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The Allocation of “Oil Deficits”

THE MEMBERS of the Organization of Petroleum Exporting Countries have developed a huge surplus on goods and services with the rest of the world as a result of the quadrupling in oil prices since late 1973 and their inability promptly to spend on imports all the subsequent enlarged export receipts.¹ This surplus, estimated at about \$60 billion in 1974, can be reduced only by the following means, alone or in some combination: (1) a reduction in oil prices; (2) a reduction in demand for OPEC oil by importing countries; (3) an increase in imports of goods and services by members of OPEC.

In spring 1975, all three of these influences appear to be at work. Because of reduced demand in importing countries—resulting from not only the price hike but also the recession and from deliberate conservation efforts—oil supplies are piling up, tankers are idle or are traveling slowly, and, according to various reports, oil sales are being made on delayed-payment arrangements. From a low base, in 1974 OPEC imports expanded spectacularly; the total, including military goods, rose about 75 percent, from \$22 billion to about \$38 billion.

For these reasons, some observers have estimated that the OPEC current surplus could disappear or shrink markedly by the end of the 1970s or, at

Note: The views expressed are personal and should not be attributed to the Board of Governors of the Federal Reserve System or other members of its staff.

1. For convenience, the balance on goods, services, and private remittances (surplus or deficit) will be referred to here as the “current balance.” The term “current-account” deficit or surplus includes government grants paid or received and, for the purposes here, this item is a means of financing the OPEC surplus rather than a flow to be financed.

least, that the total current deficit of the members of the Organisation for Economic Co-operation and Development (OECD) could disappear as the remaining deficit with OPEC was offset by a surplus with the rest of the world.² In my judgment, however, the capacity of OPEC countries to absorb imports can be easily exaggerated, at least with respect to nonmilitary products. The rate of growth in imports will depend on the rate at which investment projects can be implemented, which in turn depends on time and the availability of skilled manpower. Given these technological and physical constraints, this paper assumes that the price elasticity of OPEC's demand for imports is very low.

Without deciding when the OPEC surplus will disappear, I assume an OPEC current surplus, probably a declining one, for a number of years. The question this paper explores is how the inevitable corresponding current deficit of the countries that are not members of OPEC should be divided among them.

Since current deficits must be financed, an alternative form of the question is how the oil-importing countries should share the increase in debt and net equity claims against themselves.³ The OPEC countries have little choice but to give away, lend, or invest the proceeds of their current surpluses in oil-importing countries, which can redirect such flows among themselves either by inducing private capital movements or by official lending and borrowing. How should this net flow be apportioned?

A word may be in order about the real effects of the rise in oil prices and of changes in current balances. Although the terms of trade of PICs (petroleum-importing countries) have deteriorated, PECs (petroleum-exporting countries) can spend only a limited amount of their enlarged export receipts and must lend the remainder back to PICs.⁴ As long as they do so, the net worth of PICs will decline (or rise less rapidly) and the net worth of PECs will increase, meaning under some definitions a reduction in real income of the one and an increase in real income of the other. But the absorption of resources by PICs for domestic consumption, investment, and government outlays must fall (or rise less rapidly) only to the extent that

2. *OECD Economic Outlook*, no. 15 (July 1974), pp. 94-96; Morgan Guaranty Trust Company of New York, *World Financial Markets* (January 21, 1975), p. 8; Edward R. Fried, "Financial Implications," in Joseph A. Yager, Eleanor B. Steinberg, and associates, *Energy and U.S. Foreign Policy* (Ballinger, 1974).

3. In the remainder of the paper, the terms "debt" or "incremental debt" will be taken to include equity claims of others against the "debtor."

4. Fritz Machlup has suggested these acronyms.

their exports to PECs increase. In the aggregate, they need suffer no reduction in real absorption or its rate of growth apart from the expansion of exports to PECs. They may experience an unnecessary reduction of real income—which is to say, a recession—if their domestic policies fail to compensate for the higher costs to consumers of oil products and the consequent curtailment of spending on other goods and services, as they would if a heavy, uncompensated excise tax on oil had been imposed. In that event, the contraction of real income in PICs would be a loss of income to the world, not a transfer to PECs, which can occur only as the latter increase their imports and reduce their current surpluses.

Relevance of the Question

What is the rationale for this investigation, with its implied consequences for national policies aimed at apportioning a given aggregate current deficit and accompanying increase in debt?

To start with, international economic relations have suffered a sizable disturbance in the form of a quadrupling of oil prices. The adjustment to this disturbance cannot be immediate, given the physical limitations on the growth of imports by PECs; and its time pattern, which depends on the three factors identified in the opening paragraph, is uncertain. Furthermore, the changes in the structure of industry in the PICs along the road to full adjustment are unpredictable. Given these uncertainties and the overriding fact that these countries in the aggregate cannot eliminate their current deficits at their own discretion, it is vital for them to avoid policies that would simply aggravate one another's balance-of-payments problems without alleviating their aggregate problem.

The quadrupling of oil prices has thrown most industrialized countries into a current-balance position to which they are unaccustomed. Since the early 1950s, most OECD countries have regarded a current surplus as normal (see table 1 for the pattern over the last fifteen years). This view made economic sense, given the generally accepted objective of transferring real resources to developing countries, financed by official and private capital flows. Beyond this, a trade or current-balance surplus was frequently regarded as a virtue and a deficit was regarded as a flaw requiring corrective action. The huge and inevitable shift toward deficit in current balances of OECD countries can give rise to such reactions. Acting individually, OECD

Table 1. Current Balances^a of the OECD Countries, Selected Periods, 1960–74, and Increase in Cost of Oil Imports, 1974

Billions of U.S. dollars

Country	Annual average		1965–72		1973	1974	Increase in cost of oil imports, 1974 ^b
	1960–64	1965–72	High	Low			
Canada	-0.70	-0.31	0.97	-0.90	-0.50	-1.50	-0.25
France	0.68	0.25	1.01	-1.46	-0.10	-5.30	6.70
Germany	1.10	1.98	3.90	-0.65	6.82	11.80	6.90
Italy	0.24	2.38	3.01	1.28	-1.18	-7.00	5.10
Japan	-0.34	2.62	6.95	-0.04	0.07	-4.20	12.80
United Kingdom	0.09	0.95	3.04	-0.26	-2.25	-8.60	6.90
United States	5.54	1.88	6.37	-5.61	3.36	1.40	16.75
Other OECD	-0.56	-0.08	4.31	-1.66	5.07	-11.65 ^c	10.75 ^c
Total, OECD	6.05	9.67	13.66	6.98	11.29	-25.05	65.65

