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National Economic Policy in an Interdependent World Economy

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During the past decade there has been a strong trend toward economic interdependence among the industrial countries. This growing interdependence makes the successful pursuit of national economic objectives much more difficult. Broadly speaking, increasing interdependence complicates the pursuit of national objectives in three ways. First, it increases the number and magnitude of the disturbances to which each country's balance of payments is subjected, and this in turn diverts policy attention and instruments of policy to the restoration of external balance. Second, it slows down the process by which national authorities, each acting on its own, are able to reach their domestic objectives. Third, the response to greater integration can involve the community of nations in counter-acting motions which leave all countries worse off than they need be. These difficulties are in turn complicated by the fact that the objective of greater economic integration involves international agreements which reduce the number of policy instruments available to national authorities for pursuit of their economic objectives. This article touches on all of these facets

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of higher economic interdependence among industrial nations, both as a fact and as an objective, but its principal focus is on the third complication—the process of mutually damaging competition among national policies.

There can be little doubt about the great growth in international economic interdependence over the last two decades. Import quotas in industrial countries have been virtually abolished on trade in manufactured products, tariffs have been reduced, and transportation costs have fallen relative to the value of goods. At the same time, the accumulation of capital and the spread of technology have made national economies more similar in their basic characteristics of production; comparative cost differences have apparently narrowed, suggesting that imports can be replaced by domestic production with less loss in national income than heretofore. Whether a country imports a particular good or exports it thus becomes less dependent on the basic characteristics of the economy, more dependent on historical development and on relatively accidental and transitory features of recent investment decisions at home and abroad. An invention in one country may lead to production there for export, but the new product will relatively quickly be produced abroad—or supplanted by a still newer product—and possibly even exported to the original innovating country.

Monetary disturbances, too, are likely to be much more quickly translated into changes in the volume of exports and imports than they were formerly. Under fixed exchange rates, greater than average monetary inflation in one country will invite a more rapid deterioration in the balance on goods and services than was true in the past.

Enlargement of the decision-making domain of the world's great producing firms results in the rapid movement of capital and technical knowledge across national frontiers, thereby contributing to the narrowing of comparative cost differences; but their activity will also quicken the speed with which trade adjusts to new sales opportunities because they have direct knowledge of foreign markets and access to distribution channels.¹

Finally, as financial markets become more closely integrated, relatively small differences in yields on securities will induce large flows of funds between countries. Banks will increasingly number "foreign"

1. A quick response assumes the absence of collusive agreements on price, market-sharing, and the like.

firms among their prime customers; the advantages of inexpensive credit to firms in countries with ample savings and well-functioning financial markets, such as the United States, will be shared increasingly with firms elsewhere.

All of these changes in the characteristics of the international economy during the past decade—and it should be emphasized that economic integration is still far from complete—are crucial to the functioning of the international payments system and the autonomy which it permits to national economic policy formation. These changes mean that in normal periods prospective imbalances in international payments—imbalances which would arise if countries did not respond to reduce them or did not adjust policy measures to forestall them—are likely to be more frequent and of larger amplitude than they have been in the past. “Disturbances” arising from new innovations, from generous wage settlements leading to price increases, and from excess or deficient domestic demand will affect the balance of payments more perceptibly. Whether or not imbalances also last longer depends upon the relationship among the “disturbances”; if they are well distributed among countries and tend equally toward deficit or surplus, the duration of prospective imbalances may well be less than in the past; otherwise it may be longer.

These changes suggest that balance of payments difficulties are likely to be more common in the future, and that they will worsen as the structural changes continue in their recent trend. By the same token, however, correction of imbalances in international payments should be easier in the future. Trade flows will respond more sharply to given small “disturbances”; but they should also respond more quickly to policy measures designed to influence them. If a small relative increase in the price level will lead a national economy into greater balance of payments difficulties than heretofore, a relatively small decrease should undo the difficulties. Similarly, international capital flows will respond more rapidly to small differences in national credit conditions; but small differences in national credit conditions directed to correcting the imbalance can induce equilibrating flows of capital. Thus if the national authorities can recognize disturbances early, are willing to use some of the tools at their disposal for correcting imbalances in international payments, and act reasonably quickly in doing so, then the increased sensitivity of international payments to various disturbances need cause no undue difficulty—provided that policy instruments are properly chosen and adequately coordinated among countries.

Interdependence Before 1914

There is a natural inclination to compare the international economy today, especially under the claim that it is becoming more integrated, with the international economy before 1914, when, it is often said, the world was highly "integrated" economically. In the four decades before World War I most of the major countries were on the gold standard (implying fixed exchange rates) most of the time, capital was free to move into or out of most countries, trade was impeded only by comparatively moderate tariffs and quotas were generally absent. Even labor was generally free to migrate from country to country without visas, security checks, and immigration quotas.

