

Impact of Direct Investment Abroad by United States Multinational Companies on the Balance of Payments

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The persistent and distressingly large deficits in the United States balance of payments during the past decade have aroused considerable interest in the overall impact on the payments balance of direct investment abroad by United States multinational companies.¹ This paper summarizes the measurable balance-of-payments flows associated with American firms' operations overseas and attempts to place these flows in an appropriate theoretical framework.

The principal balance-of-payments flows associated with overseas investment can be separated into two major blocks: (1) those affecting the capital and related services accounts (principally investment income), referred to in this article as financial flows, and (2) those relating to the merchandise trade account. The preponderance of evidence indicates that the balance-of-payments impact of the financial flows has been favorable when viewed in a long-run context. Over the decade of the 1960's these flows cumulated to a net positive item of \$35 billion. Analysis of the financial flows within a theoretical framework which explicitly takes account of the relationship between investment outflows in one period and income inflows in subsequent periods suggests that their balance-of-payments contribution will remain favorable.

Conclusions about the impact of United States direct investment on the merchandise trade balance, on the other hand, must be considered tenuous for several reasons. First, the data available on trade flows related to direct investment activity are very limited. Second, to as-

sess the impact of overseas investment on trade flows, one ideally should compare the flows that took place given the existence of the overseas affiliates with the flows that would have occurred in their absence, and the data naturally do not permit such a comparison. Only by making explicit assumptions about the behavior of firms can any inferences be drawn. The assumption considered most reasonable is that multinational firms are operating in fairly competitive environments, which implies that most of the observed changes in exports and imports would have occurred even in the absence of United States foreign investment, at least in the long run. In other words, if United States companies had not exploited the overseas opportunities as they appeared, foreign companies eventually would have. Therefore, these export and import changes should be viewed more as reflections of adjustments to changes in international competitiveness rather than as a direct result of United States investment abroad. More data are required, however, before this conclusion on trade effects can be demonstrated empirically.

FRAMEWORK FOR ANALYZING DIRECT INVESTMENT IMPACT

The balance-of-payments flows associated with the activities of United States multinational companies arise in the following manner. The value of United States direct investment in foreign enterprises² can be augmented either

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¹ The phrase "multinational companies" has been defined in a variety of ways by different analysts of this subject. The terminology is used in its broadest sense in this paper to refer to the activities of all United States firms with direct investments abroad.

² In the official statistics on the United States foreign investment position published by the United States Department of Commerce, the book value of United States direct investment abroad is defined to include, not only the parent company's share of the capital stock and surplus of the affiliate, but also the net indebtedness of the affiliate to the parent plus any long-term debt of the affiliate held by nonaffiliated United States residents.

through additional contributions of capital from the United States—a long-term capital outflow in the balance of payments—or through the reinvestment of a portion of the direct investors' share of the foreign affiliates' earnings. The latter does not appear in the balance-of-payments statistics if the foreign affiliate is incorporated but, if the affiliate is unincorporated, reinvested earnings are included as inflows of direct investment income offset by capital outflows. The stock of assets abroad generates a stream of earnings into the future, some portion of which is returned to the United States in the form of dividends, branch profits, and interest payments and recorded as balance-of-payments inflows of "income from direct investment". In addition, United States parent firms receive payments from the affiliates of royalties and fees for the use of patents, managerial services, etc., which are also balance-of-payments inflows.

Since the inception in 1968 of the mandatory capital control program on American corporations' overseas investments,³ United States firms have relied to a significant extent on foreign sources of funds to finance their direct investment, principally by borrowing either through bond issues or directly from financial institutions overseas. These foreign borrowings are recorded as positive balance-of-payments inflows, offset by corresponding capital outflows when utilized to increase United States direct investment in foreign concerns. United States companies' interest payments on these foreign borrowings, of course, are also balance-of-payments entries and are included as a part of the figure recorded for United States private payments of income on foreign investments in the United States.

In addition, there are a variety of possible merchandise trade flows associated with United States direct investment abroad. Exports of capital goods may be generated by the establishment or expansion of facilities abroad, and there may be a continuing stream of such capital equipment shipments to meet replacement demands. There may be exports of intermediate goods for further processing and assembly abroad, and some goods may be shipped to affiliates for immediate resale, with the affiliate acting principally in a distributing or warehousing capacity. On the other hand, United States exports may be displaced by production and sale by the foreign subsidiary of goods which would otherwise have been shipped from this country. United States imports may also be affected

by United States direct investment abroad, as intermediate or final goods produced by the affiliate in a lower cost environment overseas are imported back to the United States.

Before proceeding to attempt to measure these flows, a brief exposition of the theoretical context appropriate to the analysis of the real balance-of-payments effects stemming from direct investment is in order. The first important point which clearly emerges from the mere listing of possible effects is that there is a dynamic process involved and time must explicitly be taken into account in any attempt to establish a causal relationship between outflows of investment funds and resultant income and net trade receipts. Any addition to the stock of productive assets abroad yields a flow of income as well as exports and imports in subsequent periods. The balance-of-payments impacts of a direct investment outflow in period t , then, are the increments in periods $t+1$, $t+2$, etc., of income and net trade receipts associated with that addition to productive capacity. Alternatively, one can say that the income and trade flows in any given year are attributable, *not* to the capital outflow in that year, but to the cumulative outflow in all previous years, i.e., to the outstanding stock of investment in that year. Thus, matching inflows and outflows on a year-by-year basis or cumulated over several years must be regarded as purely a descriptive method and not as an analytical tool.

