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OVER CAPITAL EXPORTS
FROM THE UNITED STATES

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DEPARTMENT OF ECONOMICS

PRINCETON UNIVERSITY

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International Finance Section

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THE WELFARE EFFECTS OF CONTROLS OVER CAPITAL EXPORTS FROM THE UNITED STATES

For the past seven years varying degrees of Federal restraint have been applied to lending and investing abroad by residents of the United States. Purchases of long-term foreign securities from foreign residents were, with some exceptions, made subject to the interest-equalization tax as of July 19, 1963. In 1965 this tax was extended to long-term bank lending to foreign residents, and in the same year both financial and nonfinancial corporations were asked to restrain their lending and investing of domestic funds abroad.

Although analyses of the balance-of-payments effects of these controls have been published, very little has appeared in the way of rigorous examination of the effects on welfare. Yet such examination is essential if informed judgments are to be made regarding the desirability of the controls either as temporary or permanent devices. The purpose of this essay is to fill a bit of this gap by contributing a qualitative analysis of the welfare effects of the interest-equalization tax (IET) levied on purchases of foreign securities. The discussion is limited to the IET largely to conserve space and for purposes of expository convenience; much of the analysis readily extends to the other Federal restraints on lending and investing abroad. The analysis begins under the simplifying "ideal" assumptions of perfect competition and no troublesome externalities (or "market failures," in the more general terminology used by Francis Bator in "The Anatomy of Market Failure," *Quarterly Journal of Economics*, August 1958). However, consideration of the implications of alleged departures from these assumptions constitutes the bulk of the essay.

I. PERFECT COMPETITION AND NO MARKET FAILURES

Under these "ideal" assumptions freedom of movement for the factors of production allows the most efficient allocation of the world's resources for any given income distribution, so that from the standpoint of world welfare the argument for freedom of factor movements is essentially the same as that for freedom of commodity movements. The analogy does not end here, however. From the standpoint of national rather than world welfare, the control of capital movements receives

essentially the same theoretical support as the control of commodity movements; the optimum-tariff argument applies in both cases.

The essence of the optimum-tariff argument has been advanced to support the IET in more than one public forum. Although neither the words "optimum tariff" nor the precise logic of the argument has been employed, it is not difficult to locate such statements as, "The effect of the tax was to raise interest costs to the borrower by approximately 1 percent," or "Much of the burden of the tax is likely to be shifted to the foreign seller [of securities]. . . ." (The first quotation is from the 1965 *Balance-of-Payments Hearings* of the Subcommittee of the Senate Committee on Banking and Currency, Part I, p. 127, and the second is from 1964 Senate Report 1267, p. 2.) The first of these statements, which implies that the tax is fully shifted to foreign borrowers, would be correct only if the foreign demand for capital funds from the United States were completely inelastic with respect to the interest rate or if the supply of capital from the United States to foreigners were completely elastic, and surely neither of these conditions is met. (Indeed, if the foreign demand were completely inelastic, the tax could not reduce lending from the United States to the rest of the world, even if the tax could not be circumvented.) But whatever the elasticities may be, it would probably be wrong to leave the impression that optimum-tariff considerations were given much weight within the government. The testimony in support of the IET was overwhelmingly on balance-of-payments grounds, not on optimum-tariff grounds, and it seems clear from the record that any possible shifting of the tax to foreigners was regarded merely as an ancillary dividend and not as an important justification for the tax.

In any event, in the existing state of knowledge it would be extremely difficult, if not impossible, to ascertain the level of the optimum tariff on lending from the United States to other countries, even if the world were free of market failures. Consequently, no judgments are offered in this essay concerning the impact of the IET on the national welfare. But the effect of the IET on world welfare is also of interest, and regarding this effect some tentative conclusions can be drawn.

