Increasing Returns to Scale and IT

One of the assumptions of the H–O model was that both commodities were produced under conditions of constant returns to scale in the two nations.

With increasing returns to scale, mutually beneficial trade can take place even when the two nations are identical in every respect.

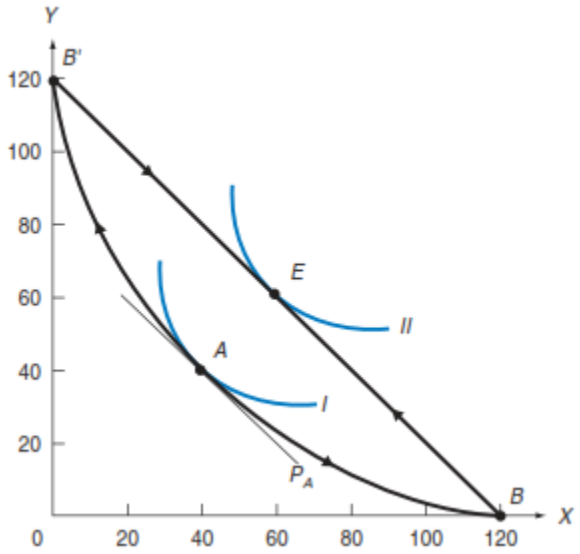
This is a type of trade that the H–O model does not explain.

Increasing returns to scale refers to the production situation where output grows proportionately more than the increase in inputs or factors of production.

Increasing returns to scale may occur because at a larger scale of operation a greater division of labor and specialization becomes possible.

As a result, productivity of each worker increases.

Moreover, a larger scale of operation may permit the introduction of more specialized and productive machinery than would be feasible at a smaller scale of operation.



How mutually beneficial trade can be based on increasing returns to scale is explained in the figure.

If the two nations are assumed to be identical in every respect, we can use a single production frontier and a single indifference map to refer to both nations.

Increasing returns to scale result in production frontiers that are *convex* from the origin, or inward-bending.

With identical production frontiers and indifference maps, the no-trade equilibrium relative commodity prices in the two nations are also identical.

In figure, this is *PX* /*PY* = *PA* in both nations and is given by the slope of the common tangent to the production frontier and indifference curve *I* at point *A*.

With trade, Nation 1 could specialize completely in the production of commodity X and produce at point *B*.

Nation 2 would then specialize completely in the production of commodity Y and produce at point *B*'.

By then exchanging 60X for 60Y with each other, each nation would end up consuming at point *E* on indifference curve *II* , thus gaining 20X and 20Y.

These gains from trade arise from economies of scale in the production of only one commodity in each nation.

In the absence of trade, the two nations would not specialize in the production of only one commodity because each nation wants to consume both commodities.

Criticisms:

First, it is a matter of complete indifference which of the two nations specializes in the production of commodity X or commodity Y. In the real world, this may result from historical accident.

Second, it should be clear, at least intuitively, that the two nations need not be identical in every respect for mutually beneficial trade to result from increasing returns to scale.

Third, if economies of scale persist over a sufficiently long range of outputs, one or a few firms in the nation will capture the entire market for a given product, leading to monopoly or oligopoly.

Fourth, since the early 1980s, there has been a sharp increase in international trade in parts and components through **outsourcing** and **offshoring**, and these are the source of new and significant international economies of scale.

Outsourcing refers to the purchase by a firm of parts and components abroad in order to keep its costs down.

Offshoring refers to a firm producing in its own plants abroad some of the parts and components that it uses in its products.

While outsourcing and offshoring lead to international economies of scale, they also lead to complaints that a significant number of high-paying jobs are transferred abroad.