The number of years required for an initial capital outflow to generate a return stream of income and net trade receipts equal to it is frequently referred to as the recoupment period, which several studies have attempted to calculate.⁴ For purposes of illustrating the time pattern of balance-of-payments impacts, which is implicit in the recoupment estimate procedure, the relationship between capital outflows and related income flows will be examined, ignoring the trade effects for simplicity. The basic model employed in these studies assumes that the investment base which produces the earnings stream is augmented either through capital outflows from the United States or through retained earnings. Then, given a constant rate of earnings, a constant ratio of repatriated to total

³ This program is administered by the Office of Foreign Direct Investments of the Department of Commerce and is usually referred to as the OFDI program.

⁴ For example, Philip Bell, "Private Capital Movements and the U.S. Balance-of-Payments Position", *Factors Affecting the U.S. Balance of Payments* (Washington, D.C.: United States Government Printing Office, 1962); N. K. Bruck and F. A. Lees, *Foreign Investment, Capital Controls, and the Balance of Payments* (New York University Graduate School of Business Administration, Institute of Finance, Bulletin No. 48-49), April 1968; G. Hufbauer and F. Adler, *Overseas Manufacturing Investment and the Balance of Payments* (Washington, D.C.: United States Department of the Treasury, 1968).

earnings, and a constant rate of growth of new direct investment outflows, the number of years necessary to achieve a cumulative positive balance-of-payments effect can be calculated. The inflows will ultimately match and then exceed the outflows, both on an annual and on a cumulative basis, so long as some earnings are repatriated and the rate of return is larger than the rate of growth of outflows.⁵

This approach may be used to analyze two relevant problems. In the first instance one can calculate how long it will take for a single once-and-for-all capital outflow to have positive balance-of-payments consequences. Clearly, in the year it occurs the outflow will be a negative balance-of-payments entry which will not be offset by any inflows, assuming that the investment does not earn a return until the next period. On the other hand, in every subsequent year the annual balance-of-payments effect will be positive and equal to the remitted earnings. This income stream will not be constant, however, but will grow because the investment base is being augmented in each period by the amount of reinvested earnings. As an example, if the earnings rate equals 20 percent and the repatriation rate is 60 percent, it can be calculated that a single outflow of \$100 will be totally recovered in terms of cumulated income inflows in the seventh year after the initial outflow.

For the purposes of analyzing the impact of aggregate direct investment flows on the balance of payments, however, it is more appropriate to examine the situation where there is a continuous, and probably growing, stream of new capital outflows. As noted above, as long as the rate of return on investment exceeds the rate of growth of capital outflows and as long as some earnings are repatriated, the balance-of-payments effect will ultimately turn positive although the recoupment period will be longer than in the example of a single nonrecurrent outflow. Using the same earnings and repatriation rates as in the earlier case but allowing capital outflows to grow at 10 percent per year, the annual balance-of-payments effect (i.e., yearly income inflows minus annual outflows) does not become positive until year 10 and the cumulated inflows exceed the cumulated outflows only beginning in year 16. The length of the recoupment period is quite sensitive to the assumptions made regarding the rate of return and

the rate of growth of outflows; in general, the larger the excess of rate of return over the rate of growth of outflows, the shorter the recovery time. Thus, whether one judges the balance-of-payments impact of direct investment as positive or negative depends critically on the time horizon one chooses. In the short run, the impact is likely to be negative, while in the long run the reverse is the case.⁶ It should be emphasized that, as illustrated by the numerical examples, the short run in this context covers a period of several years.

The second fundamental question which must be confronted in any attempt to assess the overall balance-of-payments impact of direct investment is what would have happened in the absence of United States direct investment abroad. This question is not relevant in estimating income flows associated with direct investment since there would obviously be none in the absence of the initial investment, but it is critical in estimating trade effects.⁷ There are a variety of explicit motives leading to the investment decision. While the explanations may appear different on the surface, they generally share the notion that there are competitive advantages in producing abroad—frequently in the form of lower costs. These lower costs could arise in the production process itself because of lower costs of labor or materials. Alternatively, savings could arise in the distribution process where local production allows lower transport costs, or lower costs of delivery to final market because of tariff barriers. Other less tangible benefits might also accrue from local production, such as establishing brand consciousness in the market or being better able to tailor products to specific national tastes.

In some instances, the decision to produce abroad could be based primarily on a defensive motive—to protect an

⁶ The length of the overall recoupment period will also be affected by the size and direction of the net trade receipts generated by the investment base. The larger and more positive these flows, the shorter will be the pay-back period, whereas the recoupment period will be lengthened the larger and more negative the net receipts. Indeed, if the net trade balance effects were sufficiently large and adverse, they could swamp the positive income inflows and the net balance-of-payments effect would be negative. This outcome does not seem likely, however, for a variety of reasons discussed later.

⁷ Under certain conditions, other kinds of capital flows, e.g., portfolio investment or bank lending, could arise in the absence of direct investment. The existence of such substitution might modify the conclusions of a study such as this. But for the purposes of evaluating the balance-of-payments impact of direct investment by itself, the most meaningful approach was to leave aside the possibility of substitute capital flows in the absence of direct investment.

⁵ These conditions are sufficient to ensure that the rate of growth of the stock of assets abroad (which equals the rate at which income inflows grow) will be sufficiently larger than the rate of growth of outflows—because of the reinvestment of earnings—so that the balance-of-payments inflows will ultimately exceed the outflows.

existing market share against the emergence of potential rivals. Underlying this explanation is still the presumption that there are advantages in producing abroad rather than in the United States, however. If such advantages did not exist, then the United States exporter could continue to maintain his market share through exports and would not be induced to begin production abroad in an attempt to forestall the emergence of potential rival firms.