Assuming perfect competition and no externalities, one can apply to the IET the customary analysis of the effects of a tariff on world welfare. Figure 1 illustrates the method. All variables are measured in real terms. The schedule SS' represents the supply of saving from the United States to the rest of the world, II' is the foreign import demand, and r is both the rate of interest and the marginal efficiency of investment. A tariff of cf on capital exports from the United States will reduce lending from Ob to Oa , at a welfare cost to the world portrayed

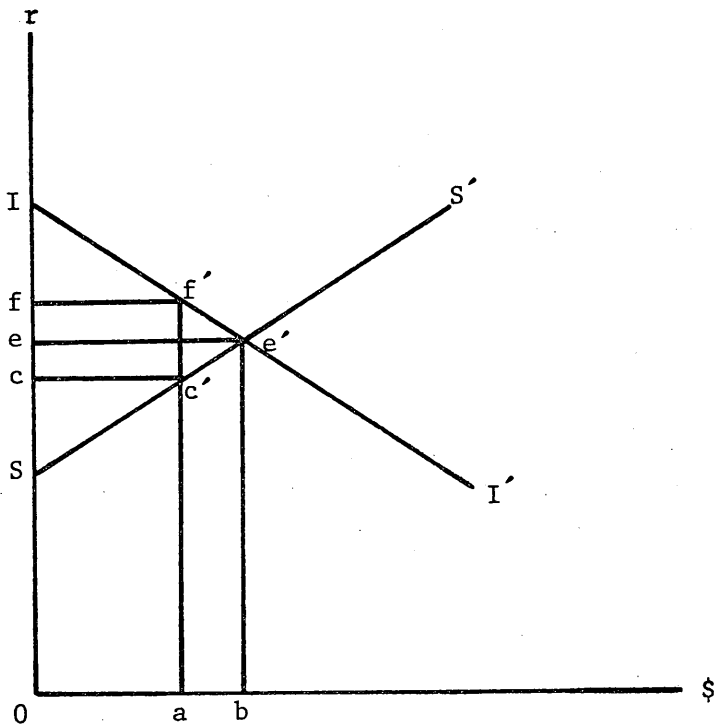


FIGURE I - Effects of a Tariff on Capital Exports

by the area $c'f'e'$. (No attempt is made in this essay to demonstrate the relationship between a country's net financial lending and the country's lending in real terms; that a noteworthy positive relationship exists is a long-standing principle of international economics.)

Capital is here regarded as a factor of production, and, as is customary, it is held that efficiency requires the marginal efficiency of investment to be everywhere the same. It is recognized that the market rate of interest in a growing economy measures neither the social cost of supplying the capital stock nor the social return realized on that stock; what it does measure, in dynamic equilibrium, is the social cost of *supplementing* the stock of capital at a given rate and the social marginal efficiency of that rate of supplementation. In this context a suppliers' surplus, for example, is the interest payment received by savers in excess of that payment required just to compensate them for refraining from consump-

tion to the extent necessary to add to the capital stock at the rate in question.

II. THE REAL WORLD

Although the foregoing simple model provides a useful point of departure, only a Dr. Pangloss would deny the existence of divergences between private and social cost in the capital markets of the world. The problem is not so much to recognize the causes of such divergences as to establish the direction and weight of their influence. Even though we can make only tentative judgments about this influence, the effort is worthwhile, because it could lead to the conclusion that the IET acts to reduce or offset such influence, in which case the measure would yield a welfare gain rather than a loss (assuming the other causes of divergences could not be removed); if the theory of second best has taught us anything, it is that two wrongs may make a right. Indeed, just such an argument is often made on behalf of the IET and other Federal controls over international capital flows.

In the following pages, then, the assumptions of perfect competition and no market failures are relaxed in order to inquire into the effects on capital allocation of various factors which might produce a divergence between the private and the social cost (or return) of capital. The end in view is to form a judgment as to whether the IET enlarges or reduces the net divergence caused by these distorting factors. No attempt is made to examine every conceivable distorting influence; scrutiny is confined to those which have received general attention as potentially quite important. The norm employed in the analysis is efficient allocation of the world's resources; a distortion which tends to raise net sales of foreign securities to the United States above the optimum prescribed by this norm helps to justify the IET, while a distortion which has the opposite influence tends to impeach the IET, other things being equal.