Sources: Organisation for Economic Co-operation and Development, *OECD Economic Outlook*, various issues; International Monetary Fund, *International Financial Statistics*, various issues; *Survey of Current Business*, vol. 55 (March 1975); OECD, unpublished data; Statistics Canada, *Quarterly Estimates of the Canadian Balance of International Payments, Fourth Quarter 1974*, vol. 22, no. 4 (Ottawa: Information Canada, 1975); IMF, unpublished data. Details may not add to totals due to rounding.

a. Balance on goods, services, and private remittances.

b. Assumes 1973 volume of oil imports at 1974 prices.

c. Federal Reserve estimate.

countries might find it rational to take immediate measures to restore their traditional current surpluses rather than incur debt. Because such actions cannot possibly succeed for OECD countries as a group, the inevitability of the aggregate PIC deficit—at least for the time being—needs emphasis. Once the deficit is accepted, how it is shared becomes a lively issue.

Some understanding about a reasonable allocation of the deficit seems necessary if mutually frustrating and destructive policies by oil-importing countries are to be avoided. As long as an aggregate OPEC current surplus exists, efforts by any one PIC to reduce its current deficit—by devaluation, deflation, restrictions on imports, or export subsidies—would simply shift the deficit to another PIC, unless those efforts were pinpointed on the country's current balance with PECs. The scope for such pinpointed efforts is rather narrow; beyond limitations on oil imports, it allows room for little else. If a PIC increased its exports to PECs by subsidies, for example, the result would probably be to reduce exports by other PICs to OPEC (unless the subsidy spurred an increase in total OPEC imports), which would merely shift the aggregate deficit rather than reduce it. Alternatively, attempts to reduce the deficit by devaluation or deflation would, apart from any resulting reduction in oil imports, also shift the deficit to other PICs as exports by that country to PECs and to other PICs rose. Insofar as devalua-

tion by PICs led to substitution in PECs of imports for domestically produced goods, as could happen where economies are diversified, the PECs would probably either match the devaluation or impose import restrictions, in light of their development aims.

Thus, the relevance of the question is that focusing on it will (1) help accustom nations to inevitable current deficits, which they tend otherwise to regard as abnormal; (2) accustom them to accept borrowing in some form as a normal accompaniment of current deficits; (3) provide a basis on which oil-importing countries can formulate policies that are mutually consistent; and (4) offer a way for the rest of the world to appraise the policies of individual countries, as is done regularly in the International Monetary Fund, the Organisation for Economic Co-operation and Development, and the Bank for International Settlements.

Although the problems this paper addresses confront all oil-importing countries, its analysis will focus on the OECD. One reason is to make the analysis manageable. Another is that less developed countries are in little danger of mutually frustrating and destructive policies because they are accustomed to current deficits. Still another is that a substantial share of OPEC's surplus is apt to have its counterpart in OECD's deficit. Finally, the OECD countries, long before the autumn of 1973, had established in Working Party 3 the practice of examining one another's current-balance positions and targets to judge their compatibility.

To emphasize OECD countries is not to minimize the serious balance-of-payments problems that many developing countries face as a result of higher oil prices and that were aggravated in 1974 by recession in the industrialized countries. The net increase from 1973 to 1974 in payments to oil producers by developing countries outside OPEC is estimated at \$9 billion, while "official development assistance" to developing countries from the countries on the Development Assistance Committee of the OECD came to \$9.4 billion in 1973.⁵ Even when the recession is over, LDCs will have larger payments deficits than they did before 1973. Since the expansion of OPEC imports is likely to be concentrated in industrial products, LDCs could be left with substantial current deficits even when OPEC has moved toward balance and OECD has returned to a surplus position.

At the outset, the OECD countries are far from equilibrium. While some imbalances always exist, table 1 demonstrates that current balances were

5. *World Bank Annual Report, 1974*, p. 82.

much less evenly distributed in 1974 than in earlier years. In 1974 Germany had a current *surplus* of almost \$12 billion, while the OECD as a whole had a current *deficit* of about \$25 billion. The United States had a small surplus and Japan a relatively small deficit despite the huge rise in their payments for imported oil in 1974. These relatively strong current-balance positions had their counterparts in large deficits in the United Kingdom and some of the smaller OECD countries, which experienced a reduction in their current balances greater than the impact of higher oil prices. Deficits of non-OECD countries also deepened. To some extent these imbalances are cyclical, reflecting the recession that began in 1974 in the major industrial countries. "High employment" positions were probably closer to balance than actual positions in 1974. In any event, apart from shifts to achieve a rational—or at least mutually acceptable—allocation of the OECD deficit, some adjustments in current balances *among* OECD countries are called for and probably will occur.

Identification of Bases for Allocation

The problem that confronts OECD can be framed in terms of the allocation among these countries either of current deficits or of incremental debt. For any individual OECD country and for the group, the current deficit will equal the increase in debt over any time period. On the historic evidence, OECD countries can be expected to avoid heavy use of their international reserves to finance current deficits. Furthermore, their current deficit is likely to consist of a current surplus with the rest of the world (the developing countries, Eastern Europe, Russia, and China) and a more than offsetting current deficit with OPEC. Similarly, OECD will be a net capital importer over the next few years, because net capital inflows from OPEC will outstrip net capital outflows to the rest of the world.

Whether the focus is on incremental debt or on the current deficit, examining the criteria for optimal allocation is important. The criteria for the two approaches may well overlap. Emphasis on current deficits involves questions about absorption of resources and its pattern over time, and the allocation of resources within individual countries during and after the adjustment period. Focus on incremental debt raises questions of creditworthiness, ability to borrow, and the availability of official financing to supplement private capital flows (including arrangements to reshuffle capital among OECD countries).