Another hypothesis about the behavior pattern of United States direct investors has been propounded by Vernon and is known as the product or industry cycle theory.⁸ This thesis suggests that new products are first developed and tested in the large and relatively high-income United States market. Production remains in the United States during a trial period when a variety of production processes and product characteristics are tested, and during this period a market abroad may be initiated through export. As the market reaction both here and abroad is assessed, some standardization occurs and the emphasis in the production-location decision shifts to cost minimization. At some point during the expansion of the foreign market, cost-minimizing criteria may dictate shifting the locus of production abroad. Vernon carries the argument one step further and suggests that, in some instances, the cost of production may be sufficiently lower overseas to offset transport costs and the product may ultimately be produced abroad entirely, with some of it imported back to the United States.

All of the foregoing explanations—by no means a comprehensive listing—have in common the basic premise that there are advantages in producing in the foreign market, which would suggest that the foreign-produced goods could outcompete the comparable United States product. Given relatively free markets in which the basic technology of production is known and in which there are no significant barriers to entry, such as prohibitive start-up costs, competitive forces would suggest that in the absence of United States firms establishing production facilities abroad, other non-United States firms would seize this profitable opportunity. Consequently, to the ex-

tent that foreign-sourced goods displace United States exports or lead to United States imports replacing domestic production, these effects would be likely to occur anyway even without the United States firms producing abroad, and therefore it would be wrong to attribute any export loss or import creation to United States direct investment. Rather these changing trade patterns merely reflect world production adjusting to relative cost advantages.

Once again, however, it should be emphasized that the time frame becomes an important consideration in this evaluation. There may be a considerable lag between the emergence of profitable production possibilities and the perception and seizing of these opportunities. It seems quite possible that United States firms may *accelerate* this rationalization of worldwide resource utilization, perhaps because they become aware more rapidly of the market opportunities in certain products as developed through their export trade and perhaps because of an ability to raise the necessary capital more quickly either through internal funds or through access to the larger United States capital market. Thus, in the short run—which may be a matter of several years—the shift of United States production may be conceived to result in actual export loss or import creation for specific products, but as indicated above, given a longer run outlook, many of these exports would probably have been forfeited and the goods imported anyway. In a long-run time frame, then, theoretical considerations suggest that the relevant criterion for assessing the balance-of-payments impact of United States direct investment abroad is whether or not the income returns outweigh the associated capital outflows, and on this basis the evidence seems clearly to indicate that the balance of payments is favorably affected by direct investment activity.

EXPANSION OF FOREIGN INVESTMENT AND SALES IN THE 1960'S

The book value of United States direct investment abroad has expanded from less than \$32 billion at the end of 1960 to \$78 billion by the end of 1970 (see chart), growing at an average rate of 9.4 percent per year. Total affiliate assets, which are larger than the book value of United States direct investment reflecting foreign equity participation in the affiliates as well as the affiliates own borrowing from foreigners, appear to have grown even more rapidly at least in the latter part of the decade. Unfortunately, recent data on these total affiliate assets are lacking, but a survey conducted by the Office of Foreign Direct Investments (OFDI) covering the balance sheets of the majority-owned affiliates of 469 United

⁸ R. Vernon, "International Investment and International Trade in the Product Cycle", *Quarterly Journal of Economics*, Vol. LXXX (1966). A recent exposition of this hypothesis supported by evidence obtained through case studies may be found in a study undertaken by the Harvard Business School under contract for the United States Department of Commerce: R. B. Stobaugh and Associates, "U.S. Multinational Enterprises and the U.S. Economy", *The Multinational Corporation: Studies on U.S. Foreign Investment*, Vol. I (United States Department of Commerce, Bureau of International Commerce, March 1972).

