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International and Interregional Payments Adjustment: A Synthetic View

Marina von Neumann Whitman

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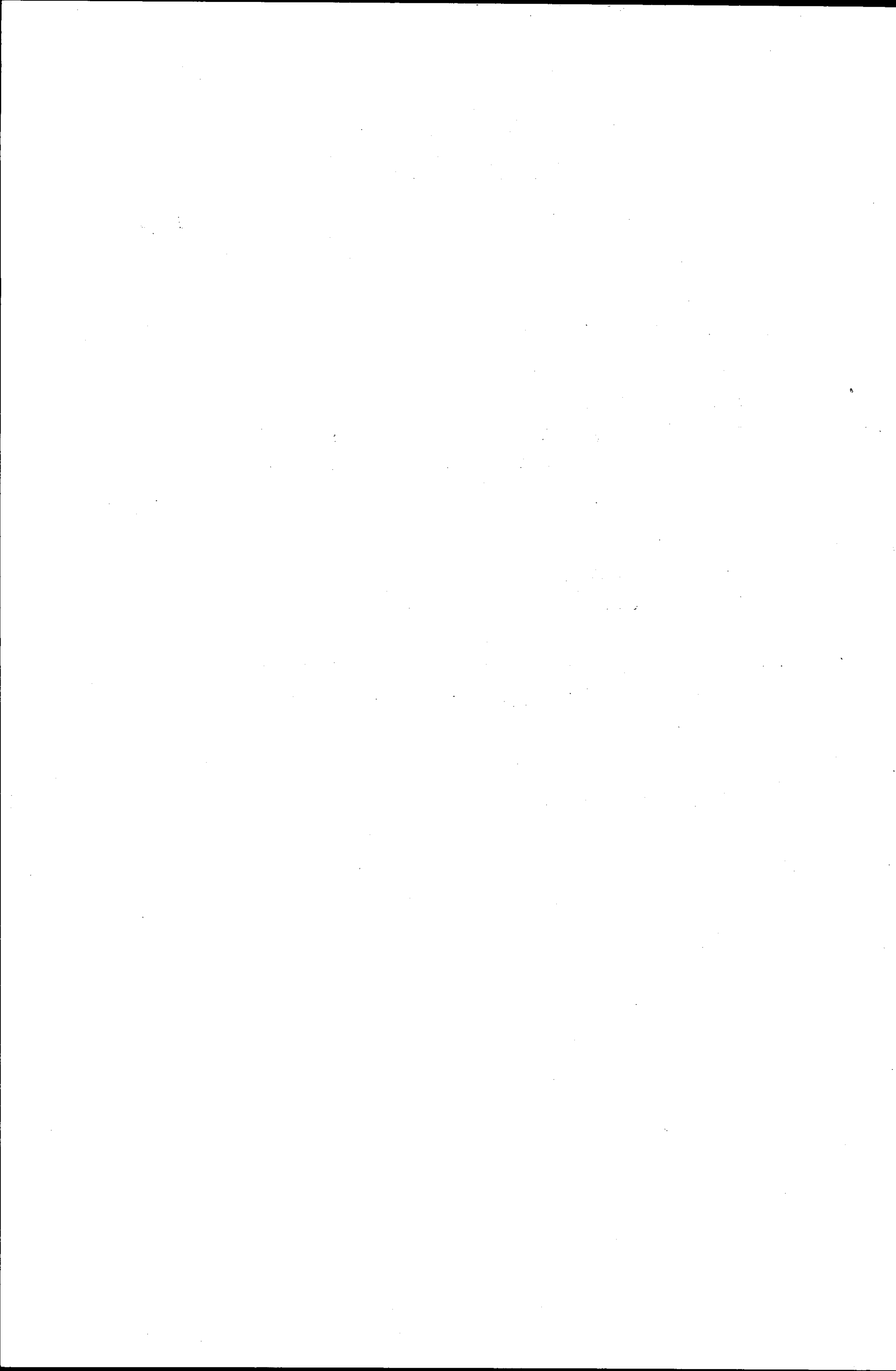

INTERNATIONAL AND INTERREGIONAL PAYMENTS ADJUSTMENT: A SYNTHETIC VIEW*

I. INTRODUCTION

Much has been written in recent years on the nature of the balance-of-payments adjustment process among very open, closely integrated economies. Different writers have stressed different facets of openness: Hartland, Ingram, and McKinnon and Oates have placed primary emphasis on the responsiveness of accommodating capital movements; Mundell, and Borts and Stein on the role of complementary autonomous flows of labor and capital; Meade and Kenen on the effects of economic policy integration.[1] Taken together, these discussions offer for consideration a number of important relationships between the "international" and the "interregional" adjustment processes.