Agreement on a pattern of current deficits and incremental debts among OECD countries implies adopting policy measures to achieve that pattern. The policy instruments available for adjusting current balances include government borrowing from abroad (in money and capital markets, from other governments, or from international institutions), which has become a major policy instrument and which clearly affects exchange rates; differential demand-management policies among countries; changes in the fiscal-monetary policy mix that will affect private capital flows and hence exchange rates; and direct intervention in exchange markets by central banks. The general desire to avoid trade restrictions and export subsidies was reflected in a "trade pledge" adopted by OECD in 1974 and renewed May 29, 1975, for another year by all members except Portugal.⁶

DO NOTHING—JUST STAND THERE

Suppose for the moment that the OECD countries do not agree on a division of the deficit. What would happen if they followed a laissez-faire prescription? Assume no official intervention in exchange markets and no governmental borrowing or other direct attempts (including controls) to influence capital or trade flows in any OECD country. For the area as a whole, the current deficit and the capital inflow vis-à-vis OPEC will be roughly equal, while, with the rest of the world, OECD will presumably have a current surplus financed by official bilateral and multilateral development assistance and by private capital flows to LDCs outside of OPEC.

This "do-nothing" case differs from the general case for freely floating exchange rates because neither the OECD current deficit with OPEC nor the net capital flow from OPEC to OECD will be significantly affected by the exchange rate between the two groups. The rate at which the current surplus of the OPEC countries can be compressed is limited by their ability to absorb imports. Given the economic characteristics of these countries, the price elasticity of their aggregate demand for imports must be very low and therefore devaluation of OECD currencies relative to OPEC currencies would do little, if anything, to curtail the OPEC surplus. And, since the major capital and money markets are in OECD countries, OPEC members have little choice but to invest their surpluses somewhere in OECD, regardless of exchange rates.

The broad case for the laissez-faire approach relies on the usual argu-

6. International Monetary Fund, *IMF Survey*, vol. 4 (June 9, 1975), pp. 161, 165.

ments for free-market solutions. Furthermore, if governments eschew specific aims for the current account, they cannot possibly pursue incompatible targets or beggar-thy-neighbor policies.

Under the *laissez-faire* assumptions, any OECD country will have, in the initial period, a given current balance, inflow of OPEC funds, and flow of capital to or from the rest of the world. If these three flows sum to zero at the existing exchange rate, that country's situation would be stable. For the "representative" OECD country, the current balance will be in deficit. The magnitude of capital inflow directly from OPEC will depend on the opportunities for direct investment as perceived by OPEC investors, on the availability of and yield on money- and capital-market instruments, on the expectations of OPEC financial managers regarding movements in the exchange rate of the country, and possibly on political considerations. Capital flows to or from other countries and the Eurocurrency markets—funds that originally might have come from OPEC—will also depend on relative interest rates and expectations about the exchange rate; such flows could arise at the initiative of foreigners or of residents of the country, but by definition of the *laissez-faire* case, deliberate borrowing by the government to finance the current deficit is ruled out.

OECD countries differ significantly in the breadth and depth of their money and capital markets. Countries in which the markets are not well developed—in the sense that the annual total of net new issues of securities, short- and long-term, is small and market turnover is low—are unlikely to attract OPEC funds directly even if current market yields are relatively favorable; nor are they likely to attract funds from other OECD countries except to the extent that their own citizens take the initiative to borrow when interest rates are lower in other financial markets or the Euromarkets. A country (call it country A) in this position is likely to experience a capital inflow smaller than its initial current deficit, and its exchange rate will therefore tend to fall. Under the assumptions here, the exchange rate will fall until the current deficit is reduced to the amount of net capital inflow.

Trade and invisible transactions respond only with a lag to changes in exchange rates.⁷ While economists may disagree about the length of these lags, for present purposes all that matters is that some lags exist. Yet the exchange market in country A has to clear daily without intervention, under

7. See, for example, Helen B. Junz and Rudolf R. Rhomberg, "Price Competitiveness in Export Trade Among Industrial Countries," *American Economic Review*, vol. 63 (May 1973), pp. 412–18.

the assumed laissez-faire conditions. The exchange rate might have to overshoot the equilibrium level in the meantime—to a point at which investors (or speculators), inside or outside country A, perceive that it has done so and move capital in to profit from the expected reversal in its movement.

The decline in the exchange rate, while it has a lagged effect on the volume of trade, will have a prompt effect on import prices and on the general price level, with a possible lagged effect on wages. The change in the current balance may also have income effects, but these presumably are offset by fiscal and monetary policies. At some exchange rate and with some cost-push inflation owing to the initial rise in import prices, after a lag, capital inflows into country A will equal the current deficit without further changes in exchange rates or other policy actions. In this process of accommodation the exchange rate will at some stage tend to rise if there has been earlier overshooting, thereby reducing the price of imports. Whether any of the earlier upward movement of prices and wages will be reversed is questionable in today's world.

Meanwhile, country B will receive capital in excess of its current deficit, given the assumption that total capital flow from OPEC to OECD roughly equals OPEC's current surplus with OECD. Country B's currency will tend to appreciate, as it would, in any event, as a reflection of the depreciation of A's currency. The extent of the more general appreciation of B's exchange rate will depend on the size of its capital inflows relative to its ex ante current deficit. Again overshooting may occur, which will lower B's import prices. In time B's current deficit will rise and its capital inflow may fall as a result of market expectations that the appreciation in its currency is likely to be reversed. Insofar as B's lower import prices percolate through to its price-wage level, the deterioration of its current balance will be less than would be expected from the movement in its exchange rate alone.

The laissez-faire case ultimately generates a pattern of current deficits and capital flows that may or may not be stable. If the (lagged) reduction in A's current deficit resulting from the depreciation of its currency is fully reflected in an increase in B's deficit, all will be well. But perhaps A's deficit will decline at the expense of country C, which is not attracting an excess of capital from abroad. In that case, C's exchange rate will fall and it will share A's experience. The result could be a round of devaluations of OECD currencies that would be fruitless, since they would not reduce the aggregate deficit of oil-importing countries.

Furthermore, the price increase set off in A by the initially excessive de-

valuation may, depending on the organization of its labor market among other things, acquire a momentum of its own, and push the exchange rate further downward. In the end, country A will have a relatively small share of the OECD deficit (a “non-oil” surplus). If it should turn out that, as OPEC imports rise over the next five years, country A’s comparative advantage makes it a prime supplier to OPEC countries, its current surplus will be too large and its currency will have to appreciate. The resource-allocation effects of first devaluing because of inadequate capital inflow (in the absence of deliberate governmental borrowing) and later revaluing may be costly.

Another instability would arise if the capital flow that country A attracts when the market decides its exchange rate has touched bottom comes from country D, which, up to this point, has had a stable exchange rate with a current deficit just balanced by capital inflows. Country D’s currency would depreciate and it would begin to repeat A’s experience.

