Floating Exchange Rates, Reciprocity and Trade Balance

The basis for reciprocal concessions in the process of multilateral trade liberalization is firmly established for fixed exchange rate regimes. The rationale and the consequences of reciprocity in the new environment of floating rates are far less clear. Questions have been raised as to whether the traditional concepts and techniques of trade negotiations have to be altered in some fundamental respect under the regime of floating exchange rates, (Johnson 1976). The move from the fixed to flexible exchange rates, in the traditional elasticity approach to balance of payments, suggests that commercial policy negotiations, and indeed trade liberalization itself, can be divorced from balance of payments considerations, since the latter will equilibrate itself through appropriate and automatic movements of exchange rates. Although the predominantly "monetary" theory of balance of payments denies that exchange rate variations can have a lasting effect on balance of payments, it too admits the possibility of *short-run* effects on terms of trade and the trade balance (Johnson 1977).

By the same token, "clean" and "dirty" (i.e., policy-induced) floats alike are increasingly viewed in policy circles as alternatives to trade and tariff measures in dealing with payments imbalances. It is argued that a country under a flexible exchange rate system could maintain desired domestic employment by choosing an appropriate exchange rate, and thus avoid the undesirable side effects of trade restrictions (Yeager and Tuerck, 1976). Still others maintain that trade restrictions will continue to be an important feature of the international trading scene regardless of the nature of international monetary system, since their primary motivations are largely domestic and unlikely to disappear in floating rate regimes.

The full range of implications of floating rates for international trade and capital movements is still not fully understood. The knowledge of many of the essential relationships between the two remains inadequate and is the subject of much controversy. Part of the reason is that an objective evaluation of the interaction between floating rates and world trade and payments is unduly difficult, since foreign exchange markets are still in the process of transitional adjustment to a vastly changed structure. In addition, they have had to cope with an unprecedented degree of underlying economic and financial instability contributed by oil price increases, domestic recessions, world-wide inflation, and growing protectionism.

The purpose of this paper is to discuss a number of significant issues that are likely to entangle the relationship between reciprocity in trade liberalization and its consequences for trade balance in a regime of floating exchange rates.

Reciprocity Under Fixed Exchange Rates

Reciprocity in trade concessions has traditionally been a common ingredient in successive multilateral trade negotiations since the establisment of GATT, even though it has no precise definition in the General Agreement, nor indeed in the trade literature itself. The inability of trade theory to come to grips with the phenomenon of reciprocity is due essentially to its almost exclusive concern with partial equilibrium consequences of free trade resulting in gains in domestic efficiency, and only secondarily if at all with gains from expansion of foreign markets resulting from mutual tariff reduction. The reluctance of countries in offering one-way trade liberalization may have some support from the "second best" proposition that it may not be optimal for one country to reduce its tariffs as long as the tariffs of partner countries cannot be reduced as well (Corden, 1965). In analyzing trade liberalization issues under the current Tokyo Round, Cline *et al.* (1978) observe that reciprocity is essential for negotiating countries to realize the full potential of dynamic welfare gains from trade, namely,those related to economies of scale and stimulus to investment. In fact, they are led to consider only those tariff-cutting constellations that result in balanced, i.e., reciprocal,

trade changes for the simple reason that without reciprocity there would be no trade negotiations.

While reciprocity and equivalence in trade concessions are embedded in a complex set of external and internal reasons, a pathological adherence to them may have been fostered by the fixed exchange rate system. The fixity of par values deprived the countries of one important degree of freedom in coping with a net increase in imports, and, a consequent deficit on trade balance, if the trading partners failed to reciprocate in an equivalent fashion. It is thus possible that the pursuit of reciprocity may have been a necessary step in enforcing the "rules of the game" under the fixed exchange rate system, in order to prevent any impairment in the given country's ability to defend its exchange rate without loss of reserves.

In practice, reciprocity has meant that each negotiating country invariably seeks to increase its exports in return for any increase in imports likely to result from its own trade concessions granted to partner countries. Part of the difficulty arises from the fact that, in line with GATT's Article 1, the non-negotiating countries (the "free riders") could also expand exports to countries that reduce their trade barriers, and thus potentially worsen the latter's trade balance. The preoccupation with trade balance consequences of liberalization clearly dominated negotiations under Kennedy Round in early 1960s and appear to be no less absorbing during current Tokyo Round. The prevalence of generalized floating has so far done little to signal any departure from reciprocity.