A. Differing Monetary-Fiscal Policy Mixes

It is sometimes argued that other advanced countries have relied heavily on monetary policy in preference to fiscal policy as a means of restraining inflation, with the result that their relatively high interest rates have attracted funds from the United States and aggravated its balance-of-payments deficit. Moreover, some theorists have suggested that international capital flows induced by differing monetary-fiscal policy mixes may be uneconomic. Suppose that the government of Country A decides to maintain full employment and fairly stable prices by means of tight fiscal policy and easy monetary policy and that the government of Country B sets out to achieve the same goals by running

governmental deficits and maintaining relatively high interest rates. One result will be a capital flow from A to B in response to the higher interest rates in B. Is such a capital flow efficient? (For elementary graphic illustrations of differing monetary-fiscal policy mixes, see Otto Eckstein's *Public Finance*, 2d ed., p. 118.)

If the higher interest rate in B is accompanied by a higher marginal efficiency of investment—and in theory the two would move together—the capital movement from A to B is efficient. Other things being equal and the governments being willing, the financial capital flow would equalize the interest rates of the two countries, stimulate increased domestic investment in B (as a result of the lower interest rate in B), diminish domestic investment in A, and improve A's trade balance with B. The marginal efficiency of capital would be equalized between the two countries. On the other hand, if the monetary authorities in B offset the addition to B's money supply from the capital inflow (say, by selling government securities from their portfolio), and if the monetary authorities in A offset the reduction in A's money supply from the capital outflow (say, by purchasing government securities in the open market), the equalization of interest rates would be delayed, and the marginal efficiency of capital between the two countries would not be equalized.

However, in the latter case there is no flow of real resources to accompany the money flow, because governmental policies are frustrating rather than facilitating the operation of the transfer mechanism; that is, governmental policies are preventing the increase in spending in B relative to spending in A which would lead B to increase its net imports from A. The inefficiency lies in the nonoccurrence of a real capital flow, not in its occurrence. (We have been assuming that the rate of exchange between A's and B's currencies is fixed in order that the discussion may be more relevant to today's world. If the exchange rate were allowed to fluctuate, a transfer of real resources from A to B would be stimulated by the decline in the value of A's currency in terms of B's currency.)

A related question is whether countries can in fact set interest rates independently without first insulating their capital markets from other markets by means of exchange controls such as the IET. It would seem that they cannot. If there are to be free markets and fixed exchange rates, governments must be prepared to orient at least their aggregate monetary policies toward the maintenance of balance-of-payments equilibrium and to accept the interest rate that results.

Finally, there is an empirical basis for skepticism about the claim that advanced foreign countries have exacerbated the balance-of-payments difficulties of the United States by relying too heavily on mone-

tary policy to restrain inflation. It is not clear that the major countries of the European Economic Community (EEC) have failed to employ fairly tight fiscal policies in recent years. Table 1, in the appendix, offers a crude measure of the net fiscal stimulus provided to the economy by the transactions of "general government" on national-income account in France, West Germany, and Italy during 1960-1967. By this measure, in none of these countries during this period have the transactions of general government been significantly stimulatory on balance, with the possible exception of Italy in 1965 and 1966. While tighter fiscal and easier monetary policies in these countries might have facilitated the balance-of-payments adjustment process, it is plain that their policy mixes could have been much worse from this standpoint than they were.

Thus it appears that international flows of capital in response to differing monetary-fiscal policy mixes may well be efficient, that attempts by different countries to set interest rates independently are inconsistent with the fixed exchange rates and free markets to which advanced countries are presumably committed, and that the major countries of the EEC have not been guilty of lax fiscal policies during 1960-1967. Little support for the IET can be drawn from these observations.

B. Differences in Rates of Inflation

Economic theory has long recognized that the money rate of interest is affected by the rate of change in the general price level. The question addressed here is whether differing rates of inflation in various countries may influence interest rates so as to induce inefficient flows of capital. Suppose that there is inflation in Country B but none in Country A and that the rate of exchange between the two currencies is fixed. To compute the real return on his security holding, an investor residing in B must discount the money rate of return, which will rise with inflation, in accordance with the rate of inflation. A resident of A who purchases securities in B, however, can convert his earnings of B's currency into A's currency at the fixed exchange rate, and since prices have not risen in A the real return on his securities is for him equal to the money rate of return. In these circumstances, will not capital flow from A to B even if the real rates of interest are the same in the two countries?