Judgments on the *laissez-faire* case before examining the other options may be premature. Granting this, the major shortcomings are the possible price-wage and resource-allocation effects during and after the period of adjustment for the balance of payments. In any event, governments are quite likely to find the *laissez-faire* approach unacceptable. And governments patently are borrowing to finance current deficits. If they are going to take a hand in managing their balance-of-payments positions, good sense dictates attempts to establish compatible goals.

The alternatives to the *laissez-faire* case involve, first, target setting—perhaps zones rather than points—for current deficits by the OECD countries; second, deliberate governmental actions to supplement private capital flows so as to provide a total capital inflow equal to the target deficit; and, third, use of other policy instruments, including intervention in the foreign-exchange markets, to prevent the temporary overshooting described in the examples above.

Adoption of targets and of policies to achieve them assumes that governments have the foresight and ability to manage their payments positions more effectively and acceptably than would the free play of markets. This is a controversial assumption, without doubt.

On what criteria might targets for the current balance or incremental debt be established? The standards for judging a proposed basis for allocating the OECD deficit or incremental debt are (1) the differential impact among

countries on present as against future “absorption” of resources for domestic use; (2) the extent to which reallocations of resources can be minimized during and after the adjustment period, on the assumption that the OPEC surplus is temporary; (3) the willingness and ability of countries to incur incremental debt and the corresponding willingness of OECD countries in overall surplus to lend to the others; and (4) the effect on the longer-run rate of growth of real income in the OECD countries.

The Do-Something Case

This section abandons the “do-nothing” case so far as to assume a desire of OECD governments to consult about an allocation of their combined deficit and to take policy measures aimed at realizing the agreed pattern. During this process, the OECD combined deficit may be shrinking as OPEC imports increase. According to what criteria might the OECD countries allocate the overall current deficit? The following sections set forth six possible candidates and examine their merits and demerits.

ABILITY TO REDUCE ABSORPTION OF RESOURCES

Since a larger deficit means a greater capacity to use resources for domestic purposes, welfare considerations might suggest apportioning the aggregate OECD deficit so that the poorer countries have the larger shares. In other words, the transfer of real resources abroad to pay for higher-priced oil would be delayed for the poorer countries until growth of their economies made it less burdensome. One way of applying this criterion would be to allocate the OECD current deficit in inverse proportion to gross national product (or gross domestic product) per capita. For example, this system would call for the assignment of relatively small current deficits to the United States and Germany and relatively large ones to Spain and Italy. To avoid assigning unreasonably large deficits to very small countries, the results must be scaled by some measure of size; table 2 gives the results of using total population for this purpose.

It is useful to consider this criterion first because it clearly reveals the tradeoff between parting with real resources and taking on debt. The preference functions of countries in this respect are not clear, but the danger that OECD countries would adopt mutually inconsistent policies in a fruit-

less effort to reduce their own individual current deficits implies that at least some countries are more willing to give up resources than to incur debt.⁸

Whatever the pattern of preferences, allocating incremental debts on this basis might be difficult. Ex ante capital flows would be unlikely to conform to the pattern that was generated by this criterion; that is, OPEC capital is more likely to go to the countries with higher incomes per capita, which happen to be the countries with better-developed capital markets. As column (1) of table 2 shows, almost one-third of the deficit would be assigned to the smaller OECD countries, which account for only 14 percent of the gross domestic product of all OECD countries. Thus, a heavy volume of compensatory official capital flows would be necessary; specifically, since the richer countries would probably be net recipients of capital in excess of their relatively small assigned current deficits, they would have to be prepared to lend, directly or indirectly, to the poorer industrial countries. It is a reasonable prediction that the willingness of OECD countries to provide official financing to one another has limits.

Another objection to this approach is the possible positive correlation between GNP per capita and comparative advantage in meeting OPEC's expanding demand for imports. In fact, the exchange-rate movements necessary to achieve the pattern of current deficits called for by this criterion—depreciation of the currencies of richer OECD countries relative to those of the poorer ones—would strengthen the comparative advantage of the richer countries. Thus, when the OECD deficit disappears in the 1980s, the richer countries might be in excessive current surplus and the balance-of-payments adjustments needed at that time could well involve costly reallocations of resources.

ECONOMIC SIZE

Some variant of GNP—that is, a criterion reflecting economic size—has the merit of assigning current deficits in apparent conformity with ability to incur debt and with the likely pattern of capital flows. By this criterion, the United States and Germany, for example, would take on a relatively larger

8. In an interview reported in *Business Week* (October 12, 1974), pp. 40–42, Guido Carli, Governor of the Bank of Italy, proposed a scheme that suggested the readiness of his country promptly to pay the higher price of oil with real resources.

Table 2. Allocation of Assumed OECD Current Deficit of \$30 Billion According to Selected Criteria, and Adjusted Normal Surplus, by Country
Billions of U.S. dollars

Country	Deficit per capita inversely proportional to GDP per capita ^a (1)	Deficit proportional to GDP ^a (2)	Deficit proportional to population ^a (3)	Normal surplus plus "oil deficit" in 1974 ^b (4)
Canada	0.6	1.1	0.9	-0.5
France	1.7	2.4	2.1	5.1
Germany	1.8	3.2	2.5	3.7
Italy	3.5	1.3	2.2	3.5
Japan	4.6	3.8	4.4	8.2
United Kingdom	2.9	1.6	2.3	4.7
United States	5.4	12.2	8.6	6.7
Other OECD	9.5	4.3	6.9	9.1
Total, OECD	30.0	30.0	30.0	40.5

Sources: Computed from OECD, *Main Economic Indicators* (December 1974), and *OECD Economic Outlook*, no. 10 (December 1971); table 1 above; and Federal Reserve staff estimates. The figures may not add to totals due to rounding.

a. Assumes total OECD current deficit of \$30 billion; based on gross domestic product and population in 1973. In column (1) the deficit is distributed inversely to GDP and then scaled to the size of the population.

b. The oil deficit is defined as the increase from 1973 to 1974 in payments for imported oil minus the increase in exports to the OPEC countries. The minus sign denotes a surplus.

share of the total debt, and Italy and Denmark would take less while also having smaller targets for current deficits.