In one important sense, however, the comparison is not at all apt. Today national governments are much more ambitious about the objectives of national economic policy than they were in the 19th century. Governments have taken on the responsibility for assuring high levels of employment and, increasingly, a rapid rate of growth; and they attempt actively to influence the allocation of resources and the distribution of income to a much greater degree. These new tasks place greater burdens on the available instruments of policy. Before 1914, by contrast, preoccupation with "defending the currency" was dominant, and the (admittedly more limited) policy instruments at hand were more willingly devoted largely toward that end. Thus the intrusion of international economic integration on national economic policy was more readily accepted because national economic policy was far less ambitious in its aims.

In addition to this important difference, economic relations among industrial countries are probably potentially much closer today than they were even before 1914, despite the characteristics of the pre-1914 world noted above. True, British and French capital moved overseas readily and British investors built railroads around the world. The proportion of Britain's annual savings which went abroad was staggering by modern standards.² Nonetheless, communications were far less perfect than they are today and foreign investors ran far greater commercial risks arising from imperfect knowledge (except in the case of colonial bonds which in effect had the sponsorship of the home government).

2. A. CAIRNCROSS, *HOME AND FOREIGN INVESTMENT, 1870-1913*, 104-06 (1953) estimates that in 1907 no less than 40 per cent of British national saving went to foreign investment.

Despite the freedom of capital to move, it did not in fact move in sufficient volume to erase differences even in short-term interest rates. Over the period 1876-1914 short-term interest rates in New York averaged more than one percentage point higher than corresponding rates in London and there was only a weak correspondence in movement between short-term rates in the two financial centers. Short-term interest rates in London and Paris were much closer together and the correspondence in their movement was higher but still far from perfect.³ Long-term interest rates showed similar divergence in their levels and movement. Response to new investment opportunities was often slow when it came at all.⁴

While tariffs were generally low, barriers to trade in the form of transportation costs were very substantial, although they declined sharply after the introduction of the ocean steamship. Large differences in comparative costs meant trade was socially very profitable, but the composition and level of trade was correspondingly less sensitive to small changes in costs, prices, and quality. Finally, business organizations, far from being international, became truly national corporations in the United States only as World War I approached, and the process was even slower in many European countries.

Thus the alleged integration of the pre-1914 world economy was something of an illusion. While the pre-1914 world was "integrated" in the sense that government-imposed barriers to the movement of goods, capital and people were minimal,⁵ those imposed by nature were much greater and economic integration was not high in the sense used here—quick responsiveness to differential earning opportunities.

Countries today are gradually entering a new environment, not merely returning to a state which had once existed. And they confront new problems arising from the combination of more ambitious national and international economic objectives and a higher degree of economic interdependence than has ever existed before. How, in this world, are they to maintain international equilibrium under a regime of fixed

3. See O. MORGENTHAU, *INTERNATIONAL FINANCIAL TRANSACTIONS AND BUSINESS CYCLES* (1959) for an exhaustive study of interest rate movements in the 19th century. The correlation coefficient between monthly averages of the commercial paper rate in New York and the open market discount rate in London was only $+ .45$; the correlation between open market discount rates in London and Paris was $+ .67$. Simple correlations of short-term interest rates in New York, London, Paris, and Berlin can be found at p. 109.

4. Morgenthau considers it "remarkable" that such permanent differences could be maintained for hundreds of months; "the interaction of all these highly organized money and capital markets and the vast flows of funds back and forth was not strong enough to overcome fundamental institutional and risk differences." *Id.* at 470.

5. This is the definition used in B. BELASSA, *THE THEORY OF ECONOMIC INTEGRATION* (1961).

exchange rates and at the same time achieve their national objectives? It is now necessary to specify more precisely how conflicts may arise and to indicate some of the ways in which governments have responded to these conflicts.

Economic Objectives and Policy Instruments

A well-known proposition in the theory of economic policy requires that the number of policy instruments be at least as great as the number of objectives (target variables) if all objectives are to be achieved.⁶ If the number of instruments is fewer than the number of targets, it will not be possible to reach all of the targets; in that case at least some targets must be given up, and the authorities must choose among them.⁷

A simple example can illustrate the need to have at least as many instruments as targets. Suppose the government of an isolated country has two economic objectives: it would like to assure full employment of its labor force at all times, and it would like its national product to grow at a specified rate each year. It can vary the overall size of the budget deficit or surplus (fiscal policy) to assure full employment. But full employment of resources can be met with a variety of combinations of investment, consumption, and government expenditure. Without some other instrument, the desired growth rate cannot be assured. If,

