactures rises relative to Japan’s autarky relative price (left hand side diagram). So what happens to wages if Pm rises (and assume there is no change in Pf). We see that the Value of MPL curve (=Pm X PMLm) for manufactures shifts up and to the right as Pm rises, resulting in a higher w and more labor allocated to manufactures.

Although nominal w rises, impact of trade on the mobile factor is ambiguous because its real income increases in terms of the imported good (food), and decreases in terms of the exported good (manufactures).

W rises (from w1 to w2)/Pf (no change) = real w rises in terms of food.

But w/Pm falls because Pm rise higher than w rise (we see this on the graph at upper right).

Overall gain to labor depends on how much of the exported and imported goods the workers consume.

II. What happens to return to capital (ie the return to the factor specific to the export sector?)

Capital owners in manufacturing are better off because
(1) The price of the good they produce increases and
(2) Workers move to their industry

Real income of capital owners rise in terms of both goods:

\[ rm = Pm \times MPKm \] implies that \( \frac{rm}{Pm} = MPKm \) rises

And \( \frac{rm}{Pf} \) rises because \( rm \) rises but there is no change in Pf
III. Return to Factor Specific to Food: (Land): The Factor specific to the import-competiting sector.

This is the factor specific to the import-competiting sector. Land-owners lose because:
(1) The price which at which they buy manufactures rises
(2) Their nominal return \( t \) falls.

How do we know?

Recall that Japan now produces more manufactures and less land. So labor flows out of the land sector. This means that \( MPT_l \) falls. (recall our discussion of the CD function)

So real income of landowners falls in terms of both goods:

\[
\frac{t_f}{P_m} \text{ falls because } t_f \text{ falls and } P_m \text{ rises}
\]

and \( \frac{t_f}{P_f} \) falls because \( t_f \) falls and there is no change in \( P_f \).

IV. Summarizing the impact of an increase in \( P_m \) on returns to factors in Japan.

\[
\%\Delta r_m > \%\Delta P_m > \%\Delta w > \%\Delta P_f = 0 > \%\Delta t_f
\]

Trade liberalization (opening up to trade):

- Benefits factors of production specific to the export sector
- Hurts factors of production specific to the import-competiting sector
- Has ambiguous effects on the mobile factors of production

V. An Example

VI. Some Empirical Evidence

VII. The Budget Constraint