In a fixed rate regime, the effect of tariff concessions on trade balance and exchange rate is fairly predictable and clear-cut. A favorable tariff concession, *ceteris paribus,* will result in an increase in the demand for the home country's currency, leading to an improvement in trade balance at the fixed exchange rate. Alternatively, a net excess demand for imports by the given country will cause the demand curve for foreign exchange to shift upward, resulting in a deterioration of trade balance. The actual change in the foreign exchange demanded and supplied will depend on the price elasticity of demand for imports and exports, respectively. In the unlikely event that the value of a negotiating country's concessions exactly equalled the value of concessions obtained from trading partners will there be no change in the

trade balance. The resulting changes in exports and imports may not equal because of errors of calculation in the underlying elasticities, unforeseen shifts in demand and supply, and errors in negotiating strategy. It is worth noting that the outcome of trade negotiations in a fixed rate regime does not directly affect the market for financial assets, although short-term capital movements for accommodating purposes may be affected. Despite the fact that the demand and supply schedules for foreign exchange may bear an undue pressure, the effect of trade liberalization on exchange rate could be safely ignored.

Reciprocity Under Generalized Floating

Reciprocity and its probable consequences for exchange rate and its ultimate effect on trade balance are less clear-cut in a regime of floating rates. Changes in the demand and supply of foreign exchange resulting from trade liberalization are likely to affect the movement of exchange rate in a manner which will tend to maintain the balance. Suppose that a country succeeds in exacting a favorable set of trade concessions from partner countries, resulting in a potential improvement of its trade balance. Such an improvement is likely to put an upward pressure on the exchange rate, thereby setting in motion a process which may cause the surplus to disappear. Similarly, a worsening of the trade balance due to unfavorable trade concessions (or errors in calculation) will lead to a depreciation of the exchange rate, with a consequent tendency for market forces to eliminate not only the deficit but also the adverse deflationary impact on domestic import-competing sectors. Exchange rate movements could be large or small, depending on the divergence between increases in exports and imports. Even if the long-run magnitude of effects on exports and imports is broadly similar, they are unlikely to be felt simultaneously and, accordingly, the movement of exchange rate will be governed by the speed and the direction of changes in the underlying magnitudes.

Exchange rate movements, in turn, will affect the relative prices of all tradable goods and ultimately the direction and the volume of trade, depending on the degree of responsiveness of trade in various sectors to price changes. Thus, in a two-way

manner, the effect of post-liberalization changes in trade on a country's exchange rate, and the effect of the latter on the relative prices of tradable goods, will work to maintain an equilibrium in balance of trade. As such, exchange rate changes are expected to induce economy-wide shifts in production and consumption, with important implications for trade balance, terms of trade and the efficiency of resource use. In some cases, exchange rate changes will merely neutralize opposite changes affecting competitiveness, e.g., wage costs, and would accordingly prevent changes in competitiveness from occuring. In other cases, they would produce compensatory changes in trade flows to offset opposite changes in other international transactions.

Moreover, since an exchange rate clears the market for the demand and supply of foreign exchange for all transactions and not just for current account, exchange rate movements are also likely to affect the trade in financial assets. In a dynamic and sequential manner, therefore, initial exchange rate changes will subsequently affect the balance of payments through their effect on all "autonomous" components. The effect of exchange rate appreciations and depreciations on capital movements can, of course, be neutralized or reinforced by an appropriate change in stock of money and the interest rate.

The size of the exchange rate change necessary to offset the initial change in trade balance will depend on the size of the trade balance change caused by liberalization, on the price elasticity of demand for imports and exports, and on the base level of imports and exports. These factors will determine the changes in the "effective" or "trade-weighted" exchange rate changes required to re-establish preliberalization trade balance.[1] Given the estimated change in trade balance resulting from any particular tariff-cutting technique, the implied offsetting change in exchange rate necessary to restore the initial trade balance is given by $dr = -B/ \eta_m M_o + \eta_x X_o$, where dr is the "trade weighted" exchange rate change expressed as a fraction, B is trade balance, η_m and η_x are overall price elasticities of demand for imports and exports

[1] "Effective" exchange rate represents a trade-weighted value derived by averaging the value of a given currency vis-à-vis other currencies weighted by the proportion of its trade with each country. See RHOMBERG (1976).

respectively, and M_o and X_o denote base values of imports and exports respectively.[2]

The acceptance of generalized floating by major industrial countries signifies that balance of trade reasons for delaying trade liberalization may have lost force, since exchange rate movements resulting from imbalances will work to maintain equilibrium in balance of trade. By the same token, a country can now counteract the undesired effects of unilateral 'liberalization on domestic employment by depreciating its currency. However, in the real world of tariff bargaining, reciprocity may still be necessary, since without a balanced expansion of both its imports and exports a country would have to anticipate a larger trade balance deterioration from unilateral liberalization, and consequently a larger required change in the exchange rate. Unless the country was initially running a large balance of payments surplus, the trade balance deterioration would mean a higher cost associated with additional depreciation induced by uneven changes in protective tariffs domestically and abroad. For countries usually in surplus, effects of balance of trade changes on exchange rates may be negligible or even desirable, since otherwise the exchange rate will have a tendency to appreciate.