The aim of this study is to carry the synthesis a step further, and particularly to investigate the crucial role which capital flows play in the balance-of-payments adjustment process of all highly open economies, be they regions or nations. In particular, it stresses the relevance for such economies of a "common-cause" theory of external adjustment. This view postulates that major changes on current and on long-term

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[1] The writings referred to are: Penelope Hartland, "Interregional Payments Compared with International Payments," *Quarterly Journal of Economics*, Vol. 63 (August 1949), pp. 342-407; James C. Ingram, "State and Regional Payments Mechanisms," *Quarterly Journal of Economics*, Vol. 73 (November 1959), pp. 619-632; Ronald I. McKinnon and Wallace E. Oates, *The Implications of International Economic Integration for Monetary, Fiscal and Exchange-Rate Policy*, Studies in International Finance No. 16 (Princeton, N. J.: International Finance Section, 1966); Robert Mundell, "A Theory of Optimum Currency Areas," *American Economic Review*, Vol. 51 (September 1961), pp. 657-665; George Borts and Jerome Stein, *Economic Growth In A Free Market* (New York: Columbia University Press, 1964); James E. Meade, "The Balance of Payments Problems of A European Free Trade Area," *Economic Journal*, Vol. 67 (September 1957), pp. 370-396; Peter B. Kenen, "Toward A Supranational Monetary System" (February 1966, mimeo).

capital account, rather than bearing a cause-and-effect relationship to one another in either direction, often stem from a common cause. Specifically, the common cause stressed in this discussion consists of shifts in the marginal efficiency of capital (MEC) in the export sector which arise primarily from changes in the demand schedule for exports. In contrast with the conventional Keynesian formulation, this approach takes into account the effects of capital flows on capacity and output as well as on income, and therefore on exports as well as on imports. An interesting implication of the "common-cause" hypothesis, when applied to open economies whose major disturbances are likely to arise in the export sector, is that export-led growth and prosperity (or decline and depression) may be accompanied *either* by surpluses or by deficits on current account, depending on the values of certain key parameters.

The first step in this attempted synthesis of the international and interregional adjustment mechanisms is a consideration of the nature of economic "openness," and in particular of the extent to which its attributes depend upon political sovereignty, the crucial distinction between a region and a nation. The nature of disturbance and response in an open economy is first examined in a "Keynesian" framework, which focuses on the adjustment of the balance of *trade* rather than the balance of *payments*. Capital flows are then introduced explicitly into the adjustment process, both in terms of the various financing mechanisms provided by short-term flows, and in terms of the contribution to ultimate adjustment made by long-term capital flows which take place in response to the MEC shifts mentioned above, and which are likely to be accompanied by complementary movements of labor in the same direction. A detailed, although entirely hypothetical, description of the processes of export-led growth and export-led decline serves to bring out the major implications of the common-cause hypothesis for open economies. Some of these implications are at variance with the conclusions derived from the more conventional view of balance-of-payments adjustment. In concluding, this study recognizes the existence, and examines some of the implications for public policy, of some important asymmetries in the processes of export-led growth and export-led decline. These asymmetries are obscured by the formal presentation of the open-economy adjustment process, but they are crucially important none the less, in view of the increasing awareness, at the regional as well as the national level, of the heavy social costs

involved in the stagnation or outmigration of productive factors associated with economic decline.

Several developments since World War II have further weakened the already shaky empirical foundations which underlie a rigid distinction between the carefully delineated and much-discussed international adjustment mechanism, and the adjustment process between regions of a single country, about which far less is known and which is often assumed to take care of itself. One such development is the increasing stress placed by many of the high-income industrialized nations on regional as well as national prosperity. We are no longer willing to abandon lagging regions to massive outmigration and to stagnation of resources unable or unwilling to move. It is not enough that the United States as a whole has the world's highest median family income if Appalachia does not share to an acceptable extent in the national prosperity; the rapid growth rate of the Italian economy will not be satisfactory if the Mezzogiorno is allowed to lag too far behind. And this concern for regions as economic entities in themselves, which makes massive labor movements an unacceptable form of adjustment for deficit regions, has compelled the application of "international" analysis to interregional problems.