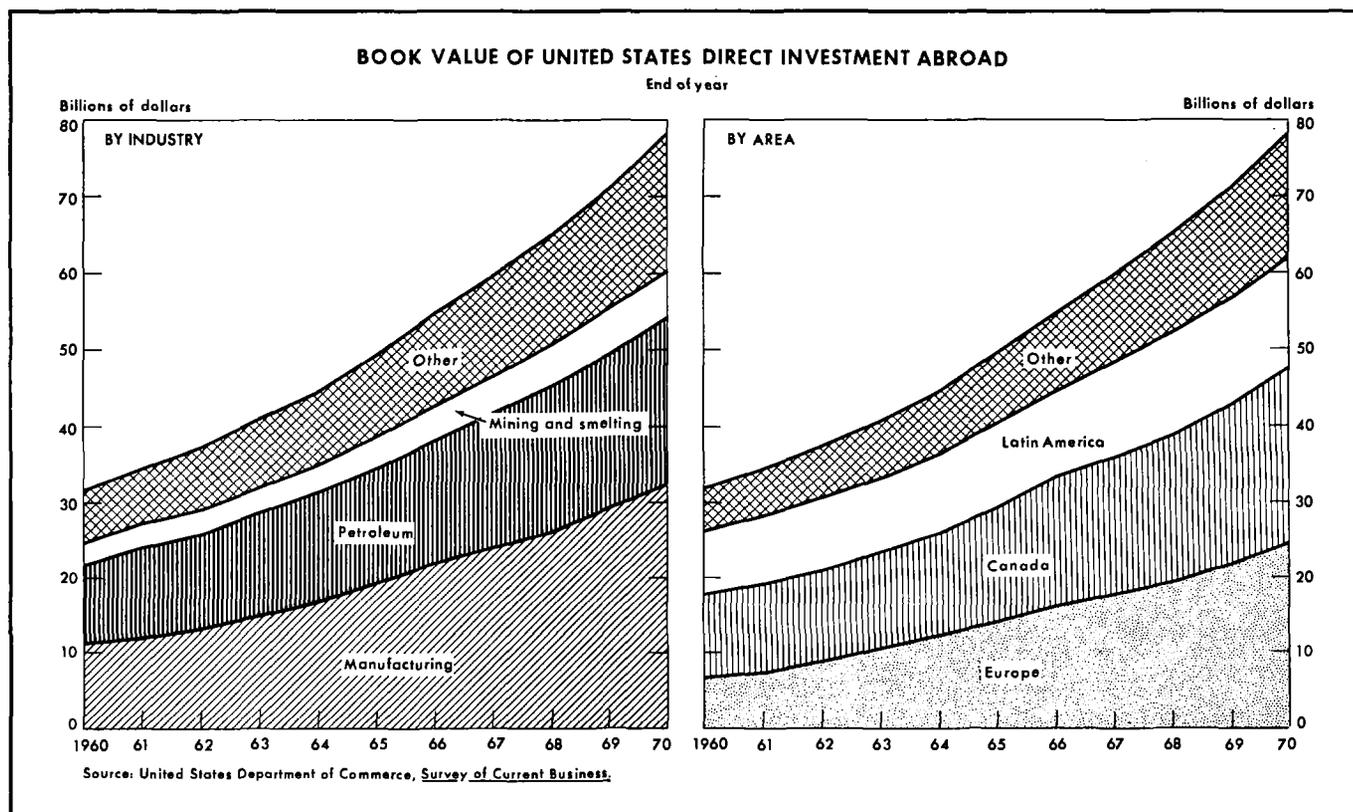
States direct investors⁹ reveals that total assets of these affiliates rose at an approximately constant rate of 13 percent per year between 1966 and 1969. During this same period, however, the United States direct investors' share of these total affiliate assets declined from 60.1 percent to 57.2 percent, reflecting the impact of the control program on United States direct investment that was designed to shift the financing of affiliate expansion from United States to foreign sources.

Additional supporting evidence pointing to the continued expansion of overseas affiliate assets can be derived from actual and anticipated plant and equipment expenditures of foreign affiliates, which dipped in 1967-68 but rose sharply in 1969-70. These figures indicate clearly

that there has been no sharp curtailment in expansion plans since the OFDI program was established in 1968. Rather the expenditure pattern seems more probably to reflect cyclical conditions in foreign business and capital markets.

GEOGRAPHICAL AND INDUSTRIAL DISTRIBUTION OF FOREIGN ASSETS. In the ten years 1961-70 inclusive, the increase in total book value of United States direct investment abroad was concentrated in the manufacturing sector, where United States-owned assets rose by 190 percent to \$32.2 billion (see chart). The bulk of these manufacturing investments was in Canada and Europe, but the rate of growth in Europe considerably outstripped that in Canada. Undoubtedly the formation of the Common Market at the end of the 1950's acted as a considerable inducement to American firms to establish production facilities behind the common tariff barrier in order to serve the markets of the member countries. The establishment of such local facilities was encouraged, not only as a means of avoid-

⁹ Office of Foreign Direct Investments, *Foreign Direct Investment: Selected Statistics* (United States Department of Commerce, July 1971).



ing the external tariff wall, but also to take advantage of the expanded internal market which opened up possibilities of achieving economies of scale and generated more rapid economic growth in the European Community countries than might otherwise have been achieved.

In absolute amount, investment in petroleum affiliates represented the second largest industrial group by the end of 1970, although their proportion of total investment abroad had fallen to 28 percent from 35 percent ten years earlier. The \$21 billion of petroleum industry assets, which include refining, distribution, and crude production facilities, was about evenly divided between Canada and Europe on the one hand and Latin America and other areas on the other. Mining and smelting operations, largely representing investments to obtain raw materials, grew at about the same rate as petroleum investments over the ten-year period and amounted to \$6.1 billion at the end of 1970, or roughly 8 percent of total investments. As expected, these assets were concentrated in Canada and Latin America.

The other category of investments displaying a growth of just over 200 percent during the 1960's was comprised of trade and other industries, largely financial and other service industries. The most rapid growth in this group of enterprises occurred in Europe, as ancillary service industries moved abroad with the rapid development of manufacturing concerns. Despite the rapid growth in these investments, however, they represented only some 8 percent of total direct investment assets by the beginning of 1970. Finally, transportation and public utilities investment exhibited virtually no growth over the period and represented less than 4 percent of the total investment figure in 1970.

PRODUCTION OF FOREIGN AFFILIATES. Unfortunately for assessing the importance of the role of American overseas investment in world production, comprehensive statistics on the total output of foreign subsidiaries of American companies located outside the borders of the United States are not available. However, by assuming a constant relationship between affiliates' assets and their sales, an estimate which is at least indicative of the rough order of magnitude of such output can be derived.¹⁰ This proce-

dures suggests affiliate sales in 1970 of about \$74 billion by manufacturing concerns, roughly \$36 billion for petroleum affiliates, \$6 billion for mining and smelting subsidiaries, and \$16 billion for all other affiliates. Thus, a very rough approximation of total sales by all foreign affiliates in 1970 would be in the range of \$130 billion-\$140 billion, which contrasts with a total sales figure (estimated similarly) of some \$50 billion in 1960.¹¹ Clearly, then, the operations of United States-affiliated firms abroad—whether measured in terms of asset formation or of total sales—exhibited sharp growth in the 1960's and, by the end of the decade, were a very significant factor in global production.