Nearly all available estimates suggest that exchange rate changes required to offset trade imbalances resulting from trade liberalization are likely to be slight. A comprehensive analysis of Tokyo Round proposals by Cline *et al.* (1978) gives the following estimates of trade balance and exchange rate changes for major negotiating countries under the assumption of a 60 per cent tariff cut, excluding those on textiles and petroleum.

The nominal changes (with respect to a constant standard) are all somewhat larger depreciations or smaller appreciations than the trade-weighted changes. This is because the major negotiating countries would need to depreciate slightly more with respect to the rest of the world in order to offset the trade balance leakages to non-participants. Appreciations of the nominal rate will be smaller than that of the effective rate for the same reason.

[2] Because both demand elasticities are negative, a positive trade balance effect requires an appreciation and a negative trade balance requires depreciation to restore original balance.

Country	Trade Balance Effects ($ millions)	Trade-weighted Exchange Rate Change (%)	Nominal Exchange Rate Change (%)
U.S.	632	0.16	−0.28
Canada	−1065	−0.79	−1.13
Japan	827	0.42	0.16
EEC	−1320	−0.22	−0.79
Austria	16	0.08	−0.64
Finland	−49	−0.32	−1.08
Norway	−41	−0.15	−0.89
Sweden	−75	−0.14	−0.90
Switzerland	93	0.28	−0.44
Australia	−275	−0.73	−1.17
New Zealand	−175	−1.87	−2.48

pp. 122, Table 3-13.

These estimates are consistent with earlier estimates of trade liberalization effects. Deardorff, Stern and Baum (1976) estimate that for all 18 industrial countries the exchange rate changes necessary to eliminate imbalances resulting from a 50 per cent tariff cut are less than one-half of one per cent; for two-third of the countries they are less than one-fifth of one per cent. Finally, Baldwin and Lewis (1976) have estimated that, for three plausible sets of elasticities, the required percentage change in the dollar exchange rate for a 50 per cent tariff cut on all industries would be within a range of −0.003 to 0.688. For the manufacturing industries alone, the required changes are expected to lie within a range of 0.126 to 0.761. The reason for the small values of exchange rate changes is simply that the initial trade balance changes from liberalization are of negligible size relative to trade volumes. Under a 60 per cent tariff cut, the trade balance is expected to rise by 0.6 per cent of 1974 exports for the U.S. and by 1.5 per cent for Japan, while it would decline by 3.1 per cent of exports for Canada and by 1 per cent of external exports of the EEC (Cline *et al.*1978). Even these small changes will be phased over a period of five years or more to allow for full implementation of tariff cuts. On the basis of these estimates, it is difficult to resist the conclusion that any opposition to trade liberalization based on anticipated difficulties for trade balance is unwarranted.

The existence of flexible exchange rates is likely to make the process of multilateral trade liberalization a little easier since exchange rate flexibility reduces potential adjustment costs. Trade deficits under floating need not be corrected by deflationary domestic policies causing unemployment and a loss of output.[3] Nevertheless, flexible exchange rates do not eliminate all costs of adjustment; terms of trade deterioration will generally follow a widening of trade balance deficit. A certain amount of readjustment and relocation of factors of production cannot be avoided either. Moreover, the generally salutary effects of exchange rate variability on trade balance and ultimately on trade liberalization that we have outlined above are contingent on the performance of flexible exchange rates in smoothing the process of balance of payments adjustment, their influence on uncertainty, speculation and the cost of normal trading operations. We discuss these and related questions in the following sections.

Generalized Floating and World Trade

An understanding of the interaction between flexible exchange rates and trade liberalization is complicated by the fact that the functioning of exchange rates is inherently a circular process, full of feedbacks and interdependencies. Exchange rate changes affect trade flows but are themselves affected by changes in trade flows. There is often a long chain of actions and reactions — private and public, domestic and external — by which changes in either exchange rate or trade flows affect the other. Links in that chain are often forged sequentially and the shape of each link may greatly influence the pattern of those that follow. Moreover, exogenous disturbances may intermittently affect the adjustment process in midstream.