Even more important, perhaps, is the emergence of the European Common Market and the development, throughout the world, of embryonic multinational groups which hope to follow in its footsteps. As these regional blocs move toward increasing economic integration, the nations comprising them will inevitably shed some of their national economic attributes and behave, in their relationships with their partners, more and more like regions.

Finally, the search for a world monetary system that will permit nations to minimize the conflict between internal and external balance without resort to protectionist restrictions on the international flow of goods and factors of production has focused new attention on the international balance-of-payments adjustment process itself. In the effort to describe the adjustment process as it actually operates in the real world, the traditional assumptions about international factor immobility are being relaxed, and economists have begun to explore anew the interrelationships between internal economic activity and external adjustment in economies far more open to external influence than those described by the classical and neoclassical writers.

II. THE OPEN ECONOMY

The Nature of Economic "Openness"

Relatively open economies differ from relatively closed ones both in the sources of the disturbances which impinge on them and in the nature of their responses to these disturbances. Because an open economy is heavily dependent on the foreign-trade sector, in the sense that exports and imports represent a relatively large proportion of total income, external shocks will represent a major source of disturbance. That is, fluctuations in exports will tend to be large relative to fluctuations in domestic investment as sources of disturbance to the domestic economy. Such disturbances to the export sector may be of a macroeconomic nature, originating in changes in the level of income abroad, or they may arise from such structural shifts as changes in foreign tastes or technology.[2]

"Open" economies are distinguished from relatively "closed" and autarkic systems not only by the fact that the disturbances which impinge on them are more likely to originate beyond than within their borders, but also by their vulnerability to such disturbances, a vulnerability which stems from limitations on the range of policy responses available to them. One factor which makes a crucial difference in this respect is political sovereignty. A region that has no authority to erect tariff or other barriers to external trade, to control movements of capital across its borders, to determine the size of its own money supply, or to exercise an independent fiscal policy[3] will inevitably be more sensitive to external shocks than a nation which may avail itself of any one of these instruments in order to make its external receipts and expenditures balance or to bend its external trading and financial relationships to serve the cause of internal stability. This distinction between nation and region in terms of political autonomy is one that must be borne in mind, however open a national economy may be in other respects, as long as economic unions lack significant supranational authority in the economic sphere.

None the less, although political autonomy may be a necessary condition for internal rather than external influences to dominate the

[2] Disturbances in the export sector can also originate internally, in the form of domestic technological or other changes which shift the supply curve of exports.

[3] See Kenen, *op. cit.*, pp. 8-9, for a more detailed discussion of the limitations on the fiscal powers of sub-national governments.

level of economic activity, it is not a sufficient one. Building on earlier work by Mundell, McKinnon and Oates have demonstrated in a recent monograph that, if one assumes (a) the maintenance of fixed exchange rates, (b) the existence of a large stock of perfectly mobile and generally acceptable financial assets, and (c) the desire of individuals to maintain "portfolio balance" (a fixed ratio between income and assets at a given rate of interest) in terms of these assets, it will be impossible for the government to affect the level of domestic economic activity through either monetary or fiscal policy. Under these assumptions, attempts by the government to affect the supply of money by purchases or sales of securities would simply result in an altered mix of domestic and foreign securities in private portfolios, with no change in the interest rate or the money supply. Attempts to achieve similar effects through surplus or deficit spending would be drained off in surpluses or deficits in the balance of trade with the outside world.[4] Despite the rigidity of the assumptions, the general point implied by this analysis is important: the free flow of interest-sensitive capital across national boundaries is likely to emasculate the effect of government financial policies on the level of income and employment. This diminution of the influence of domestic economic policy has two implications: errors in such policy become less important as a source of disturbances to the domestic economy, but at the same time government stabilization policy is rendered less effective in offsetting disturbances which originate abroad.