CAPITAL AND SERVICES ACCOUNT FLOWS

To recapitulate briefly the relevant entries in the capital and services accounts of the balance of payments associated with United States direct investment, the expansion in the book value of United States foreign direct investment can be achieved either through a capital outflow from the United States or through the reinvestment of a portion of the United States share in the affiliates' earnings. The first method of financing entails a debit entry in the balance of payments, "direct investment abroad", whereas, as noted above, the latter does not appear in the balance of payments at all if the affiliate is incorporated or it appears as offsetting debit and credit entries if the affiliate is unincorporated. Direct investment capital outflows rose from \$1.6 billion in 1961 to \$4.4 billion in 1970 (see Table I), with the bulk of the outflows going to manufacturing and petroleum affiliates.

These additions to the stock of investments subsequently generate a return flow of payments in the form of repatriated earnings and interest payments on credit extended by United States residents, all recorded as "income on United States direct investment abroad". These flows have been a major positive factor in the balance of payments, rising from \$2.8 billion in 1961 to \$6.0 billion in 1970 and again coming mainly from

¹⁰ This estimation procedure was derived from work done by Judd Polk, economist for the United States Council of the International Chamber of Commerce. For the few years when data on both assets and sales are available, the relationship was fairly stable.

¹¹ The 1970 total is probably a conservative estimate since it is based on an assumed constant relationship between sales and assets. However, the relationship actually used in the estimation procedure is that between affiliate sales and the United States direct investors' share of book value, not gross assets. To the extent that the gross investment base of the foreign affiliates has been augmented by an increased proportion of foreign capital contributions, either debt or equity, total sales expansion might well have exceeded that suggested above.

Table I
NET EFFECT OF CAPITAL AND SERVICES ACCOUNT FLOWS
ASSOCIATED WITH DIRECT INVESTMENT OF UNITED STATES MULTINATIONAL COMPANIES

In billions of dollars; — denotes outflow

Capital and services account flows	1961	1966	1967	1968	1969	1970	Cumulated 1961-70
United States direct investment abroad	- 1.6	- 3.7	- 3.1	- 3.2	- 3.3	- 4.4	- 28.8
Borrowing abroad by United States direct investors	*	0.7	0.5	3.4	2.4	3.9	11.2
Interest payments to foreigners on borrowing abroad†	‡	‡	- 0.1	- 0.2	- 0.4	- 0.6	- 1.3
Income from direct investment abroad	2.8	4.0	4.5	5.0	5.7	6.0	41.8
Receipts of royalties and fees	0.7	1.3	1.4	1.5	1.7	1.9	12.4
Net financial flows‡	1.9	2.3	3.2	6.5	6.1	6.8	35.3

* Not available.

† Estimated.

‡ Less than \$50 million.

Sources: United States Department of Commerce, *Survey of Current Business* (June 1971) and *Foreign Direct Investment Program: Selected Statistics* (July 1971).

manufacturing and petroleum affiliates.¹² Receipts from affiliates of royalties and management fees for services rendered by the parent companies comprise another balance-of-payments inflow, and these rose from \$0.7 billion in 1961 to \$1.9 billion in 1970.

In response to the OFDI program, United States companies have borrowed substantial amounts of funds abroad in recent years. These borrowings appear as an inflow of nonliquid foreign capital in the balance of payments and are subsequently counterbalanced by an outflow of direct investment as the proceeds are transferred to foreign subsidiaries. A survey carried out by the OFDI reveals that borrowing by United States direct investors from foreigners both in the form of bond issues and directly from banks has been a strongly positive item in the balance of payments, particularly in the 1968-70 period following the institution of the mandatory restraint program. In fact, during this three-year period, the average net positive contribution of all financial flows to the balance of payments was \$6.5 billion, and foreign borrowings by

United States direct investors accounted for nearly one half of this—or \$3.2 billion, as can be seen in Table I.

Finally, this foreign borrowing also gives rise to a balance-of-payments outflow in the form of interest payments to foreigners. Estimates of these figures are available only for 1967-70 but, since borrowing abroad was relatively insignificant prior to 1965, the absence of earlier figures does not seriously distort the overall picture.

On the simplest level of analysis, these debit and credit entries can be matched on a year-by-year basis or cumulated over a period of years to yield a net positive or negative impact on the balance of payments, as illustrated in Table I. Clearly, on either of these bases, the inflows of income, royalty and fee payments, and foreign borrowing have greatly exceeded the outflow of funds for expanding direct investment assets or for interest payments on foreign debt: the net positive balance-of-payments flows cumulated to over \$35 billion in the period 1961-70, nearly one third of which may be attributed to borrowing from foreigners.