First of all, there is no unanimity on the question of as to how much exchange rate variability should be expected under generalized floating. Available empirical evidence suggests that generalized floating since the middle of 1973 has been ac-

[3] In fact, CHAN (1978) demonstrates that the imposition of a tariff unambiguously causes a deterioration in the level of employment under floating rates even without a Laursen-Metzler effect.

compained by substantial volatility in bilateral exchange rates among major currencies (Hirsch and Higham 1974, Dooley and Schafer 1975). Moreover, the volatility of rates appears to have been higher than *ex post* differentials in inflation rates among countries. Schadler (1977) reports that variations of floating rates during the last four years have been much higher than those of determining factors, such as the variability of price levels. This points to the possibility of "overshooting" in exchange rate adjustments, i.e., exchange rate adjustments being larger than variations in their fundamental determinants. Overshooting could be an inherent characteristic of flexible rates, or it could have been caused by official intervention in foreign exchange markets which has been substantial during current floating. Attempts to manage the "float" have often made the oscillations worse.[4] The major reason, quite apart from the size and timing of the intervention, is that central bank intervention frequently conveys a signal of the underlying disequilibrium and feeds speculative activity.

There is a sharp controversy on the question as to whether the excessive volatility has been caused by destabilizing or insufficiently stabilizing speculation, with *prima facie* arguments on both sides (Hirsch and Higham 1974, Giddy and Dufey 1975, Kindleberger 1976, McKinnon 1976, Dornbusch 1976, Willet 1977). Artus (1976), in analyzing the German experience, suggests that destabilizing short-run capital movements have been an additional factor in the large amplitude of fluctuations in the dollar/mark rate since the beginning of floating in March 1973. Relatively small variations in the interest rate differential between Frankfurt and Euro-dollar market seem to have produced large fluctuations in the exchange rate. Genberg's (1978) simulations suggest that deviations from purchasing power parities under the flexible rates of 1970s have been much larger and more pronounced than under the previous fixed rate regime. In his view, the main reason is that short-term variations in exchange rates do not get offset by movements in relative price levels. Johnson (1975) raises the possibility that domestic inflation may have been

[4] Witness the Bank of Japan's efforts to hold down the exchange value of the yen at the beginning of 1978 which helped to speed up its rise.

the causal factor for exchange rate volatility, rather than vice versa. The notion that the high degree of instability of exchange rates in recent years reflects the underlying instability in the world economy carries a certain intuitive appeal but is difficult to substantiate empirically.

It is far from clear as to what proportion of total variability of rates can be ascribed to a "well-behaved" response to market forces and how much to disorderly market conditions. The difficulty most clearly is that the explanation of actual exchange rate behavior is a complex matter and cannot be explained with reference to any single factor. Issues concerning expectations, differential speeds of adjustment in different markets, the impact of uncertainty on foreign exchange transactions, and the nature of policy decisions, all presumably affect exchange rate variations, in addition to normal pressures arising from trade and capital flows.

On the other hand, movements of "trade-weighted" or "effective" exchange rates seem to have been much less both in magnitude and in volatility than bilateral rates. Crockett and Goldstein (1976), among others, believe that indices of effective exchange rates are more appropriate for assessing the implications of exchange rate movements for trade, and that they have been much less than bilateral exchange rate changes. It seems, however, that effective rates themselves are subject to varying definitions and interpretations, according to particular analytical purposes involved (Rhomberg 1976, Hirsch and Higgins 1970).

Regardless of the type of measure used, one must guard against the frequent tendency to treat all large and rapid changes in exchange rates as either inappropriate or unwarranted. This pitfall arises from the common habit of treating exchange rate changes merely as a reflection of differential rates of inflation. Such conclusions are usually derived from calculations of national price movements in the tradition of purchasing power parity. But it is evident that exchange rate movements are governed by an intricate mixture of causes which cannot be adequately captured in a single set of price level calculations. Moreover, it is generally recognized that the recent period of floating rates cannot be judged as representative of the likely future behavior of exchange rates, and it would be an error to project these unsettled conditions into the indefinite future.

A further question which is central to trade liberalization is

the extent to which exchange rate variability in particular and floating rates in general are harmful to the smooth flow of world trade and payments. Aliber (1976), in analyzing the cost of exchange rate variability from the point of view of private traders, provides basic empirical evidence hinting at an adverse effect on trade. Comparing the monthly data for the U.S. and eight other industrial countries during 1969-70 and 1973-74, he finds significantly increased deviations from purchasing power parity under floating. These distortions, in his view, have been a factor in hampering the growth of trade. Similar conclusions are reached by Wihlborg (1976), using quarterly data for the U.S., the U.K. and Germany during the period 1973 and 1974. In addition, Aliber's data suggest that the cost of forward cover in terms of the average risk premium paid has risen sharply during the current period of floating. The reason seems to be a pronounced unwillingness of the speculators to bear the risk involved in smoothing out exchange rate fluctuations. Moreover, Willet (1977) has suggested that exchange rate volatility could discourage foreign trade relative to domestic trade, due to immobility of factors.