Under this approach countries would share the initial deficit in proportion to their economic size. Moreover, as OPEC imports rise and the OPEC current surplus shrinks, countries could also share equitably the impact of the real transfer to OPEC (the loss of "absorption" for OECD as a whole).

But, since real income per capita differs among OECD countries, a strict proportionality of current deficits to GNP in some cases would initially impose a somewhat greater relative real transfer on poorer countries than on the rich. To avoid this result, total population or total labor force, rather than real GNP, could be used as the measure of economic size.⁹

A possible objection to allocating current deficits in proportion to GNP or economic size stems from the wide differences among OECD countries in the share in GNP of foreign trade. With its big GNP and small foreign sector, the United States would be assigned a current deficit that appeared

9. In fact, however, this problem has not deterred the Development Assistance Committee of OECD from assigning targets for development assistance as a proportion of GNP.

very large in relation to its normal exports while the Netherlands would be in the opposite position. The GDP of the United States is 41 percent of the OECD total, while that of the Netherlands is 1.8 percent. Thus, of a current OECD deficit of about \$30 billion, the U.S. share would be \$12 billion and the Dutch share \$540 million. Yet U.S. exports were less than three times Dutch exports in 1973 (\$71 billion versus \$24 billion). Thus, the current deficit assigned to the United States would equal about one-sixth of its annual exports while the deficit assigned to the Netherlands would come to less than 3 percent of its exports. Germany's assigned share of the OECD deficit would equal \$3.2 billion, about 5 percent of its 1973 level of exports of \$68 billion. Assignment on the basis of GNP thus could create problems for balance-of-payments adjustment in the future. On the other hand, growth of OPEC demand for imports (and the induced effects of this growth on other countries' imports) may also be distributed among OECD countries roughly in proportion to their GNP, as discussed above. In that event, this criterion would have considerable merit. Furthermore, distribution on the basis of population, rather than GNP, would lessen this problem, as table 2 demonstrates.

RATE OF RETURN ON CAPITAL

Since, for any OECD country, current deficits represent additional real resources for home use relative to what would otherwise be available, consideration might be given to allocating the aggregate OECD deficit according to the social rate of return on additional resources. This criterion has particular appeal if a country with a relatively large current deficit is expected to undertake more investment than a country with a smaller one. Some urge it as the most rational way to use the increase in world saving that OPEC is lending back to the rest of the world.¹⁰ On these various grounds this criterion would tend to maximize real GNP growth in the OECD area as a whole. Furthermore, it would allocate incremental debt to countries in proportion to their potential for growth.

An objection to this criterion would be the inconsistency of its sudden application at the margin. In the past, the appropriateness of current sur-

10. See W. M. Corden and Peter Oppenheimer, "Basic Implications of the Rise in Oil Prices," *Moorgate and Wall Street* (Autumn 1974), pp. 23-38 (published in London by Hill Samuel & Co.).

pluses was judged not in the light of the rate of return but rather in the light of the capacity and assumed obligation of countries to export capital, particularly to developing nations.

A more elementary and possibly fatal objection to this criterion is the difficulty of estimating national rates of return on investment in a way that is generally accepted. I pretend to no expertise in capital theory. If this general criterion—the marginal rate of social return on investment—has appeal, I would propose that OECD form a working party to develop acceptable measures or proxies for it.¹¹

POTENTIAL FOR PRODUCING SUBSTITUTES FOR OPEC OIL

If the OECD makes a concerted effort to reduce its dependence on OPEC oil by developing substitute sources of energy, that endeavor will require considerable investment outlays in some countries. OECD countries differ in potential for this endeavor. The United States has enormous coal reserves, whereas Japan has limited possibilities of producing oil substitutes. The higher oil price is swelling potential world saving; and this shift is now contributing to recession since no commensurate increase in consumption or investment or government spending has yet accompanied the consequent OPEC lending to the OECD area. Insofar as investment in substitutes for OPEC oil will be substantial, and will thus raise the share of total investment in GNP, a case can be made for allocating the OECD current deficit more heavily to countries that make this heavier additional investment.

This approach would allocate a very large share of the OECD deficit to the United States, with the result that other OECD countries would give up real resources earlier. But U.S. consumption of oil is generally regarded as wasteful and more susceptible to conservation than that of other countries. Thus, the United States could, without undue strain, reduce its oil consumption in order to provide scope for more investment in energy without, in effect, absorbing resources from other OECD countries.

A decisive objection to this approach may be its penalties on a country with little potential for oil substitutes but a high rate of return on other in-

11. Two of the members of the working party should be Robert M. Solow and Edward F. Denison.

vestment. If such a country were assigned a larger current deficit and carried out normal investments, its income growth could be rapid enough ultimately to reduce the relative burden of higher oil costs.

NORMAL CURRENT SURPLUSES ADJUSTED FOR OIL DEFICITS

Before oil prices were raised, a broad consensus existed in OECD on the appropriate pattern of cyclically adjusted current surpluses (referred to here as "normal" surpluses). This consensus was strengthened by the considerable work and debate in the four months between the suspension of convertibility of the dollar into gold on August 15, 1971, and the Smithsonian Agreement on December 18.

One way of allocating the deficit would be to adjust each country's normal surplus for its "oil deficit"—assuming agreement on the definition of that component and on measurement of changes in it. The most common definition of an oil deficit is the increase from some base date in a country's payments for imported oil minus the increase in its exports to OPEC members.

In 1970, the OECD current surplus with the rest of the world was estimated at \$10.4 billion on a cyclically adjusted basis, reflecting an average annual increase of about \$400 million since 1960. In 1972 the minimum norm for the United States was thought to be about \$6 billion, leaving \$5 billion for the rest of OECD.¹² For 1974, in the absence of the rise in oil prices, the normal OECD surplus would be about \$12 billion.

Adjusting such normal surpluses for oil deficits involves conceptual problems, which become ever more difficult with time.¹³ For example, should the oil deficit include oil trade between Canada and Norway, which are oil exporters, and other OECD countries? Should interest and dividends paid by OECD to OPEC members be included in the computation? What about the effects on other elements of OECD trade caused by the change in relative prices and by the financial transfers from OPEC to other developing countries? How many of these influences on OECD current balances should one take into account in computing an oil deficit?

Ignoring them all, one could get a rough measure of the impact by adjusting each country's normal current surplus for the increase in its actual oil

12. *OECD Economic Outlook*, no. 10 (December 1971), pp. 8, 10, 11.