Apart from the question of political sovereignty, then, economic openness is characterized by a heavy dependence on the foreign-trade sector, implying that fluctuations in the export sector will be more important than fluctuations in the levels of autonomous domestic expenditures as sources of disturbance to the domestic economy, and by a high degree of capital mobility across regional, or national, boundaries, which weakens the power of government financial policies to combat external disturbances. One implication of these various facets of openness, taken together, is that an open economy can have no independent business cycle, since changes in its real-income level will be dominated by the position of its trade balance with the outside world. A different, but related, implication is that all disturbances to the economy, wherever they originate, will tend to "spill over" into the balance of payments through either the current or the capital account or both. In fact, some writers have elevated this implication itself to the status of a

[4] McKinnon and Oates, *op. cit.*, pp. 4-6.

definition. Triffin and Grubel, for example, define economic openness in terms of the extent to which inflationary or deflationary disturbances to the economic system "spill out" directly into the balance of payments, rather than expending their forces on domestic prices and output, as they would have to in a completely closed economy.[5]

Domestic Income and the Trade Balance

In terms of Keynesian multiplier analysis, the degree of openness has very definite implications for the relationship between an economy's domestic-income level and its trade-balance position. These implications stem from the preoccupation of multiplier analysis with the behavior of the current account; a major concern of this paper will be to show how they are modified when we consider the interrelationships between the current and capital accounts. But first, to see what these implications are, the point of departure is the fact that, in the familiar multiplier framework, autonomous changes in domestic spending ("internal" disturbances) will have the same effect on the domestic economy as autonomous changes in exports ("external" disturbances) of the same magnitude and in the same direction, but the two types of disturbance will lead to exactly opposite changes in the trade balance.[6] Thus, if the initial disturbance is in the foreign-trade sector, the Keynesian formulation implies a coincidence between inflationary pressure and current-account surplus, and between deflationary pressure and current-account deficit. If, on the other hand, the initial disturbance takes the form of an exogenous change in some component of domestic expenditure, a prosperity-cum-deficit or recession-cum-surplus syndrome is implied.

This line of reasoning suggests that open economies, where disturbances originating in the foreign-trade sector dominate those arising from fluctuations in domestic expenditures, should experience coincidences of depression and deficit or of prosperity and surplus more often than relatively closed economies less sensitive to changes in the outside world. One can see why this is so by focusing on regions of a single country, which generally lack any significant degree of economic autonomy and whose economies are heavily dependent on the well-being of their export industries. There are at least two reasons why such regions are unlikely to experience internal boom with external

[5] Robert Triffin & Herbert Grubel, "The Adjustment Mechanism to Differential Rates of Monetary Expansion among the Countries of the OEEC," *Review of Economics and Statistics*, Vol. 44 (November 1962), pp. 486-491.

[6] Kenen, *op. cit.*, pp. 4-5.

deficit, or depression with surplus. One is that such a situation most often reflects an underlying monetary disturbance;[7] it is likely to originate either in differential rates of monetary expansion among countries, creating different degrees of inflationary pressure on the demand side, or from differing degrees of "cost-push" inflation. This type of disturbance has been quite common among nations in recent years, as a result of governmental efforts to stimulate or maintain full-employment production levels under conditions of downward inflexibility of wage rates. But it is much less likely to occur among regions of the same country, which lack the power to stimulate monetary expansion through credit creation, and among which the scope for relative-cost changes is much more limited in the short run.

Even apart from monetary disturbances, one might logically expect a relatively self-sufficient nation's exports to decrease during booms and increase during slumps. Changes in relative prices, affecting the competitive position of a nation's exports adversely during booms and favorably during recessions, and the possibility that during periods of inflationary pressure potential exports will be bid away by internal demand are two of the more obvious factors tending in this direction. But this kind of reasoning assumes a chain of causation running from changes in the domestic economy to changes in the export sector. In regions, or in small nations where autonomous fluctuations in exports are large in comparison with fluctuations in investment or in other autonomous components of domestic expenditure, the chain of causation will more probably run the other way, from the external sector to the domestic economy. And in such instances a deterioration in the trade balance will contribute heavily to a general slump; conversely, an export increase leading to a current-account surplus will contribute heavily to internal prosperity. For at least two reasons, then, we might expect that regional or very open national economies will tend to experience concomitant expansion or contraction in net exports and in the domestic economy, whereas the opposite pattern is more likely to prevail among more autarkic economic units. Insofar as this implication is not borne out by observation, we must look outside the framework of simple multiplier analysis for an explanation. The model described in this paper is an attempt to do just that.

[7] For the argument that any sustained imbalance of payments must be essentially monetary in nature, see: Harry G. Johnson, "Towards a General Theory of the Balance-of-Payments," in *International Trade and Economic Growth* (Cambridge, Mass.: Harvard University Press, 1958).