On the other hand, Hooper and Kohlhagen (1978), in testing for the effect of exchange rate uncertainty in sixteen cases involving U.S. and German multilateral and bilateral trade flows, found no statistically significant impact on the volume of trade despite considerable experimentation with alternative proxies for exchange risk. Only in the case of the U.S. trade with the United Kingdom, they found a marginally significant negative impact on trade volume. It seems that whatever harmful effects floating may have had on international trade have been quite limited. Trade flows have shown no significant decline from the levels that would normally be expected on the basis of changes in economic activity. It is perhaps fair to add that there are no empirical studies that measure the volume of international trade under current floating relative to what it would have been under fixed exchange rates, *ceteris paribus*. This is difficult to do since the underlying conditions during the two regimes cannot be made comparable.

The overall impact of exchange rate regimes on the growth of world trade would seem to be a function more of the degree of stability of the underlying conditions than of exchange rates themselves. The rather impressive and uninterrupted growth of world trade which coincided with the Bretton Woods regime, and

is frequently ascribed to it, may have in fact very little to do with the fact that exchange rates were fixed. It was probably due to a host of fortuitous circumstances which combined to give the stability necessary for the continued growth of world trade. Perhaps the establishment of orderly trading conditions following the general acceptance of GATT provisions, the successive attempts to scale down post-war tariffs, and the establishment of the European Economic Community may have more to do with the impressive growth of world trade than the fixity of exchange rates. This shift in perception seems justified in view of the fact that while fixed rates may have offered temporary stability to the trading sectors, they were not without sharp changes and widespread underlying disequilibria which eventually led to their abandonment.

In principle, flexible exchange rates could provide more or less continuous adjustment to changing conditions in the underlying parameters, albeit often in an erratic and disorderly fashion. It is inconceivable that flexible exchange rates could tolerate prolonged or substantial deviations from real purchasing power parities. The rather large and erratic fluctuations during the short regime of floating may themselves be the result of unrealistic exchange rates maintained during the par value system and of the destabilizing intervention policies followed by many industrial countries in prolonging indefensible parities. Prolonged official resistance to exchange rate changes when dictated by changes in economic conditions may have created a pent-up disequilibrium, and it was natural that the eventual floating resulted in what *ex post* appear to be rather large oscillations. The period of floating inherited substantial payments disequilibria from the later years of fixed rate period. Under these conditions it is not unreasonable to expect that foreign exchange markets would take some time to find the new pattern of equilibrium exchange rates. It is, of course, entirely plausible that such corrections as occured have been subject to periodic overshooting, since exchange rate movements are influenced by a multitude of factors, not the least of which is the expectation about these movements themselves.

Floating Rates and the Adjustment Process

A central question, originally posed by Mundell (1961), is whether or not a greater sensitivity of exchange rates to market forces would increase or decrease the frequency or the severity of trade and exchange crises. The answer to this question uniquely depends on whether or not the flexibility of exchange rates would improve the balance of payments adjustment process in the short-run. If floating rates tend to improve the short-run adjustment process, one would expect to find a diminished incidence of protective barriers, and controls over trade flows. The usual causes of unhappiness over multilateral trade flows, including differences among countries in their rates of inflation, are less likely to lead to "trade wars", because the greater freedom of spot rates to move would tend to maintain balance. The record of current floating on that score is fairly respectable; they have so far tended to stem the tide of latent protectionism in the wake of intolerable balance of payments problems due to increases in oil prices and domestic recessions in a number of industrial countries.

It is not yet clear, however, whether aggregate demand management, commercial policies or exchange rates — free or managed — will bear the greater part of the burden of adjustment of balance of payments in major industrial countries.[5] Another imponderable is the degree to which floating by major currencies is expected to remain totally free of intervention, or would be subject to minor interventions on a continuous basis or to a major dirtying up on an occasional basis. Hopefully, the management of floating rates will be governed by internationally agreed criteria for intervention and procedures for "surveillance" established in the IMF Charter (Artus and Crockett 1978). Even then, there is no guarantee that domestic financial authorities will not subvert, or conveniently stretch, surveillance criteria to engage in overt or covert intervention in foreign exchange markets. Intervention may have a stronger case when the source of disturbance to balance of payments is outside the domestic economy than when it is inside.

[5] This uncertainty on policy-mix is super-imposed on the difficulty that the existing literature has failed to reconcile the conflicting approaches to balance of payments analysis (KYLE, 1976).

There is, however, less likelihood of competitive depreciations for trade purposes.