13. These problems are set forth in *OECD Economic Outlook*, no. 16 (December 1974), p. 62.

imports from 1973 minus the increase in its exports to OPEC countries from 1973. For the United States these magnitudes were about \$17 billion and \$3 billion, respectively, in 1974, netting to about \$14 billion. The U.S. target for the current deficit for 1974 would have been a little less than \$7 billion on this basis, compared with an actual current surplus of \$1.4 billion. Japan's normal current balance would have required an adjustment of about \$10¼ billion in 1974 (a \$12¾ billion increase in oil spending minus increased exports to OPEC of \$2½ billion). Assuming its normal surplus was \$2 billion, its target deficit would be just over \$8 billion, whereas its actual current deficit was \$4.2 billion. For Germany the target deficit would have been nearly \$4 billion, compared with an actual current surplus of \$11.8 billion. As is evident in table 2, I have not attempted to "normalize" the individual deficits to match the total of \$30 billion assumed for the other allocations.

This approach would invoke the objection that normal deficits would be awarded inversely with efforts at conservation: a country that reduced its oil imports would be assigned a smaller normal deficit. Thus, the more "virtuous" countries would be expected to make earlier real transfers to OPEC than the "wastrels." On the other hand, since the latter would take on a larger share of the total OECD debt, this objection is not necessarily decisive. Furthermore, this problem might be avoided by basing the oil deficit on the physical quantity of each country's imports in a base year—say, 1973—rather than on actual imports.

Another objection to this approach might be that, in the short run, it implies that the increase in the OPEC surplus is an aberration whose impact countries should accept. But it has the advantage of adjusting targets for increases in exports to OPEC as the OECD deficit shrinks. In this way it looks to the ultimate adjustments in "normal" current balances that might be necessary and that will almost inevitably differ among OECD countries. Countries that captured a larger share of the growing OPEC market would over time be assigned targets involving smaller current deficits. Whether the final pattern of current balances would appear acceptable is not clear.

POTENTIAL EXPORTS TO OPEC

The expected distribution among OECD countries of increases in exports to OPEC could serve as a means of apportioning the deficit. OPEC is the

focus because the predominant adjustment in world trade over the next decade will reflect the growth of its imports. This approach is circular, of course, since it requires assumptions about relative exchange rates among OECD countries. But that objection aside, the virtue of this criterion is that it minimizes the resource reallocation in individual OECD countries after the transition from the present large OECD deficit to a normal surplus in the 1980s. Like the previous criterion, it provides for a gradual move to equilibrium as OPEC imports grow, instead of requiring some countries first to concentrate resources on exports and then to reverse this process once OECD as a whole has completed the adjustment.

The problem here is the difficulty in predicting potential exports to OPEC by individual OECD countries even on the assumption of fixed exchange rates. In practice, this approach might well resolve into a negotiation about sharing the growing OPEC markets, the results of which would guide exchange-rate policies. Such a result might be rigid and the agreed distribution of current deficits might be economically unjustified. This disadvantage must be set against the apparent minimization of resource reallocation during the transitional period.

Concluding Observations

This paper is a preliminary exploration and yields no clear-cut and unequivocal conclusions. For one thing, it neglects the possibility of an intermediate case between complete laissez-faire and systematic assignment of current-balance targets. The objective is to prevent the adoption of mutually self-defeating domestic or external policies that could cause wasteful losses of income, internal instability of prices and wages, excessive reallocations of resources, and restrictions on trade and payments. In the intermediate case envisaged here, the OECD countries would renew the pledge against trade restrictions that they adopted in 1974. If their currencies were floating, they would abide by the IMF guidelines, which among other things rule out the equivalent of competitive devaluations (by proscribing "aggressive intervention" and other policies that would further depress an exchange rate that was already falling).¹⁴ This stance still leaves countries free to borrow externally and to intervene in exchange markets to prevent their

14. International Monetary Fund, *International Monetary Reform: Documents of the Committee of Twenty* (IMF, 1974), p. 35.

rates from rising or falling. Implicitly, therefore, countries would be pursuing current-balance aims. The IMF and the OECD could monitor national policies and their consequences for the balance of payments, and, when apparent incompatibilities arose, could urge countries to alter their policies. In this process the IMF and OECD would be concerned with the implications not only for OECD countries but for the rest of the world. Whether this ex post approach is preferable to an explicit and systematic ex ante effort to establish balance-of-payments targets is left to the reader.

To sum up briefly, the laissez-faire case will appeal to many economists. The arguments against it—apart from the fact that, rightly or wrongly, governments are not accepting it—are that it might spur a series of fruitless devaluations and in the process aggravate price-wage instability and that it might induce more resource reallocation than is necessary to cope with the temporary OPEC surplus.

If governments are to manage their deficits—as they have done during 1974 and 1975 by deliberately borrowing and intervening in exchange markets—it is important that their balance-of-payments aims be compatible and of a magnitude that can be financed.

This paper has examined six criteria according to which the OECD countries might establish consistent aims for current deficits and the corresponding incremental debt over the next few years. Of these, two—those relying on ability to reduce absorption of resources and on potential for substitution for petroleum—encounter decisive objections. Two—economic size and normal surpluses adjusted for “oil deficits” as defined above—merit further consideration. And two—the rate of return on investment and potential exports to OPEC—might degenerate into a negotiation. But adherence to a set of negotiated aims would be preferable to active pursuit of incompatible aims.

Comments and Discussion

Marina v. N. Whitman: I found Solomon's paper an interesting attempt to set up criteria for allocating the oil deficit. For the purposes of discussion, I can accept his fundamental assumptions that the OPEC countries will have a surplus over a considerable time, and that the cartel will not crack and return the world to the status quo ante. I also accept as given that countries will insist on setting current-account targets, whether they ought to or not, and that an attempt should be made to coordinate these targets. The heavy management of the current floating rates suggests that the dangers of competitive depreciation and the like are quite real. An allocation of the oil deficit is a natural outgrowth of the efforts of Working Party 3 to coordinate current-account targets among the OECD countries, a general attempt to assure consistent aims that has been under way for several years.