As stated earlier, this simple comparison of flows is useful mainly as a descriptive tool, but reveals little about the causal relationship between capital outflows and future incremental income returns generated by the addition to the investment base. For this, time must be allowed explicitly to enter the calculus. When the model described earlier is employed using actual data for the period 1961-69, the rate of return is found to have exceeded the rate of growth of capital outflows and, therefore, one can conclude that the balance-of-payments effects of new direct

¹² Since a large number of petroleum affiliates are branch subsidiaries, the income figures from these affiliates include earnings which in fact are reinvested, and thus the gross income inflows overstate the amount of income which remains in the United States. From the overall balance-of-payments point of view, however, this overstatement is canceled out as any branch profits reinvested are counted as capital outflows in the direct investment account.

investment will ultimately be positive on both an annual and a cumulative basis. This is consistent with the presently observed pattern of positive balance-of-payments contributions of income and capital outflows, and suggests that this pattern will continue in the future if the parameters remain stable.¹³

To evaluate the overall balance-of-payments effect of all capital and financial flows, certain other flows must also be considered. The annual stream of receipts of royalties and fees associated with the outstanding stock of investment will also increase as the investment base grows. In the base period, each \$100 of book value was associated with about \$3 of such receipts. This additional stream of inflows enlarges the ultimate net positive balance-of-payments effect and shortens the length of the recoupment period. Second, the increase in United States corporate borrowing from foreigners to finance overseas investment will affect the time pattern of net balance-of-payments effects. The borrowing may be considered as an offset to direct investment outflows in the immediate period, thus reducing net capital outflows, but repayment of the debt in the future will lead to larger net outflows than would otherwise have occurred. In addition, interest payments to foreigners on the debt will constitute an annual stream of outflows, partially offsetting some of the positive effects mentioned above, and will tend to lengthen the recoupment period.

These conclusions must be further tempered by other qualifications. The calculations assume constant parameters—that is, rates of return, repatriation, and growth of outflows—and there are a variety of factors which might lead to a shift in these parameters. For example, there is

¹³ The values of the parameters were estimated to be: rate of return, 12 percent; rate of growth of outflows, 9 percent; repatriation rate, 70 percent. These values were estimated as averages over the period and, therefore, must be viewed as only rough approximations of the marginal relationships the use of which would be preferable since we are interested in isolating the incremental income inflows from an addition to the investment base. These estimates may be used to calculate the recoupment period, although the results must be viewed with caution. Such simulations suggest that the balance-of-payments impact (annual income inflows minus annual new direct investment outflows) associated with these new direct investments will become positive in the twenty-second year, although the negative annual balances diminish in magnitude after the fourth year. Of course, it should be emphasized that the balance-of-payments impact of total income and capital flows in future years will be a combination of not only these marginal flows associated with the new direct investment but also the positive flows generated by past investments. On this basis, the calculations show that the net income and capital flows associated with both old and new investments will continue to be positive and to expand.

some evidence of a negative relationship between capital outflows and the age of foreign affiliates.¹⁴ As the affiliates mature, they provide for a larger part of their investment needs through internal funds and rely less on funds from the parent organization. This would suggest that, as the previously noted bulge of investments in the 1960's matures, the rate of growth of outflows may decline. The stability of the rate of return on investment is also open to question. In particular, it appears that the foreign affiliates have been induced by the OFDI program to increase their own borrowing to finance investment.¹⁵ The impact of this greater leveraging of their assets may be to increase the rate of return in the future. However, increased leverage can also sharply cut rates of return in periods of slackened demand for their output as the higher interest costs reduce earnings. It is not obvious which type of effect is likely to prevail. Finally, United States ownership of assets abroad and/or the proportion of foreign earnings which may be repatriated are, in some instances, subject to control by host governments, and the possibility of expropriation introduces a further uncertainty into the long-run outlook.

TRADE ACCOUNT FLOWS

EXPORTS. As outlined in the introduction, there are a variety of possible export effects attributable to United States direct investment abroad but, unlike the capital and other financial effects, these cannot readily be isolated from available statistics. There are two types of export effects which it would be desirable to measure. (1) Exports of goods to and through foreign affiliates, which would not have been shipped to other foreigners if the affiliates did not exist, are referred to as associated exports. This category could comprise a variety of goods, such as capital equipment associated with plant expansion, parts and components to be assembled abroad, or final goods destined for immediate resale. (2) Exports which do not occur because of the competition of goods manufactured and sold by the foreign affiliates are described as displaced exports. Unfortunately, we cannot directly answer the question—which is central to these two effects—of what the pattern of United States exports would have

¹⁴ F. Cutler, "Benchmark Survey of U.S. Direct Investment Abroad, 1966", *Survey of Current Business* (August 1971).

¹⁵ P. Berlin, *Foreign Affiliate Financial Survey, 1966-1969* (United States Department of Commerce, Office of Foreign Direct Investments, July 1971).

been in the absence of foreign direct investment. Nevertheless, very rough estimates of the order of magnitude of such effects are presented below based on the limited amount of available data and, most importantly, on judgmental assumptions about firm behavior.

Turning first to the question of estimating associated exports, the only comprehensive data available are provided in a bench-mark survey of direct investors for 1966. In that year, United States companies' exports to overseas affiliates amounted to \$7.8 billion, of which \$6.3 billion represented shipments by United States manufacturing concerns, primarily to their manufacturing affiliates with distribution outlets receiving most of the remainder. Several interesting facts emerge from this survey. First, exports to foreign affiliates accounted for roughly one half of the total exports of the direct investors. Second, the total export sales of direct investors accounted for 67 percent of the total United States exports of merchandise goods.¹⁶ Third, as noted earlier, one of the associated export effects to be expected from United States overseas investment is a demand for capital equipment—both for use in constructing and expanding facilities and to fill the subsequent stream of replacement needs. It has been suggested that United States affiliates might be more likely than other foreigners to purchase such equipment in the United States, and therefore such exports would be directly associated with United States overseas investments. When exports to affiliates are examined in terms of their end use, it is apparent that shipments of capital equipment for the affiliates' use are small, amounting to only 9 percent of total exports to affiliates. Of the other exports to affiliates, shipments of parts and components for further processing or assembly accounted for 40 percent of the total, with 51 percent of the goods destined for immediate resale or lease. The bulk of the shipments of final goods was received by manufacturing affiliates, suggesting that in many cases the manufacturing affiliates themselves act as distributing agents for finished products from the United States.