For floating rates to improve the short-run adjustment process, it is necessary that trade flows be sufficiently sensitive to relative price changes. The analysis of probable effects of exchange rate changes on trade flows requires that account be taken of the simultaneous interaction between prices, incomes and absorption in countries whose exchange rates are altered. The complexity of the problem increases when one attempts to assess the empirical magnitude of the reverse causation, namely, the effect of gradual changes in trade flows on exchange rates. Artus and Rhomberg (1973) have proposed a computable model for analyzing the effect of discrete changes in exchange rates on trade flows likely to occur after an adjustment period of two to three years. It remains doubtful, though, whether the model is sufficiently flexible to accommodate continuous exchange rate changes, rather than once-for-all parity adjustments. Nevertheless, available empirical evidence suggests that the required degree of sensitivity to price changes exists for trade in manufactures, while the evidence on agricultural and commodity trade is considerably weaker (Stern, Francis and Schumacher 1976, Goldstein and Khan 1976, Magee 1976, Houthakker and Magee 1969). In fact, the trading world seems to be riding the high wave of "elasticity optimism". This optimism is tempered only by the realization of the oligopolistic nature of international markets, closely controlled by a relatively small number of large, multinational enterprises with their considerable intra-firm trade and the absence of arms-length pricing. In any event, high elasticities of excess demand for, and supply of traded goods are likely to reduce the exchange rate changes necessary to effect adjustment with flexible exchange rates.

It must be noted, however, that the estimated demand elasticities for exports and imports are invariably long-run values, and do not say anything about the short-run consequences of relative price changes. It is generally acknowledged that the short-run elasticities of demand for exports and imports are likely to be very low, because trade flows are determined by permanent or expected price constellations, including the expected exchange rate. With relatively low short-run elasticities of demand, a depreciation of the exchange rate will result in an initial deterioration of the trade balance. If so, the low short-run elasticities would not only undermine the effectiveness of flexible exchange rates in correcting payments imbalances, but would also cast doubt on the well-known proposition that monetary policy under flexible exchange rates is more effective than under fixed rates. Niehans (1975) has shown that if the short-run elasticities of demand for imports and exports are low, a deterioration of trade balance will weaken the expansionary effect of increased money supply and may conceivably result in a perverse income effect.

However, Kreinin (1977), using the "control country" approach, finds demand elasticities on *volumes* of imports and exports large enough to satisfy Marshall-Lerner stability conditions. Kreinin estimates exchange rate elasticity for the U.S. as 2 on the import side and 1.7 on the export side. The import demand elasticities for Japan and Canada are 1.25 and 2.5 respectively, while the foreign demand for their exports have elasticities of 1.1 and 2.3 respectively. These estimates are in line with earlier estimates — a range of 1.5 to 3 — provided by Deppler (1974) through an econometric procedure. Deppler's results indicate that during the early period of current floating, exchange rate changes have induced quite substantial changes in the volume of exports, while the evidence on imports is considerably weaker. Although most of the adjustments on import side were in the appropriate direction, they were rarely substantial. Moreover, as noted by Kreinin, most elasticities generated by exchange rate changes are likely to be lower than tariff elasticities, since traders may consider exchange rate changes as reversible, while tariffs are "bound" by GATT rules.

Most observers feel that the performance of current floating in smoothing the short-run process of adjustment is considerably short of expectations. Floating rates have rarely been successful in eliminating disequilibrium either for deficit or for surplus countries, although this by itself does not justify their unfavorable comparison with fixed rates.[6] It is interesting to note further that generalized floating to date has not significantly reduced the use

[6] One need only point to the successive appreciations of the German Mark and the Japanese Yen which have failed to make a dent in their sizeable surpluses. One can always say that the situation could have been worse without floating, but that hardly settles the argument.

of international reserves as shown by Williamson (1976), even though Suss (1976) contends that reserve use during the present period of floating has declined, but not by a large magnitude. Accordingly, it is difficult to confirm that exchange rate adjustments have borne anything but a marginal burden of payments adjustment.

It is perhaps fair to conclude that the empirical evidence to date is not sufficient to isolate the precise role which exchange rate adjustments have played in correcting payments imbalances. About all that can be said is that the existence of floating rates does indeed widen the choice of instruments available in managing balance of payments problems. A great value of flexible rates lies not in their ability to fully correct the disequilibrium in external balance, but rather in preventing the disequilibrium from arising. Floating rates may already have considerably reduced the probability of serious disequilibria in underlying economic conditions to continue undetected through overvalued or undervalued pegging as under the fixed rate regime.