The central issues in Solomon's paper concern the problems of avoiding inconsistencies in international allocation schemes—issues that extend far beyond oil. The paper is really an argument about balance-of-payments adjustment and, more specifically, a brief in favor of some fixity of exchange rates. Solomon's paper contains strong echoes of Ragnar Nurkse's arguments of the late 1940s against so-called unnecessary reallocations of resources caused by exchange-rate fluctuations. This is one aspect of a fundamental controversy about the economic costs associated with rigidity and nonadaptation, on the one hand, and the adjustment costs of reallocations, on the other. Criteria for an optimum pace of adjustment are sorely needed. Undoubtedly, they would call for some cushioning against an immediate and abrupt change; but they would avoid postponing adjustments indefinitely because the cumulative cost of making them would rise the longer they are postponed.

In a sense, Solomon is concerned with two different types of reallocation costs. One type is the frictional costs associated with both competitive depreciation and the overshooting of equilibrium under flexible rates. The second is the cost of adjustment over, say, a decade from a situation of temporary OECD deficit back to the “normal” situation of surplus with the rest of the world. The benefits of avoiding the first kind of cost are much more evident than those associated with minimizing the second. In the latter case, the projected shift is sufficiently gradual and uncertain that “optimum plans” are likely to go astray.

Criteria based on the need for real adjustment to changes in the terms of trade tend to conflict with those based on the capacity to service debts. In an ideal world, where the poorer countries were faster-growing as well as capital-scarce, the poor nations would have a high marginal efficiency of capital and should be allocated the lion’s share of the deficit. In the real world, however, poor countries are often least able to bear the burden of substantial debt. I have the uneasy suspicion that some current discussions about how best to achieve so-called secondary recycling—getting the money back to the countries that need it the most—really concern a different issue: how to allocate the burden of assisting those countries for which the real costs of changed terms of trade threaten social upheaval or economic collapse. And that becomes a problem of foreign aid rather than recycling.

While those considerations are most relevant for less-developed countries, they may apply to some degree even within the OECD. I am reminded of Wilson Schmidt’s paradox that, in cases where the return on capital is lower in the receiving country than in the lending country, loans can turn out to be a more expensive form of aid than simple outright grants. It may be that loans are an inefficient—if not impossible—way of handling the present problems.

Another perennial issue that arises in this paper is whether governments can read the future better than the marketplace can. While Solomon apparently assumes that they can (or will insist on trying), I think that history should make us cautious on this point. The substantial revisions that have been made over just the past year in estimates of the magnitude of the deficit problem underline the need for such caution. Moreover, with the passage of time, it will become increasingly difficult to identify quantitatively anybody’s “oil deficit” because that requires determining what would have happened in the counterfactual case of no major price increase for crude petroleum.

All in all, I agree with Solomon that governments seem likely to intervene in any case, and that much can be said for coordinated rather than uncoordinated intervention. I would urge, however, that the search for relatively simple and clear-cut criteria not be allowed to impair flexibility in adapting targets continually to changing economic conditions.

Walter S. Salant: Let me begin by pointing out, apropos of Marina Whitman's question of whether governments have better foresight than the market, that Solomon's central argument for some coordinated allocation of the aggregate current-account deficit of oil importers does not depend on that premise. Rather, it rests on the external diseconomies that would result from letting nature take its course, if that course involved beggar-thy-neighbor policies. The case for *laissez-faire* has been set forth by a number of articulate U.S. Treasury officials. Indeed, their arguments may deserve more thorough discussion and criticism than Solomon gave them. Although I am satisfied with most of his reasons for rejecting that approach, one reason that does not satisfy me is his conviction that an appreciation of OPEC currencies would not enhance their ability to absorb imports. I don't see why that ability should be impervious to the price of imports, especially considering that their imports include military products that appear to be luxuries.

Some who favor the *laissez-faire* approach emphasize that adjustments to large international transfers in the past have not been very difficult, and cite instances of easily made transfers, going back to reparations after the Franco-Prussian war. I believe those examples are poor analogies since they involved only two—or, at most, a few—countries. Any single paying country can expand its exports by selling more to all other countries in the world, not just to the payee. Similarly, a single payee can expand its imports not just from the payer but from all other countries. These historical analogies involving transfers between two countries, or at best among a handful of countries, cast no light on the present problem, in which many nations with large economies are sizable payers who must make the real transfers by increasing exports to a group of payees with small economies. They imply a solution of the problem by ignoring the very things that make it a problem.

Assuming that some allocation of the aggregate current-account deficit should be collectively agreed upon, there are two approaches. One is political: seeking the highest degree of potential agreement among nations. It

stresses that agreement is needed basically to avoid beggar-thy-neighbor policies and consequently emphasizes the potential for success in achieving that agreement. At the extreme, it implies that anything that the countries will agree on is okay. The second approach may be called the welfare or efficiency approach. It relies on more or less traditional criteria of welfare economics to set target allocations of current-account deficits. The welfare approach is the game that most of the participants in this conference can play. For the political approach, most of us would be technologically unemployable. So naturally we dwell on the welfare aspects. In any case, if several allocations are politically about equally acceptable, welfare considerations can serve as a rational basis for choosing among them. Maybe that is the way that we, as a group, can rationalize our concentration on the only game we know how to play, instead of on the one that may be more relevant to the fundamental objective.

The welfare approach, as it actually has been applied, highlights the differential impact among countries on present versus future domestic absorption of resources associated with different methods of allocating the deficit; for a country to accept a large deficit is not regarded as a cost but as avoidance of a cost—that of forgoing or postponing investment or consumption. I am not sure why absorption forgone or postponed should be regarded as a more relevant or more fundamental measure of cost than loss or postponement of real income, which would include not only absorption but changes in net financial wealth. Second, the approach focuses on the extent to which reallocations of resources are minimized in the adjustment period. Third, it raises the question of the willingness and ability of various OECD members to incur incremental debt. And, fourth, it is concerned with the effect of alternative proposals on the growth rates of aggregate real income in the OECD area as a whole. I am not convinced that the growth criterion can be used without taking into account differential impacts among nations.

When Solomon turns to specific criteria of allocation, he refers to the first criterion on his list as “ability to reduce absorption of resources.” It is the ability to shoulder real transfers—to postpone receiving goods and services in the face of an inevitable cut in real income. That, of course, points in the direction of deficits allocated in some inverse relationship to GNP per capita. Solomon stresses the difficulty of allocating incremental debts by this criterion. Nonetheless, if that is the pattern the countries select, the difficulty could be overcome by official lending.