For several reasons, then, the origin and transmission of exogenous disturbances are likely to vary with the degree of openness of a particular economy. In addition, the processes of adjustment which take place in response to these disturbances are likely to be somewhat different in a relatively open than in a relatively closed economy. For one thing, regional economies within a single country tend to have higher marginal propensities to import than more self-sufficient national economic units. The marginal propensity to import for consumption is generally large both because domestic final output is not highly diversified, producing a large direct demand for imported goods, and because this output itself has a large import content, implying a substantial indirect demand as well. If the marginal propensity to import for investment purposes is considered separately, it is likely to be even larger, since the indirect requirements for imports are characteristically highest in the capital-goods sectors.

Where economic disturbances are typically internal in origin, a high marginal propensity to import will exacerbate the resulting balance-of-payments difficulties, since a relatively large portion of the initial income change will spill over into the current account. But for an open economy, whose domestic-income level is dominated by external shifts transmitted through the current account, such a high import propensity will greatly facilitate the process of adjustment. For, the larger the marginal propensity to import, the smaller is the change in income and total expenditure required to bring about a given change in imports and thus effect adjustment to a given initial disturbance in the trade balance. And, of course, the more powerful this "income effect" in balance-of-payments adjustment, the smaller will be the observed income shifts which take place in response to an external disturbance.

However large the marginal propensity to import, complete balance-of-payments adjustment can never be effected through the multiplier effects on income and imports alone in any economy in which the marginal propensity to save is greater than the marginal propensity to invest.[8] In such instances, price changes will come into play to help complete the adjustment process. And, as in the case of income shifts, observed shifts in relative prices among regions of a single country are likely to be small just because the price effects themselves are very

[8] The model presented here can effect a full adjustment by what amounts to a violation of this condition: the appearance, in the process of adjustment, of changes in the level of investment (ΔI) induced by changes in the level of exports (ΔE).

large. There are a number of reasons to expect the trade balance to be highly responsive to small price differences among the regions of a single country with a well-integrated industrialized economy, such as the United States. The absence of legal or cultural trade barriers and the production and marketing of a wide variety of goods by interregional corporations with nationwide pricing policies greatly reduce the scope for price differentials to arise in product markets. And the development of nationwide bargaining by major labor unions, the increasing mobility of labor at all levels as transportation and communications improve, and the growth of a highly integrated national capital market all serve to reduce the scope for such price shifts in factor markets. In short, the high mobility and wide availability of both goods and factors of production all serve to increase price elasticities of both demand and supply among closely-integrated economies, and thus to make a region's trade balance highly responsive to small price shifts.

III. THE ROLE OF CAPITAL FLOWS

Because factors of production are highly mobile and responsive to differences in the rates of return among very open or integrated economies, factor flows themselves play a major rôle in the open-economy adjustment process, quite apart from their effect on elasticities of supply. We cannot, therefore, continue to ignore the capital account by assuming that disturbances to the domestic economy and the responses leading to external adjustment both operate through the current account alone. The classical and Keynesian theories on which the discussion so far has been based are fundamentally theories of balance-of-*trade* adjustment, whereas the importance of factor flows, particularly of capital, among open economies requires that we consider the question of balance-of-*payments* adjustment instead. This is particularly true because for such economies, as we shall see later, it is often impossible to separate effects on the current account from those on the capital account; shifts in trade flows and in financial flows often stem from common causes.

Short-Run Financing

The most obvious, and trivial, instance of simultaneous and offsetting shifts in the current and the capital account are capital flows which take the form of trade credits, that is, either supplier or domestic-bank financing of exports. Such capital movements are "equilibrating" in the narrow sense in which Kindleberger originally introduced the term; that is, they fluctuate directly with the trade flows they are financing.[9] They therefore represent a highly sensitive cushioning device, limiting the reserve changes which would otherwise result from uncompensated fluctuations in the trade balance. Although we do not have direct data on the importance of such trade credits in interregional capital flows, we do know that they form a significant proportion of the capital account for the United States as a whole. Bell estimated that, in 1960-61, between 75 and 80 per cent of all short-term capital outflows from the United States were for the purpose of financing American exports.[10] And, in view of the fact that some of the remaining 20-25

[9] Charles P. Kindleberger, *International Short-Term Capital Movements* (New York: Augustus M. Kelley, 1937, 1965), Ch. 1.

[10] Philip W. Bell, "Private Capital Movements and the U.S. Balance-of-Payments Position," in U.S. Congress, Joint Economic Committee, *Factors Affecting the*