The impact of floating rates on capital movements is much more complicated, since any analysis necessitates assumptions about the goals and direction of domestic monetary policy in influencing the movement of financial assets. It bears remembering in this connection that a current account surplus or deficit is not by itself a condition requiring a change in the exchange rate. There is no reason to expect that in the case of a current account deficit capital inflows will not continue to finance the deficit, as they have done in the case of the U.S., with only relatively modest exchange rate changes vis-à-vis the appreciating currencies. Yet, an adequate level of capital movement in most OECD countries is neither certain nor stable, and herein lies the difficulty posed by the exchange rate instability arising from large movements in current account transactions. Capital movements are quite sensitive to expected exchange rate changes and, hence, even relatively small changes in exchange rates are likely to translate into unstable levels of capital movements. Black (1977) has reason to believe that short-term capital movements have been deterred somewhat by increased risk due to exchange rate variability. No evidence is available on long-term capital flows, although they should benefit from reduced long-term risks under floating. To the extent that long-term capital movements are undertaken by large

and multinational firms, floating rates offer certain advantages in managing foreign exchange risks by denominating assets and liabilities in different currencies. Empirical evidence accumulated by Bond (1977) suggests that expected as well as actual changes in exchange rates play an important role in the determination of investment *income* inflows and outflows for the U.S, the U.K., and West Germany, while the evidence on capital movements themselves is sketchy.

It is also possible that unstable capital movements by private speculators as well as by reserve-holding financial authorities have produced large changes in exchange rates. Artus (1976) estimates that an increase of 1 per cent in the interest rate differential (at an annual rate) in favor of Frankfurt vis-à-vis the Eurodollar market has caused, on an average, an increase of 2.4 per cent in the dollar rate of the deutsche mark within a month, and an increase of 3.4 per cent by the end of the adjustment period.

Floating Rates and Trade Adjustment

Is there any reason to believe that floating rate regimes would make the trade adjustment problem in industrial countries any easier than it has been? In analyzing the domestic impact of trade liberalization under the current Tokyo Round, Baldwin and Lewis (1976) conclude that the existence of exchange rate flexibility acts as a powerful adjustment program that prevents any significant adverse impact on labour as a whole. In the same vein, Cline *et al.* (1978) show that in all tariff-cutting formulas considered by them, the labor adjustment costs and trade balance changes are only slight and can be overcome by marginal exchange rate adjustments. Yeager and Tuerck (1976, p. 10) go much further by claiming that "controls or tariffs are unnecessary when the exchange rate mechanism is allowed to keep trade balanced".

While floating rates *per se* will not solve all problems posed by inter-regional and inter-industry mobility of factors, they will at least provide a sharper focus to the internal conflict between the divergent interests of the import-competing industries, the exporting industries and the consumers in general. It is true that industries that have become heavily dependent on tariffs or

currency undervaluation will oppose any change in exchange rates. This opposition is likely to delay official decision to influence appropriate exchange rate changes long after the nature of disequilibrium is recognized. But in the face of persistent signals from exchange rates, domestic vested interests are likely to find themselves constantly on the defensive. The maintenance of protective tariffs in a regime of flexible rates implies that the exchange rate would be overvalued relative to its equilibrium level, since increases in import demand consequent on relaxation of trade controls imply a depreciation. Overvaluation means that exports are potentially lesser than what they would be if the equilibrium rate prevailed. While the tariff on imports would benefit the competing home industry, the effect of tariff on exchange rate would stimulate other imports, and discourage exports. Industry groups harmed by tariff privileges given to others would be able to perceive the inequity better than in a fixed rate regime. In fact, the major theoretical superiority of exchange rate changes over trade restrictions in adjusting imbalances lies in that while trade restrictions affect industries differently, an exchange rate change affects all industries equally and does not produce undesirable allocative effects. In this respect, exchange rate changes are comparable to a uniform *ad valorem* tariff on all import-competing industries *and* an equal subsidy to all exporting industries.

One must hasten to add, however, that trade adjustment problem arising from the immobility of labor is going to remain as intractable under floating as it is under fixed rates. It is quite unrealistic to expect that labor groups will automatically adjust to exchange rate changes and would effortlessly move from sector to sector in a "take your bed and go" manner. This is the reason why the frequent assumption that abrupt exchange rate changes will be accompanied by a movement of resources back and forth and will result in inefficiency and chaos is a non-problem. In fact, for stochastic reasons alone, it is obvious that in an environment of highly variable prices the movement of resources in response to any particular change will be ruled out, since each change will be viewed as transitory. The short-run responsiveness of resource allocation to exchange rate changes will in all probability be proportional to the cost of adjustment, broadly defined to include human and social costs. Where costs are high, adjustments will be

minimal. The unlikelihood of large resource movements under floating may indeed be their weakness or strength, depending on one's perceptions.