6. A useful framework for the discussion of economic policy has been provided by the Dutch economist, Jan Tinbergen. He draws a distinction among three types of economic variables: target variables, instrument variables, and data. Target variables are those to the values of which we attach some social importance *per se*, e.g., unemployment or the growth in per capita income. Instrument variables, or policy instruments, are those which the public authorities can manipulate directly in order to influence the target variables. Data are other economic variables which influence the target variables. If an economy starts from a position "on target," that is, with all of its target variables where the authorities want them, then changes in the data are "disturbances" and call for some adjustment in the policy instruments in order to restore the desired values of the target variables. See J. TINBERGEN, *ON THE THEORY OF ECONOMIC POLICY* (1952); J. TINBERGEN, *ECONOMIC POLICY: PRINCIPLES AND DESIGN* (1956).

7. In general, it will be desirable to have more instruments than there are targets. This is especially true where the relationships between instruments and targets are not well-known. More often than not, policy-makers are quite confident about the *direction* in which a given change in a policy instrument will affect the target variables, but they are not at all confident about the extent of the influence. This may be due to simple ignorance about an economy with fairly stable structural relationships, or it may be due to a rapid change in the structure of the economy.

In the presence of this uncertainty, it is desirable to have as many policy instruments as possible. None of them will be superfluous, for all can help to keep the target variables as close as possible to their targets. Each instrument variable should be used in proportion to the confidence held in its relationship to the target variables. For a formal analysis of this problem, see Brainard, *Uncertainty and the Effectiveness of Economic Policy*, 57 *AMERICAN ECONOMIC REVIEW* (May 1967).

however, investment leads to more growth, then monetary policy and fiscal policy together can be manipulated to achieve the two objectives. The higher the growth rate desired, the lower should be the rate of interest. Fiscal policy can then be adjusted to assure full employment. This very simple model apparently influenced thinking in the early years of the Kennedy Administration.

Viewing economic policy as a problem in specifying targets and finding sufficient instruments to reach them helps to illuminate many policy problems confronting national authorities. The objective of greater economic integration has led many officials to reject both flexible exchange rates and frequent variations in fixed exchange rates as instruments for maintaining balance of payments equilibrium. A number of other instruments of policy have been ruled out by international agreement on the same grounds, or to avoid a round of retaliation and counter-retaliation that would leave all countries worse off than they were at the outset. Most types of export subsidies, tariff discrimination among countries, increases in tariffs, and discriminatory exchange regulations fall into this category. A number of provisions of the General Agreement on Tariffs and Trade (GATT) are devoted to these exclusions and prohibitions; with specified exceptions, such as the formation of customs unions or free trade areas, trade discrimination is proscribed.⁸ So are many types of export subsidies and discrimination in domestic taxation between home and foreign goods. The Articles of Agreement of the International Monetary Fund make similar prohibitions with respect to currency arrangements. The extensive use of these measures in the past, especially in the 1930's, led to widespread retaliation and mutual recriminations, and they acquired a bad name among outward-looking officials. But the price of international rules of good behavior as set forth in the GATT and the IMF Articles has been a reduction in the range of instruments available to national policy-makers.⁹

Some usable policy instruments may be used, as a practical matter, only within a limited range. In the United States changes in the dis-

8. Trade discrimination is also permitted, under Art. XIV of the GATT, when currency discrimination is permitted under the rules of the International Monetary Fund. That occurs if the IMF declares a particular country's currency is "scarce" under its Scarce Currency Clause. No such finding has ever been made, even during the period of severe dollar shortage of the late 1940's.

9. Freedom to use some of these instruments may in any case have been more apparent than real. As noted below, export subsidies in one country raise exports only if other exporting countries do not also use them, or if importing countries do not offset them with higher duties. But that is precisely what happened in the interwar period.

count rate of the Federal Reserve System and (since 1962) deliberate deficits or surpluses in the government budget are both regarded as legitimate tools of economic policy; but in normal times the public is not likely to countenance a discount rate of 20 per cent or a budget deficit of \$50 billion. These exceed the range of acceptability; policy instruments have "boundary conditions." In the abnormal situations when such limits become operative, they withdraw an instrument from use. Sometimes these limits are not fully known until they are tested; then we discover that we have more targets (or fewer instruments) than were previously apparent.

It goes without saying that to be attainable economic objectives must be consistent. If they are not consistent, no number of policy instruments will be sufficient. One illustration in the forefront of discussion in most industrial countries involves the relationship between employment and price stability. Given the institution of private collective bargaining, is the target of "full employment" (4 per cent unemployment in the United States, under 2 per cent in the United Kingdom, each by its own standards and definitions) consistent with "price stability," defined, say, as stability in the consumer price index? Many economists would find a conflict.

