A REJOINDER ON "INTERNATIONAL TRADE AND CAPITAL MOVEMENTS"

By KIYOSHI KOJIMA*

I deeply appreciate Ekkehard Bechler's comment on my paper.[1] I have to note that Nobuo Minabe of Osaka City University[2] also commented on my work in Japanese,[3] prior to Bechler's[4] who supports Mundell's presentation. Therefore, I am elaborating upon both Minabe's and Bechler's comments on my work.

The main intention of Minabe and Bechler is to find out whether or not Mundell's presentation is acceptable, that is, whether free trade and capital movements are complete substitutes for each other even when the capital movement is stimulated by the imposition of tariffs in the host country. I just pointed out that Mundell has not clearly stated whether or not tariffs still remain with the new equilibrium situation in both countries after the capital movements. The question I raised was that we cannot take it for granted as Mundell that the tariff will become "no longer necessary"[5] after the capital movement. Both Minabe and Bechler, supporting Mundell's prosition, pointed out that the tariff becomes no longer necessary nor effective when the preceding situation is attained. However, this question was not the major but rather a minor point of my paper. My main intent in connection with Mundell's presentation was to show that even if his idea of "free trade being complete substitute for capital movements" is accepted, the capital movement will necessarily result in a relatively higher production cost of competitive capital-intensive products in the host country in which the investing country is thought to have a comparative advantage. And this is, in my terminology, an anti-trade oriented foreign investment.

Bechler explains a shift in production points from P to Q and to Q' and then to P' in his Fig. 1. This seems to be reasonable except the last one, which is a shift from Q' to P'. He shows that the host country producing at Q' with "prohibitive" tariffs, paying reward, i.e. royalty, know-how fees, dividends and profits, to foreign capital, by the value equivalent to $Q'S'$ in terms of cloth (this means that rewards are paid in terms of domestic prices instead of international prices), result in such situation that "at the existing natural exchange ratio (LS'), the point S' represents an excess supply of steel and a lack of cotton," which, through the manipulations of "autonomous market forces," lowers domestic relative price of steel equal to the international price ratio. And thus, Q' moves to P'.

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[1] Kiyoshi Kojima, "International Trade and Foreign Investment: Substitutes or Complements," *Hitotsubashi Journal of Economics*, June 1975, pp. 1–12.

[2] Nobuo Minabe, "Foreign Investment and Foreign Trade—On Professor Kiyoshi Kojima's Comment on R.A. Mundell," Osaka City University, *Keizaigaku Zassi*, August 1976, pp. 1–10.

[3] Kiyoshi Kojima, *Hitotsubashi Ronso*, April 1975, pp. 15–31.

[4] Ekkehard Bechler, "International Trade and Capital Movements—A Re-examination," in this issue of *Hitotsubashi Journal of Economics*, pp. 25–30.

[5] R.A. Mundell, "International Trade and Factor Mobility," *American Economic Review*, June 1975, p. 325.

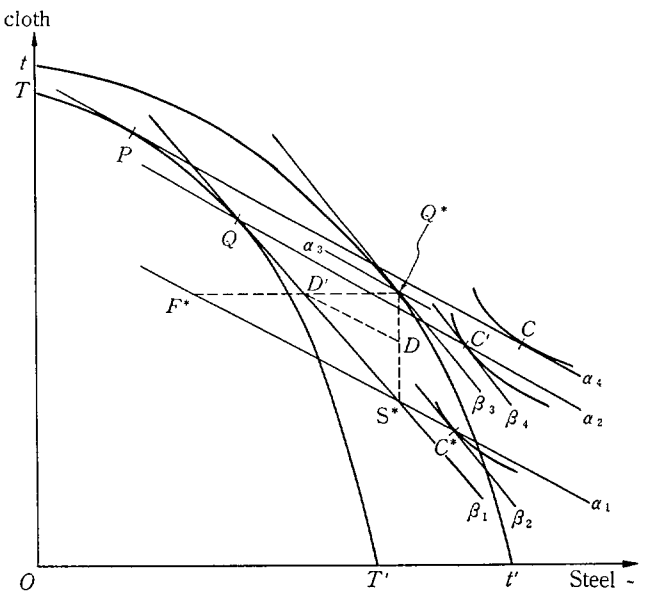
Incidentally, Minabe uses the same logic as Bechler saying that as foreign capital flows in increasingly until the rewards of capital become equal both in the investing and the host countries, an excessive amount of steel is produced in the host country and the relative price of steel is lowered to the same level as the international price ratio or even lower than that (this means that the tariff becomes ineffective in Minabe's sense).

Although the reasoning is somewhat different in Bechler and Minabe, the common logic for them to reach the new equilibrium production point, P', is "excess supply of steel." Is this logic acceptable?

The degree of excess supply of steel may differ depending upon whether the rewards of foreign capital are paid either in cloth or in steel or in their certain mix, but it is obvious that the excess supply of steel under the given domestic price ratio is brought about from an excessive inflow of foreign capital. Accordingly the amount of foreign capital is reduced and the transformation curve (such as VV' in Bechler's Fig. 1) is contracted until the production point Q is re-established and no more capital inflow takes place as far as the prohibitive tariffs remain.