Equally unlikely is the phenomenon of "false trading" brought up by McKinnon (1976), referring to international movement of goods and services induced by exchange rate changes. There is no evidence as yet to suggest that oscillations of exchange rate of the kind witnessed during the current period of floating pose any threat of displacement of trade from its normal and efficient channel. It is doubtful whether volatile exchange rate changes, unaccompanied by long-run shift in comparative advantage, will ever have a strong impact on the structure of demand and supply of traded goods. It is well-known that in an oligopolistic world, non-price factors in the determination of trade performance are probably more important than relative prices, and will continue to influence trade flows and trade performance under floating rates as they do under the fixed. In addition, the orientation of particular economies toward export markets is a significant factor in influencing trade flows. It is , therefore, unrealistic to expect that sudden exchange rate changes will upset the pattern of international production which reflects such structural factors. More stable and substantial exchange rate changes will undoubtedly affect these patterns but even then after sufficiently long lag and only gradually.

It is clear, therefore, that exchange rate changes may prove futile in dealing with trade adjustment problems if they are not "flanked" by other measures to ease the relocation of factors, alter the distribution of current output between consumption and investment, effect changes in productivity, humanize conditions of work and other necessary and compatible rearrangements. Without high mobility of factors, exchange rate changes would not eliminate the need for explicit microeconomic policies under all circumstances. In a multi-sectoral economy, exchange rate adjustments are only a partial substitute for wage and price flexibility. Thus an increase in wage and price flexibility through complementary policies is expected to reduce adjustment costs under flexible rates. It is apparent, however, that policies concerned exclusively with trade adjustment to the neglect of viable exchange rate policies — as they are now — are equally unlikely to be successful. The essential point is that floating rates, by

preventing sustained deviations from long-run equilibrium rates, will provide a better environment for the design and success of the flanking measures than is possible under fixed rates.

It must be underlined, however, that any real disturbance (as opposed to a purely monetary disturbance) such as changes in productivity, technical change and shifts in demand, would have the same effect as they do under the fixed rate, namely, a real effect on relative prices and the volume of trade. The difference, as highlighted by the "monetary" approach to balance of payments, is that while under a fixed rate system the full burden of adjustment is borne by domestic wages and prices, under flexible rates the adjustment would be partly on domestic wages and prices and partly on exchange rates (Frankel and Johnson 1976, Johnson 1977). To that extent, therefore, trade adjustment may become easier than under fixed rates.

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Changes in the Export Instability of Less Developed Countries - A Dissenting Note

In two recent articles in this Review Lancieri has provided interesting new evidence on export instability. In the earlier article the expansion of the sample of LDCs produced the conclusion "that there was no decline between 1950-61 and 1961-72 in the export instability of developing countries... These results... strongly contradict the results of Lawson who maintained even in 1974: 'it is clear that, between the fifties and the sixties, LDC export instability fell by between a third and a half' ".[1] In re-examining this claim I conclude that his finding does not "strongly contradict" but is consistent with earlier research, for there is evidence of a mild decline even between his sample periods. The decline is much smaller than that reported by previous researchers mainly because of the inclusion of the early seventies in the sample period, and only to a lesser extent because of the extended country sample. Thus I will argue that LDC export instability fell between the fifties and the sixties, but began to grow in the late sixties and early seventies. This places the current stabilisation issue in a consistent historical setting.

On three grounds Lancieri's findings are not directly comparable with those of Lawson (1974). The latter's results came from a sample of 45 LDCs, for the decades 1950-59 and 1960-69, using weighted mean indices, the weights being proportional to the country's share in group exports. Lancieri uses longer periods, 1950-61 and 1961-72, 123 countries and unweighted indices. Not only is no straightforward "contradiction" possible, but also the extension of the time period into the increasingly unstable seventies suggests an explanation of his result. In addition the use of unweighted indices can lead to the overall index being unduly influenced by small but unstable economies. Although his LDC index is 11.7 in both periods, this average masks some interesting trends. Thus 51 countries showed increases, but 71 decreases in instability between the periods. Using the sign test the null hypothesis that there is either no change or an increase in instability can be rejected.[2] Alternatively the median index for 1961-72, 9.3 is six per cent lower than its 9.9 first period counterpart. Finally, using trade shares for 1956 and 1967 as weights, the weighted mean index shows a similar five per cent fall, from 9.8 to 9.3.[3]

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[1] LANCIERI (1978), p. 149 and p. 144.
[2] $Z = -1.72$; see SIEGEL (1956), pp. 68-75 for a description of the test.
[3] Export data from the United Nations *Yearbook of International Trade Statistics*. A detailed examination of this weighted index can be found in LAWSON (1974), p. 57. In