It is unlikely that many residents of A who are seeking long-term investments will be attracted as a result of the differential inflation to the securities of B. The money rate of return on long-term securities in B will not rise very much due to the inflation unless the inflation is expected to be substantial and to persist for some time. (Cf. Friedrich A. Lutz's contribution in *Maintaining and Restoring Balance in International Payments*, by William Fellner, *et al.*, p. 164.) But if a sub-

stantial and enduring inflation is generally anticipated, it is probable that a devaluation of B's currency will be feared by investors considering B's securities, unless the price elasticities of demand for imports are very low or unless B resorts to balance-of-payments controls. Moreover, a substantial inflation would probably arouse concern about a subsequent bust and possible default by some private issuers. Thus it seems that only short-term capital will be drawn to B in any volume as a result of the inflation there and that as fear of devaluation grew this flow would be reversed.

It is enlightening to imagine a world in which investors feared neither devaluation nor exchange controls and sought the highest rate of return without regard to rates of inflation. A country wishing to effect a lasting improvement in its balance of payments might then consider the method of perpetual inflation to raise its interest rate and attract foreign capital; and the annual reports of the Bank for International Settlements might exhort the United States to step up its rate of inflation.

Finally, it should be noted that ordinarily one would expect the general price level in borrowing countries to rise relative to that in lending countries as part of the transfer process, in which case the capital flow would be a source of differential inflation rather than a response to it.

C. Differing Fees for Placing New Securities Issues

Official documents in the United States have sometimes expressed the view, with varying degrees of explicitness, that a substantial part of the nation's capital exports to Europe is attributable to institutional defects or departures from competition in European capital markets. These markets have been characterized as narrow, restricted, inefficient, fragmented, poorly organized, and inadequate in capacity. The inference is drawn that "a great deal of the high cost of borrowing . . . appears to be the result of institutional forces and regulations rather than of the interaction of the market forces of supply and demand" (Senate, Subcommittee of the Committee on Banking and Currency, *op. cit.*, p. 145). If so, the IET may be desirable. Before accepting this conclusion, however, we examine its foundations in greater detail. Specifically, attention is given in this and the following sections to differences between Europe and the United States in the fees charged for placing new securities issues, to quantitative controls over security issuances in Europe, and to differences in tax structures between Europe and the United States. The inquiry is aided by two fairly detailed studies of European capital markets: (1) U.S., Congress, Joint Economic Committee, *Economic Policies and Practices: A Description and Analysis of Certain*

European Capital Markets (1963); and (2) Organization for Economic Cooperation and Development (OECD), Committee for Invisible Transactions, *Capital Markets Study: General Report* (1967).

The best single measure of the efficiency of a securities issue mechanism, according to the OECD study, is the total charge by intermediaries for placing new securities (p. 174). This charge consists of the issue commission, the underwriting commission, and miscellaneous other expenses of printing, advertising, etc. As shown in Table 2, in the appendix, these charges vary appreciably from country to country, and charges in the United States are among the lowest.

The impression left by these figures is substantiated by data gathered by the Department of Commerce in administering the voluntary-restraint program. These data reveal that domestic companies selling securities abroad incur issue costs (the difference between the issue price and the proceeds received by the company) amounting to about 2½ per cent of the bond issue, on the average, while the comparable figure in this country is only 1 per cent (Andrew F. Brimmer, Member, Board of Governors of the Federal Reserve System, "International Capital Markets and the Financing of U.S. Foreign Trade and Investment," remarks at the 30th Chicago World Trade Conference, February 16, 1967). Another source reports that the spread between the yield to investors and the cost to borrowers on a long-term high-grade corporate bond has been about 0.1 percentage point in the United States, 0.2 - 0.3 point in the United Kingdom, and up to 2 points in France and Italy (Federal Reserve Bank of Chicago, *Business Conditions*, September 1964, p. 15). Although taxes on new issues account for some of this spread in some countries, much of it is accounted for by relative inefficiency, because investment bankers in the United States have found it highly profitable to underwrite dollar-bond issues in Europe.

Two possible causes of this seeming difference in efficiency come to mind. European underwriters (and perhaps European financial intermediaries generally) may experience higher costs of operation than do underwriters in this country; or European intermediaries may be able to exercise more monopoly power than their counterparts in this country. Of course, if markets are not fully integrated these two explanations are not mutually exclusive, and both have been advanced.