Using these 1966 data as a bench mark and assuming a constant relationship between exports to affiliates and

outstanding investments, a comparable figure for associated exports in 1970 can be estimated to be about \$12 billion. It should be noted that this is only a rough estimate of the amount of exports which would *not* have been shipped in the absence of the foreign affiliates because it assumes that *all* exports of United States firms to their foreign affiliates can be attributable directly to the ownership of the affiliates. This must be viewed only as an approximation because, on the one hand, at least some of the goods sold through affiliates probably would have been exported anyway. On the other hand, the existence of the foreign affiliates may have helped promote the sale—either through the affiliates or directly to other foreigners—of goods produced by their United States parents that otherwise would not have been exported.

This brings us to the key question of displaced exports. At the outset, the argument over possible displacement may be limited to the manufacturing industries since the output of other affiliates, principally petroleum and mining and smelting enterprises, represents development of raw material sources not available in sufficient supply in the United States. The problems of evaluating the magnitude of export displacement render sharply defined estimates impossible. To obtain such estimates, it would be necessary to know to what degree the expansion of foreign-sourced output by United States firms replaced, not United States exports, but other potential foreign-owned production. In other words, in the absence of United States-owned affiliates abroad, would the foreign demand for the products have been met by United States exports or by production abroad in a foreign-owned facility? Here then, subjective assumptions about behavior become critical. The most reasonable assumptions, as indicated above, seem to be that markets are relatively competitive for most of the manufacturing affiliates' products, that a significant portion of United States investment in overseas facilities is undertaken in response to lower production and distribution costs (including the effect of tariff barriers), and that these cost conditions as well as needed technological knowledge are fairly readily available to foreign organizations. These assumptions imply that, on the basis of relative cost considerations, production in the foreign market would eventually replace United States exports and that, in the absence of United States firms abroad, foreign firms would in time come to produce the goods. Thus, some, and probably a large proportion, of affiliate production should be viewed as a substitute for output of indigenous foreign firms without United States affiliation rather than as a substitute for United States exports.

Since the process of substitution of foreign production

¹⁶ For comparability with the direct investor export figures, this total merchandise export figure as published by the Census Bureau is adjusted to exclude goods classified by the Census Bureau as special category goods—mainly military-type goods transferred by the Department of Defense. For further details, see *U.S. Direct Investments Abroad, 1966, Part II*, a supplement to the *Survey of Current Business* (United States Department of Commerce, Bureau of Economic Analysis, April 1972).

for United States exports is a dynamic one involving adjustments over time, some insight into the shift of production may be gained by examining the change over time in relative market shares provided by United States exports as opposed to foreign affiliate production. For five major categories of manufactured products for which comparable data on exports and affiliate sales are available,¹⁷ the share of the market provided by United States exports fell from 35 percent in 1962 to 30 percent in 1968.¹⁸ (See Table II for detailed sales and export data.) In other words, if the relative market shares had remained constant over this period, United States exports would

have been about \$2 billion higher in 1968 than they actually were. It must be emphasized that this is *not* to be interpreted as a numerical estimate of export loss during the interval attributable to the existence of the affiliates. The "loss" might well have occurred anyway as nonaffiliated foreign producers assumed a larger market share, and might more appropriately be viewed as illustrative of a general loss of competitiveness of United States exports in world markets.

In summary, the question of whether there has been export displacement and, if so, of what magnitude essentially cannot be answered on the basis of existing data. However, when the problem is appropriately viewed as a dynamic adjustment process over time, reasonable assumptions about firms' behavior suggest that the amount of export displacement attributable to direct investment is likely to be fairly small. This, of course, in no way contradicts the possibility that, at any one point in time, there may be substitution of foreign affiliate production for United States exports as the adjustment process works itself out.

IMPORTS. As with exports, the question of what effect United States direct investment abroad has on United

¹⁷ Affiliate sales data are classified by type of industry while export figures are by type of product, so that the two categories are not necessarily completely consistent.

¹⁸ For this purpose, the total supply to the market is defined as sales by foreign manufacturing affiliates outside the United States plus exports from the United States summed across the five major categories for which we have comparable data. Data for sales and exports of transport equipment for Canada are excluded from the calculations because the figures are heavily influenced by the movement across the United States-Canadian border of automotive parts associated with the 1965 Automotive Agreement.

Table II
SELECTED DATA ON UNITED STATES EXPORTS AND SALES BY FOREIGN MANUFACTURING AFFILIATES OF UNITED STATES MULTINATIONAL COMPANIES

In billions of dollars

Commodities	1962	1963	1964	1965	1967	1968
Chemicals:						
Affiliate sales	4.4	5.1	5.9	6.9	8.9	10.2
United States exports	1.9	2.0	2.4	2.4	2.8	3.3
Rubber products:						
Affiliate sales	1.3	1.3	1.6	1.7	2.0	2.1
United States exports	0.1	0.1	0.2	0.2	0.2	0.2
Machinery excluding electrical:						
Affiliate sales	3.4	3.7	4.6	5.4	7.4	8.2
United States exports	4.1	4.2	4.8	5.2	6.2	6.5
Electrical machinery:						
Affiliate sales	2.7	3.0	3.6	4.0	4.8	5.3
United States exports	1.4	1.5	1.7	1.7	2.1	2.3
Transportation equipment:						
Affiliate sales	6.7	8.0	9.5	10.7	12.8	14.5
United States exports*	1.8	1.9	2.2	2.2	3.1	3.7
Total for selected goods:						
Affiliate sales	18.5	21.1	25.2	28.7	35.9	40.3
United States exports*	9.3	9.7	11.3	11.7	14.4	16.0

* Excludes civilian aircraft.