Whether the tariffs are prohibitive or not may involve a confusion. Frankly, I could not find a proper treatment of prohibitive tariffs. Bechler assumes prohibitive tariffs and shows a production point Q where one of the indifference curves touches the transformation curve, showing an autarky position. Under a two-commodity model, the import of one commodity is prohibited and the other commodity is necessarily not exported or, in other words, no trade is taken place. Now, Bechler shows that after a capital inflow, the rewards of foreign capital are transferred through trade either with cotton or steel or their mix in

FIG. A



terms of international price ratio in order to reach an equilibrium position at P' and S. This is inconsistent in so far as prohibitive tariffs remain. In order to move the production point from Q' to P' in Bechler's Fig. 1, the tariffs, not only prohibitive but also non-pronibitive ones, must be eliminated institutionally.

Let us impose non-prohibitive (moderate rate) tariffs on import of steel. In my Fig. A, line α's shows international price ratio and β's domestic price ratio inclusive of tariffs. Under free trade, this host country produces at point P and consumes at point C. With the tariffs, it produces at point Q and consumes at point C', resulting in lower welfare level than under free trade. Now, suppose that foreign capital flows in and the transformation curve expands to tt'. A new production point is established at point Q^* corresponding to domestic price ratio. The host country has to pay rewards of foreign capital in terms of international price ratio, i.e., Q^*S^* amount of cloth, or Q^*F^* amount of steel, or their certain mix. The country's income after the payments of rewards to foreign capital lies on a line α_1, on which a new consumption point C^* is found. The country's welfare level at the point C^* is lower than at the point C' under protected production without foreign capital. Needless to say, the level is lower than that at the point C under free trade.

Lower welfare under protected production with foreign capital than that without foreign capital comes from the fact that the foreign capital transferred can share benefits of protection with domestic capital and to obtain higher rewards than under free trade by the amount of tariffs which is equivalent to an amount DS^* of cloth or $D'F^*$ of steel,[6] where a line DD' shows the international price ratio. These observations lead us to such a conclusion that if a country protects an industry with tariffs it is better for the country not to allow foreign capital to come in but achieve free trade.

In the equilibrium position mentioned above, there still exists a difference as far as the rewards of capital between investing and host countries are concerned. I believe this is the equilibrium although it is distorted, for if there exists a distortion (or imperfection) created by such as tariffs in commodity market, the distortion created by it in the factor markets is unavoidable. Following Mundell's assumption, Minabe insists that capital moves until its rewards are equalized between the two countries. But take another example of distortion due to distance and transportation costs, instead of tariffs. If transportation costs for one of the two commodities take up a large portion of the total costs, the capital movement is stimulated but the transportation costs never become ineffective. The story may be the same for tariffs.

Bechler's statement that "international capital has shown to be an instrument of overcoming the distorting effects of a tariff" is important. But this is not realized under strict assumptions of the Hechscher-Ohlin model, especially that of the same production function with constant returns to scale for the investing and the host countries. Suppose, however, that the host country used a technology in steel which was inferior to that of the investing country, and that, due to the direct investment, technology is improved and economies of scale is realized. Then the relative cost of steel in the host country becomes

[6] This proposition is originally pointed out by H.Uzawa in his "Shihon Jiyuka to Kokumin Keizai (Liberalization of Foreign Investments and the National Economy)", *Ekonomisuto*, December 23rd, 1969, (in Japanese), and is developed by K.Hamada, in his "A Theory of International Trade and Direct Investment," *Toyo Keizai*, February 5th, 1971 (in Japanese), and "An Economic Analysis of the Duty-Free Zones," *Journal of International Economics*, August, 1974, pp. 231–35.

chaper than the international price ratio, and thus the tariffs become ineffective or of no use and even the host country is now able to export steel. I recommend this type of capital movement as a trade-oriented foreign direct investment. What makes tariffs ineffective is not an excess supply of steel, as Bechler and Minabe emphasize, which results merely in a temporary price fall, but is the improvement in productivity and economies of scale in steel production in the host country due to appropriate inflow of direct investment.[7]

It should be remembered that Mundell intended to show that the relation between free trade and capital movements is a complete substitute or indifference for each other. In order to demonstrate it, he should not introduce any incentive or motivation of capital movement such as tariffs. He should show that if a capital movement took place without any motivation, it would reach the same result as what free trade attains. This means, however, that there is no incentive and therefore no capital movement actually takes place. Thus, the "complete substitute or indifference" means in fact that only free trade is to be pursued. Since Mundell introduced an incentive for capital movement such as tariffs, he could not show the "complete substitute or indifference", or otherwise, he had to show effects of capital movement with the tariffs which, however, must differ from the results of free trade.

[7] Here is another case in which capital movements contribute to increased production of two countries taken together. Even in the Heckscher-Ohlin model with technology identical throughout the world, one or both of the countries could be specialized in production of one commodity, if factor endowments are sufficiently dissimilar. In such a case free trade would not equalize factor returns from one country to another because of the specialization in the production of one commodity. If capital could move from the capital-rich country in which returns were low to the labor-rich country where capital earns higher returns until factor endowments would become more similar and both countries could produce the two commodities with equalized factor returns under free trade, the total outputs of the two commodities in the two countries taken together would increase. When this situation is attained as Mundell, Bechler and Minabe have assumed, however, further movements of capital would not change the total outputs and, therefore, would be worthless from the point of improving the efficiency of world production. The case as above is well demonstrated in Richard E. Caves and Ronald W. Jones, *World Trade and Payments: An Introduction*, Little, Brown and Company, Boston, 1973, pp. 464–65.