With respect to costs, the expenses of financial intermediaries in the United States may be lowered by economies of scale external to the firm but internal to the industry, as well as by otherwise superior techniques. The OECD report asserts that the efficiency of a capital market depends to some extent on absolute size; for example, size facilitates the placement of large security issues. But the report hastens to add that

the capacity of the European and Japanese markets is great *relative* to the size of the corresponding economies, and it rejects the allegation of "narrowness" as an important explanation of any imperfections that may exist in these markets. To illustrate, even though the annual average of new security issues (including private placements) in the United States exceeded that in all of 14 other markets (of Western Europe and Japan) combined between 1960 and 1965, 8 of these countries surpassed the United States in terms of security issues as a per cent of GNP, indicating that their markets are quite capable of mobilizing savings and are fairly highly developed in relation to the size of the economies they serve. But the gap between the size of the *secondary* securities markets in the United States and the United Kingdom, on the one hand, and in other OECD countries, on the other hand, is considerably greater than the gap between the sizes of the corresponding new issues markets, whether measured in terms of number of securities quoted, their total market capitalization, or number of transactions (OECD, *op. cit.*, pp. 11, 166-167, 218-219).

If European capital markets have the potential for external economies of scale, the IET might be a useful stimulant to help them develop so that the economies are realized. However, recent theorizing has shown that the welfare costs may exceed the gains when tariffs are imposed to foster the development of industries displaying such technological external economies and that direct subsidies to the industries concerned are probably preferable. (For example, see Harry G. Johnson's contribution in *Trade, Growth, and the Balance of Payments*, by Robert E. Baldwin, *et al.*) Moreover, it may be that intermediaries in the United States have lower costs because of superior management and communications, that is, because of the kind of comparative advantage upon which the case for *free* trade in the services of intermediaries must ultimately rest. (In this connection, it is instructive to note the absence of concern in this country over relative European inefficiency in the production of computers or full-size automobiles.)

The recent growth in volume of new security issues in European capital markets is sometimes cited as though it were evidence of an improvement in efficiency resulting from the imposition of the IET. The growth is impressive. For example, in 1962 international bond issues amounting to \$360 million were floated in European markets, and in 1966 the comparable figure was \$1,286 million. What is not clear, however, is how much of this increase reflects an efficient development of capital markets in Europe and how much reflects an uneconomic diversion by the IET of demand for long-term capital from the United States to Europe.

As noted above, the fees of investment bankers in Europe would be higher relative to fees in the United States if there were less competition among European bankers than among bankers in this country, and Charles Kindleberger has recited some support for the view that capital markets in Europe are infected with a substantial degree of monopoly:

There is a view . . . that part of the [U.S. balance-of-payments] problem comes from monopoly in European capital markets. For example, European banks don't want to develop long-term security markets. They prefer to lend at short-term to industry and to have some kind of control, therefore, over the liquidity position of industry. . . . They resist the invasion of American security houses and they dislike the European dollar market. If this be true, these bankers, of course have been anxious to have us restrict the outflow of capital. (Senate Subcommittee of the Committee on Banking and Currency, *op. cit.*, pp. 367-368.)

On this question of monopoly, welfare theory again suggests that a direct production subsidy would be preferable to a protective tariff (such as the IET) as a means of attracting additional resources into any of the financial intermediary industries in Europe which may be monopolized. Still more efficient would be the elimination or reduction of the monopoly influence by competition from intermediaries of the United States unhampered by the IET.

D. Quantitative Controls

There is no disputing the existence of quantitative controls in European capital markets. We shall briefly describe those devices which have been publicized in the Joint Economic Committee and OECD reports and which are most relevant to our inquiry and shall then adjudge the direction of their effect on long-term capital flows between Western Europe and the United States. It is recognized that some of the controls described may have been modified since the compilation of these reports, but the goal is merely to obtain a general idea of the nature and prevalence of these controls in recent years.

In Belgium neither foreign nor domestic securities may be issued without government authorization, which may be refused because of tightness of the market or for other reasons. Similar rules apply in France, where the government attempts to channel funds into uses designated as of high priority in the national plan, approving issuances of securities by foreigners only after it is deemed that important domestic needs have been met, and met as a rule at a rate of interest below that which would prevail if demand were not restrained. Canvassing to sell