This kind of inconsistency can perhaps be overcome by developing new policy instruments.¹⁰ Another kind of inconsistency, especially important to national economies linked through international trade and capital movements, cannot be eliminated through the development of new instruments. Examples are objectives regarding the balance of payments or the trade balance. Since one country's trade surplus is another country's trade deficit, it is impossible for all countries to succeed in running trade surpluses. The same is true for balance of payments, taking into account capital movements.¹¹ If there are n countries, only $n - 1$ of them can succeed in achieving their independent balance of payments targets;¹² at least one must accept defeat or else fail to target values for its trade position and its balance of pay-

10. These new instruments would involve shifting the trade-off between unemployment and price inflation—called the Phillips Curve—enough to make simultaneous attainment of the two objectives feasible. This is the thrust of "incomes policies."

11. This assumes that national definitions concerning the balance of payments are all consistent, and abstracts from the additional complications created by disparate national definitions of balance of payments "deficit" and "surplus." See Høst-Madsen, *Asymmetries Between Balance of Payments Surpluses and Deficits*, IMF, in 9 STAFF PAPERS 182-201 (1962).

12. Unless, of course, the targets all happen to be consistent, e.g., if the sum of all balance of payments targets happened to add to the annual addition to monetary gold stocks.

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ments position, thereby acting as an international residual. It has been suggested that the United States played this role until the late 1950's, by taking a relatively passive position toward its payments position after the termination of Marshall Plan aid.¹³

The requirement of consistency is not merely theoretical. In 1962, for instance, all of the major industrial countries wanted simultaneously to improve their payments positions on current account. While mutual success was not logically impossible in this case, it did imply a correspondingly sharp deterioration in the current account position of the less developed countries taken together, which in turn would require ample financing from the industrial countries in the form of grants or loans. No such increase in capital movements was targeted. Thus national targets were inconsistent.¹⁴

The Speed of Adjustment

In summary, successful economic policy requires an adequate number of policy instruments for the number of economic objectives, and it requires that these objectives be consistent with one another. If either of these conditions fails, policymakers are bound to be frustrated in their efforts. Before turning to how these frustrations become manifest, however, one other point should be made: growing interdependence can slow down greatly the process by which independently acting national authorities reach their economic objectives, even when all the targets are consistent and there are sufficient policy instruments at hand to reach them. Thus in practice nations may find themselves further from their objectives than would be true with less interdependence.

High interdependence slows the speed of adjustment to disturbances if national policy-makers do not take the interdependence into account. This is because the economic authorities in different countries may be working at cross purposes. An investment boom in one country may raise interest rates both at home and, by attracting internationally mobile funds, in neighboring countries. The first country may tem-

13. Polak, *International Coordination of Economic Policy*, IMF, in 9 STAFF PAPERS 199 (1962). The ability of the United States to take a passive position ended around 1959, when the deficit became very large and foreign officials began to call for correction. One interpretation which can be put on the international discussions to establish machinery for creating international liquidity is that it represents a search for a new residual supplier in the international payments system.

14. Triffin has underlined the dramatic inconsistencies in balance of payments targets in the early 1960's. See R. TRIFFIN, *THE WORLD MONEY MAZE* 118-32 (1966).

porarily welcome the high interest rates to help curb the boom and may also tighten fiscal policy to keep inflationary pressures in check. But the other countries may fear that higher interest rates will deter investment at home and take steps to lower interest rates. Unless this monetary relaxation is taken into account in framing fiscal policy in the first country, its authorities will find that fiscal policy has not been sufficiently contractionary. But more contractionary fiscal policy will tend to hold up interest rates, so that the monetary authorities in the neighboring countries will find they have only been partially successful in lowering their rates. Even if in the end the whole process settles to a point where the various national authorities are satisfied, it will have taken longer than if there had been close coordination between the authorities in the several countries involved. The greater the interactions between the countries, the longer convergence will take if countries act on their own.

Sometimes, of course, actions in a neighboring country can reinforce those taken at home. If in the above example the domestic investment boom transmitted inflationary pressures to a neighboring country through enlarged imports, then contractionary fiscal policy there would complement contractionary fiscal policy at home. But in this case failure to take into account the interactions between the two countries may lead to *over*-correction and excessive unemployment. This will arise if the authorities in each country decide how much they have to act when acting alone to restore equilibrium; then when both groups act, the total effect will be excessive.