The second criterion Solomon considers is the allocation of current-account deficits in proportion to economic size. To the extent that countries with larger GNPs also have larger GNPs per capita, this criterion does require greater real transfers from poor than from rich countries. But the correlation between economic size and income per capita is loose. Therefore, using the total GNP is not necessarily regressive from the point of view of real absorption.

The third criterion—allocating the deficit in proportion to the marginal social rate of return on capital—suffers from the measurement problems that Solomon stresses. But other authors have proposed to approximate that criterion by allocating the deficit in proportion to gross investment on the theory that levels of investment bear some rough relation to rates of return on capital.

Others have argued that, since the marginal propensity to save of the OPEC members is higher than that of the oil-importing countries, the focus should be on either reducing saving or raising investment enough to maintain a world equality of the two at full employment. This offset to the threatened excess of investment over saving should be distributed, according to this view, in a way that equalizes the marginal productivities of the incremental investments. That does not prescribe how much of the adjustment should be made in the form of incremental investment and how much in the form of incremental consumption. It seems to me that the correct principle would be to distribute both so as to equalize the marginal social utility of additional investment *and* additional consumption.

Many of these more sophisticated proposals for allocation would require an aggregation of the social-welfare functions of importing countries. Since that is not possible, one is forced to retreat to something fairly simple, like GNP per capita, as a practical criterion that would yield a result not too far from the implications of the welfare approach.

General Discussion

A number of participants argued that the case for *laissez-faire* in the allocation of deficits was a good deal stronger than was conceded in the paper. William Branson felt that Solomon had not made an overpowering case against *laissez-faire*—reliance on flexible exchange rates—to accomplish the adjustment. Rather, he had launched into his specific criteria for a

coordinated solution by predicting that governments will take action—without establishing that they *should* take action. Alternatively, in Branson's judgment, one could approach the whole problem by viewing the oil deficit as a particular kind of problem in balance-of-payments adjustment in a world in which exchange rates are not pegged. Adjustment by government-coordinated capital movements can be regarded as a means of moving back into a fixed-rate system.

Salant took issue with this interpretation, and argued that the oil deficit poses such a massive problem of adjustment by such a large part of the world that the difference in size becomes a difference in kind. In response, Branson accepted Salant's view with respect to the deficit of the OECD countries *as a group*: that deficit may be inevitable and incapable of adjustment for a time. But he contrasted that adjustment with the one required *within* the group of oil-importing countries, which conceivably might be handled by changes in relative exchange rates among them that held constant their average exchange rate relative to OPEC currencies.

William Poole suggested that the controversy between advocates of intervention and of free exchange rates for handling the oil deficit provided a specific illustration of the general differences among economists in appraising the responsiveness of economic behavior to price and interest-rate incentives. While Solomon had spelled out the possibilities for adverse developments under the regime of free exchange rates, Poole saw comparable dangers of adverse developments under the interventionist plan. It is not clear that OECD governments would accept a consistent plan. Nor is it clear that their intervention could avoid restrictions on trade and capital movements, nor that it would promote wage-price stability, nor avoid errors of macroeconomic policy, nor minimize temporary resource reallocation.

Lawrence Krause pointed to a different kind of solution, which avoided any collective allocation of the deficits among the OECD nations. Instead, it would permit individual governments to influence exchange rates by official borrowing. Such a plan requires only limited collective action to ensure that a country can borrow the money it needs to cover its oil deficit. Under present circumstances, countries may want deficits but be unable to borrow sufficiently. Hence, Krause felt that the reshuffling problem is serious and may be the most important issue to negotiate and coordinate.

Reacting to these criticisms of the central argument in the paper, Franco Modigliani strongly sided with Solomon's conclusions on the need for col-

lective allocation of the deficit to avoid competitive devaluation and unnecessary temporary shifts of resources.

Modigliani expressed his personal inclination toward some modified criterion of the oil deficit—the additional cost of oil imports to the various OECD nations. He and Solomon engaged in a discussion of the sense in which the burden of the oil deficit could be deferred. Modigliani contended that whether the burden was borne now or deferred was not to be confused with whether the extra oil bill was paid with additional exports or by borrowing. A country could run a deficit and still be paying now if it curbed consumption in recognition of its lower real income from the worsened terms of trade and channeled the resources so released into increased domestic investment (rather than increased exports). It would in effect be paying with the additional investment, offsetting the debt incurred and providing the extra income for servicing and amortizing it. If this mechanism were generally understood, there would be no reason for countries to regard a large current-account deficit as a burden to be avoided, especially when the additional investments could be expected to yield domestic benefits beyond the debt service. On the contrary, a deficit should be seen as an opportunity as long as its financing was assured. Put differently, the fact that OPEC members are willing to save much of their gain should be seen and seized as an opportunity for the consuming nations as a whole to increase investment.

Martin Feldstein noted that the outcome would not be very different if some of that new capital is owned by OPEC investors. Under the present tax systems of OECD countries, roughly half of the income on capital earned by OPEC would flow into OECD government revenues, largely through the corporate income tax. Thus, the OPEC drain on wealth may be smaller than it looks on the surface.

Weir Brown saw the collective allocation as a formidable task in international political economy. He reminded the group that governments in the OECD had attempted for some time to assure that developed countries followed payments aims that were mutually compatible and that their aggregate current-account surplus vis-à-vis the less-developed world was consistent with the amount of aid received by LDCs. That endeavor had not been very successful. Moreover, in the present case, OPEC countries have a key influence on both capital flows and current payments, and they presumably will not be at the table negotiating the allocation in Solomon's scenario.

Arthur Okun noted that, in terms of the “welfare approach,” the problem facing OECD countries was a shortage of volunteers to incur debt and trade deficits. For a welfare-maximizing solution, the group should subsidize that activity—for example, by offering loans to volunteers at very low rates of interest. Moreover, any deficit assigned to a country as its quota under a collective agreement ought to be viewed as its *minimum* obligation; any nation willing to incur an even larger deficit should be encouraged to do so.

In responding to various points raised in the discussion, Robert Solomon conceded to Salant that the price elasticity for total OPEC imports was very uncertain, but said that it seemed quite low to him, impressionistically. He assured Whitman that he had no conscious nostalgia for the old system of fixed exchange rates, even though he had less than complete faith in the capacity of freely flexible rates to handle the great strain of oil deficits. Finally, he suggested to Krause that negotiation and coordination of official borrowing might raise the same problems and be about as difficult to negotiate as allocation of the current-account deficit.