Sources: United States Department of Commerce, *Survey of Current Business* and *Overseas Business Reports*, selected issues.

States imports revolves around attempting to differentiate between those imports which would have occurred even in the absence of United States overseas affiliates and those which may be directly ascribable to the existence of these subsidiaries. Once again, the discussion may be limited to imports from manufacturing affiliates since purchases from petroleum and mining affiliates reflect primarily raw materials needed in the United States, which presumably would have been imported even if the United States investors did not own the overseas facilities.

Conceptually, the same considerations of exploiting relative cost conditions as enunciated above in the export discussion could lead United States firms, not only to establish production units outside the borders of the United States, but also to import the output of these affiliates for direct sale or further assembly in the United States. The manufacture of electronic components in the Far East, such as Hong Kong, Taiwan, Korea, and the Philippines, by United States producers is a frequently cited example. Other specific examples can surely be found. To the extent that lower production costs arise out of differing relative factor endowments or other market forces, such overseas production can be seen once again as merely a more rational utilization of resources.

In other instances, the cost advantages of producing abroad may arise not from market factors but from specific incentives provided by host governments. For example, special concessions are given to United States firms by Mexico to induce them to set up assembly plants on the Mexican side of the border and export the final goods back to the United States. In situations of this sort there are, of course, benefits to the host country in terms, for example, of employment and foreign exchange earnings, but there are also disadvantages to the United States in terms of displacement of United States workers with the attendant loss of income. When the cost advantages arise from artificial incentives, it is questionable whether a more efficient pattern of resource use results.

The most striking conclusion which can be drawn from data on sales of foreign manufacturing affiliates to the United States is that such shipments represent a fairly small proportion of total affiliate output and a much smaller percentage of total United States imports than the comparable relationship between exports to affiliates and total United States exports. Imports from all foreign manufacturing affiliates increased approximately fourfold between 1962 and 1968 and reached a level of \$4.7 billion in the latter year, or approximately 15 percent of total nonmilitary merchandise imports. While the increase over the period is fairly sizable, it is largely a result of the

1965 Canadian-United States automobile agreement. If imports of transportation equipment from Canada are excluded, the remaining imports rose by about two and one-half times to only \$2.5 billion. These sales to the United States accounted for only some 4 percent of total affiliate sales in both 1962 and 1968. Thus, by far the largest part of affiliate output is designed for sale in foreign markets, not in the United States.

Furthermore, the available statistics do not support the claim that there are very significant imports from affiliates in the areas frequently cited as the "low wage" countries, such as Mexico, Taiwan, and Korea, where United States firms are establishing assembly plants and production facilities for parts and components.¹⁹ In fact, the bulk of the increase in nonautomotive imports has been from Canada and was principally centered in three categories: paper and allied products, primary and fabricated metals, and nonelectrical machinery.

Thus, on the basis of the available data, it seems reasonable to conclude that the impact of foreign direct investment on imports is small. Using the relationship between imports from affiliates to outstanding investment in 1968, it can be estimated that such imports (excluding Canadian autos) were about \$3 billion in 1970. Not only is this absolute magnitude of imports from foreign affiliates fairly small, but additionally it is likely that a significant portion of the goods currently purchased from these overseas subsidiaries would have been imported from other foreign sources if the United States affiliates did not exist.

CONCLUSIONS

In summation, the empirical evidence available to estimate the total impact on the trade balance of direct investment by United States multinational companies is inadequate to the task. As indicated above, rough estimates can be made from existing statistics of two types of trade effects associated with direct investment. Combining the \$12 billion of associated exports with the \$3 billion import figure suggests a net positive trade effect in 1970. But even these are only partial estimates of the total trade balance effect and must be interpreted with great caution for several reasons. First, they depend very heavily on

¹⁹ However, it should be noted that there may have been some increase in this type of activity recently which would not be captured in these statistics for 1968.

the underlying behavioral assumptions. In particular, both estimates assume that *none* of these exports to, or imports from, affiliates would have occurred if the affiliates did not exist, while in reality it is likely that some indeterminate portion of both would have been traded with foreign-owned firms in the absence of United States affiliates. Second, these trade balance estimates for 1970 do not take into account any possible export displacement which, as noted above, may be significant in any particular year. Third, and perhaps most importantly, all of these trade effects are more appropriately viewed as part of a dynamic process over time rather than as a specific impact in any given period. On this basis, while there may be some net export gain or loss or import creation in the short run, over a longer time horizon the portions of the observed changes in export and import patterns which can reasonably be ascribed to the direct investment process itself probably tend approximately to balance out or perhaps be a net positive item. Rather, most of the observed alterations in trade patterns should more appropriately be

viewed as market responses to shifts in worldwide relative competitive conditions, and would have occurred whether or not the foreign facilities were owned by United States investors.

The real balance-of-payments impact of United States direct investment activities, then, hinges on the relationship between capital account items and related financial flows and, on this basis, the evidence seems clear that United States direct investment is a long-run positive factor in the balance of payments. It must be recognized, however, that there are still many unanswered questions about the underlying motivations and the dynamic processes involved in foreign direct investment. There are most likely significant differences among industries and countries which temper the investment decision, and the future outlook could well be affected by changes in international economic and political relations. There is a great need for more and better statistics on the international operations of multinational firms and wide scope for further research on this important topic.