If policy decisions are truly decentralized among nations, in the sense that the authorities in each nation pursue only their own objectives with their own instruments without taking into account the interactions with other countries, then the more interdependent the international economy is, the less successful countries are likely to be in reaching and maintaining their economic objectives. This is due to the greater impact of domestic measures on foreign economies, calling forth correspondingly greater offsetting responses which in turn affect the first country. Under these circumstances, countries must either reconcile themselves to prolonged delays in reaching their objectives or they must coordinate their policies more closely with those of other nations.¹⁵

15. These ideas are complex and are best stated somewhat more formally in a technical footnote.

In matrix notation, let $y = Ax$ describe the relationship between target variables (y) and small changes in policy instruments (x), the matrix $A = [a_{ij}]$, where a_{ij} indicates the

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It has of course long been true that small countries must watch closely economic developments and policies in their larger neighbors, and they would take these developments into account. For the Netherlands, forecasting German GNP and German economic policies is a critical component to forecasting Dutch GNP. But as economies grow more interdependent, the importance of *two-way* interactions increases, so that economically large countries such as Britain, Germany, and even the United States must increasingly take into account developments and policies abroad.

International Competition in Economic Policy

In an interdependent economy, governments do not have full control over the instrument variables needed to influence the trade balance or the balance of payments. Each government can affect the domestic interest rate in an attempt to influence international capital movements or can set tariffs on imports and subsidies on exports to influence the

impact of instrument x_j on target y_i . Arrange the variables so that all the targets and instruments of one country are grouped together, followed by those of another, etc. A can thus be partitioned, with blocks representing individual countries running along the diagonal, and blocks representing the degree of interdependence, or interaction between the instruments of one country and targets of another, lying off the block diagonal.

Suppose that y^* represents the target values the economic authorities of the various countries would like to reach, that the targets are all consistent, and that there are enough policy instruments to reach them all, giving the authorities the correct values for these instruments, $x = A^{-1}y^*$.

Suppose now that the target variables take on values different from their targets. How do the authorities react? Their reaction functions might be described by the following set of differential equations, $\frac{dx}{dt} = B(y^* - y) = B(y^* - Ax)$, which says that the authorities change their instruments at a rate which depends on how far the target variables are from their targets. If they do not take into account international interdependence, B , the matrix of reaction coefficients, will be a diagonal or block diagonal matrix, indicating that each policy-maker looks only at his own target(s).

The solution to this system of linear differential equations takes the form:

$$y_j(t) = y_j^* + \sum_i K_{ij} e^{-\lambda_i t}$$

where the λ_i are the characteristic roots of BA and the K_{ij} are constants determined by the initial disturbances. For a policy system which works in the sense that $y_j(t)$ will gradually approach y_j^* , the second term on the right is transitory. The system will be more efficient, i.e. achieve the policy targets more rapidly after any disturbance, the more rapidly this term fades away. It will fade more rapidly the larger are the λ_i .

In general, the larger the off-diagonal elements are relative to the diagonal elements, i.e. the higher the degree of ignored interdependence, the smaller the smallest root will be and the longer it will take after any given disturbance to reach the target values y^* . High interdependence which is ignored gives rise to the possibility of overshooting targets several times, and it even gives rise to the theoretical possibility that targets will not be reached at all until the nature of the adjustment process is changed.

Coordinating economic policy involves not only exchanging information on targets and use of instruments, but taking this information into account when using instruments. Convergence to targets is then much faster.

trade balance. But success in influencing capital movements or trade flows depends on what other countries are doing. It is interest rate *differentials*, not the absolute level of interest rates, which induce the movement of capital. And it is domestic tariffs *less* foreign subsidies which influence the level of imports. There are many instruments of economic policy for which relative differences affect international transactions, but where the absolute value may continue to exert a strong influence on purely domestic decisions. This is true, for example, not only of short- and long-term interest rates, but also of liberal tax benefits to investment, generous depreciation allowances, lax regulation of corporate activities and a host of other measures designed to influence corporate location. It is also true of foreign trade: generous credit arrangements or credit-risk guarantees for exports may encourage total exports without improving the trade balance if other countries are pursuing similar measures.

This feature of policy instruments—that the absolute level of the instrument may have important effects domestically, but that only the level relative to that in other countries influences the balance of trade or payments—raises the question: where do the values of these instruments finally settle? International capital movements between two otherwise isolated countries will presumably be roughly the same whether interest rates are at 7 per cent in one and 5 per cent in the other or at 4 per cent in the first country and 2 per cent in the second.¹⁶ In each case the differential is two percentage points. But what determines whether “community” interest rates settle at the higher level or the lower one? The effects on other objectives may be very different. Economic growth will be inhibited more in the first case than in the second.

This would be of secondary importance if all countries had many policy instruments at their disposal. Each country could compensate for any deleterious effects on domestic objectives arising from the value of instruments determined predominantly by the community as a whole. But as we already noted, the number of instruments and the range of values they can assume are often sharply limited by tradition or law. Indeed, it is highly likely that at any point in time a country will have at its disposal *only* the minimum number of policy instruments that it needs to satisfy important domestic political demands. Policy instruments affect the welfare of particular members of the

16. This must be qualified to the extent that interest rates influence total savings in two countries.

community as well as national economic objectives, so their use will be resisted. Public expectation is that certain measures, while theoretically conceivable, will in practice not be used. Any attempt to invoke them therefore meets stiff resistance.¹⁷

The values which policy instruments take on in the community of nations, and the process by which those values are reached, are therefore of strong interest to the individual nations. They may not have sufficient domestic flexibility to offset the damaging effects of policy instruments which are forced to an inappropriate level by international competition among governments. As a result, greater international integration can force choices among national objectives which otherwise would all be attainable.

There are occasions in which most or even all members of the international community will find themselves worse off. The competitive devaluations and tariff wars of the interwar period offer the most striking examples; many of the proscriptions in the GATT and the IMF Articles of Agreement are designed to avoid a repetition of those events.

But competition among policies was not thereby banished on all fronts. For example, interest rates shot upward in 1965 and 1966 to levels one to two percentage points higher than those which had prevailed in most countries in 1964. Some of the increases were designed to curb domestic demand; others were defensive, to limit capital outflow. Even after domestic economies had cooled down, it took a dramatic meeting of finance ministers at Chequers, England, in early 1967, to reverse the process. Four other types of policy instruments having these characteristics have been used in the effort to strengthen the balance of payments of various countries: restrictions on government procurement, government-sponsored export promotion, tax incentives to domestic investment, and changes in domestic tax structure. The United States, faced with large payments deficits during the early sixties, made or considered moves in all of these areas; but in each case there was ample precedent abroad for doing so.

Government purchases for government use are specifically excluded from coverage by the GATT rules governing international trade.¹⁸

17. The inflexibility of potential policy instruments is summed up in the adage, "Any *old* tax is a good tax." Changes in taxes not only affect marginal decisions—that may be the objective—but also capital values which the market place has adjusted to allow for the old tax. Thus changes in taxes often result in capital gains for some and capital losses for others.

18. GATT, Art. XVII(2).

The result is that a conspicuously small proportion of government purchases, by any government, is from foreign suppliers who compete with domestic producers. In the United States the Buy American provision—which since 1954 officially gives preferential treatment of six to twelve per cent (in addition to tariffs) to domestic over foreign competitors for the Government's custom—has existed since the 1930's. But in 1962 a number of government agencies, including most importantly the Department of Defense, raised the preference accorded to domestic suppliers as high as 50 per cent.¹⁹ Foreign aid expenditures by the American government are even more restricted. Starting with development loans in 1959, such expenditures were tied increasingly to purchases in the United States, until by 1965 only a limited class of expenditures was not so tied, regardless of the price advantages offered by foreign suppliers.

The government procurement practices of other countries are more difficult to document, since most governments do not require open bidding on government purchases with well-publicized preferences for domestic producers, such as those found in the Buy American provisions. Many countries follow the practice of tying foreign assistance, either by law or by skillful selection of projects and recipient countries, to purchases from the donor country. This is as true for those donors with fully employed economies as for those with excess capacity and unemployment—even though tying is far less effective in the former case, and merely stimulates additional imports—and it is as true for donor countries in balance of payments surplus as for those in deficit. Canada, Japan, and the United Kingdom tie the bulk of their foreign assistance, and France ties some expenditures. France and the Netherlands give virtually all of their foreign assistance to colonial or former colonial areas, where *de facto* aid-tying takes place through long-established trading firms. German aid often originates with requests from prospective exporters who have found projects in recipient countries eligible for foreign assistance by German criteria.²⁰

Many of these practices, of course, arise not only from balance of

19. The Department of Defense also introduced, and then raised, a margin of preference to American suppliers for its procurement for use by American forces abroad, which procurement was not subject to the Buy American Act (41 U.S.C. § 10). The change added an average of 26 per cent to the budgetary cost of those items shifted from overseas to domestic procurement. See testimony of Charles Hitch, Comptroller of the Defense Department, *Hearings on Balance of Payments Before a Subcomm. of the Senate Comm. on Banking and Currency*, 89th Cong., 1st Sess. 156 (1965).

20. On national practices and their economic effects, see Cooper, *External Assistance and the Balance of Payments Donor Countries*, U.N. Doc. E/Conf. 46/141, Vol. V, at 360-73 (1965).

payments considerations but also from protectionist sentiment. Domestic producers apply strong political pressures on their governments to buy at home—the more so when the goods are to be “given away.” But weakness in the balance of payments often strengthens their arguments and increases public acceptability of such restrictive measures.²¹

Government activities are not solely restrictive of trade. On the contrary, a second range of practices involves all kinds of schemes, except direct subsidies proscribed by GATT, to promote exports of goods and services. Governments sponsor trade fairs, product exhibitions, and other advertisements for the products of their exporters; they insure commercial and so-called non-commercial risks involved in exporting; and they often help to finance exports directly. No major industrial trading nation can be found without a government or government-sponsored agency for insuring and/or extending credit for exports. Some countries, such as France and Italy, give especially favorable treatment to export paper in their banking systems or at their central banks. And export credit is often exempt from general credit limitations to restrict domestic demand. All of these measures really subsidize exports, although it is often impossible to identify the amount of the subsidy to any particular sale.

The United States established the U.S. Travel Service in 1961 to attract foreign tourists to the United States. European governments have been aiding tourism much longer, and each year spend substantial amounts for the purpose of attracting foreign tourists. Moreover, expenditure for tourist promotion has been growing rapidly, doubling every two to four years. In addition to straightforward publicity, most European countries subsidize the hotel industry either through preferential tax treatment or through low-interest or government-guaranteed loans.²² In most countries these programs date from the late fifties or the early sixties.

Subsidies to domestic investment is the third area in which governments have moved to improve their international payments positions. Investment subsidies for manufacturing and agriculture improve the competitiveness of a country's products in world markets. Some countries give direct tax incentives to new investment in plant and equipment, such as the investment tax credit of 7 per cent adopted by the United States in 1962 and the 30 per cent investment allowance in the

21. When the European common market is finally established, member governments will be obliged to give equal access to suppliers throughout the EEC.

22. ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT, *TOURISM IN O.E.C.D. MEMBER COUNTRIES 22 and Annex I* (1963).

United Kingdom (in early 1966 the latter was also converted into a direct grant of 20 per cent of expenditures on new plant and equipment). Japan permits greatly accelerated depreciation of assets. A rough impression of the influence of these arrangements can be gained from Table 1, which indicates the speed with which new equipment can be written off, taking into account investment allowances and tax credits. Table 2 indicates the substantial incentive to

TABLE 1
PERCENTAGE OF INVESTMENT IN NEW PLANT AND MACHINERY ALLOWED
TO BE WRITTEN OFF FOR TAX PURPOSES

	In First Year	By Fifth Year	Cumulative Total over asset life
Belgium	22	92	n.a.
Canada	30	71	100
France	25	76	100
Germany, F.R.	20	67	100
Italy	25	100	n.a.
Japan	43	68	n.a.
Netherlands	26	86	110
Sweden	30	100	100
United Kingdom ^a	55	91	130
United States ^b	29	78	114

^a Including an investment allowance of 30 per cent.

^b Including an estimate for the effect of an investment tax credit of 7 per cent.

Source: REPORT OF THE COMMITTEE ON TURNOVER TAXATION, Cmnd. No. 2300, at 52 (1964);
Hearings on the Revenue Act of 1962, Before the Senate Comm. on Finance,
87th Cong., 2d Sess., at 82 (1962).

TABLE 2
STATUTORY AND EFFECTIVE CORPORATE INCOME TAX RATES

	Earnings Fully Retained		Earnings Fully Distributed	
	Statutory Rate	Effective Rate ^a	Statutory Rate	Effective Rate ^a
Belgium	30	30	30	30
France	50	46	50	46
Germany, F.R.	56	53	32	30
Italy	36	32	15	13
Luxembourg	45	32	45	32
Netherlands	45	37	35	29
United Kingdom	54	39	24	18

^a Computed on the basis of straight line depreciation on the assumption of a constant before tax rate of return of 20 per cent over the life of the investment and a market rate of interest of 5 per cent.

Source: Richman, *Depreciation and the Measurement of Effective Profits Tax Rates in the European Common Market and United Kingdom*, 17 NAT'L TAX J. 90 (1964).

invest which accelerated depreciation and investment allowances provide in some countries by reducing corporate profits taxes.

Under a regime of fixed exchange rates, government subsidy for domestic investment is similar to a devaluation of the currency in that

it improves the cost competitiveness both of the country's export products and of its products which compete with imports.²³

Subsidies to investment are obviously motivated by considerations extending well beyond the balance of payments; economic growth has become a target of economic policy in its own right, partly for political and strategic reasons (arising in part from the "economic race" with the Soviet Bloc), partly because rising standards of living are universally desired. But balance of payments considerations do play an important role in the decision to inaugurate investment incentives. Britain for years has emphasized the need to enlarge and improve its capital stock to compete more effectively in world markets. And former U.S. Secretary of the Treasury Dillon, testifying on behalf of the U.S. investment tax credit in 1962, argued that the measure was required "if U.S. business firms are to be placed on substantially equal footing with their foreign competitors in this respect. It is essential," he said, "to our competitive position in markets both here at home and abroad, that American industry be put on the same basis as foreign industry. Unless this is done, increased imports and decreased exports will unnecessarily add to the burden of our balance of payments deficit."²⁴

Changes in the structure of domestic taxation, and in particular the "mix" between direct and indirect taxes, constitutes a fourth area in which governments have moved, or have been tempted to move, to improve their national trade positions. GATT rules prohibiting export subsidies have been interpreted to preclude remission of direct taxes on exports but to permit remission of indirect taxes. Thus taxes on the corporate profits arising from export cannot be rebated, but manufacturers' excise taxes or turnover taxes can. Similarly, countries are permitted to levy indirect taxes, but not direct taxes, on imports. Because of this asymmetry in border tax adjustment, it is possible under fixed exchange rates for a country to stimulate exports and impede imports by shifting its tax structure from direct taxes to indirect taxes, provided that direct taxes affect prices.

The GATT rule is based on the classical economic assumption that indirect taxes are shifted entirely to the purchaser, while direct taxes

23. Investment subsidies differ from straightforward currency devaluation, however, in that the improvement in competitiveness varies from industry to industry according to the capital-intensity of the productive process, and in general they encourage the use of more capital intensive methods of production.

24. *Hearings on H.R. 10650 Before the Senate Comm. on Finance, 87th Cong., 2nd Sess., pt. 1, at 83 (1962)*. It is noteworthy, moreover, that investment incentives are usually directed at the manufacturing industries, e.g., those whose goods are important in international trade. An important exception to this pro-trade bias in some countries is housing.

are not shifted at all, being absorbed entirely (in the case of the corporate profits tax) by the firm. Recent work in the field of public finance suggests, however, that there may be much less difference in the price effects of, say, corporate profits taxes and manufacturers' excise taxes than was once thought to be the case.²⁵ To the extent that indirect taxes are partially absorbed by the producer, or that profits taxes are partially shifted forward to the consumer, the GATT rules regarding border treatment of national taxes allow some "subsidy" to exports and a country can improve its trade position by switching from corporate profits taxes to excise or turnover taxes.

Some countries have made tax changes in this direction, and others have been urged to do so. Sweden reduced its income tax and imposed a general sales tax in 1960; in mid-1964 Italy reduced payroll taxes (which are not rebatable) and, to recoup the revenue, increased turnover taxes (which are rebatable). The German government in 1967 approved a change from a turnover to a value-added tax which will improve the export competitiveness of German products;²⁶ and Britain has been periodically urged to increase its indirect taxes and lower the direct corporate taxes, although a special committee set up to examine the matter rejected the proposed change.²⁷ Similar changes have been proposed for the United States.

Once again, many considerations have influenced these proposals; in some cases there may be powerful arguments for making the change regardless of the effects on the balance of payments. But it is interesting to note that these proposals have come alive only since the late 1950's, as international competition has stiffened, and that improvement in the trade balance is often mentioned explicitly as an important reason for making the change. The Committee for Economic Development has stated, for example, that "a major advantage of a general excise tax [over a corporate profits tax] is that it would tend to improve the ability of the United States to compete with others in world markets," and it goes on to argue that the United States must "equalize" its tax

25. M. KRZYZANIAK & R. MUSGRAVE, *THE INCIDENCE OF THE CORPORATION INCOME TAX* chs. 6, 8 (1963); Stockfish, *On the Obsolescence of Incidence*, 14 *PUBLIC FINANCE* 125-48 (1959).

26. Because rebates under the turnover tax, due to complications in calculating the exact burden of the tax on each commodity, are lower than the values of rebates—and import levies—that would be permissible under the GATT rules.

27. *REPORT OF THE COMMITTEE ON TURNOVER TAXATION*, CMND. No. 2300 (1964). In late 1964, however, Britain did increase tax rebates on exports by extending the definition of rebatable excises to include taxes on fuels and office supplies and equipment. The rebates were estimated at about 3 per cent of the value of affected exports.

structure with that of the Common Market as tariffs between the two trading areas are reduced.²⁸

All of these policy measures have a common characteristic. Taken by one country alone, each represents a concealed devaluation of the currency, at least with respect to a selected class of transactions. But like devaluation, these measures are effective only if other countries do not respond in kind. To each country, tying foreign aid and giving preference to domestic producers in government procurement may appear to offer a means to improve the balance of payments; and indeed in the short run it may do so. But if all countries follow the same practices, the benefit to each is much reduced and some countries will have their payments positions worsened as a result. In the meantime, the total real value of foreign aid has been reduced by reliance on high cost suppliers, and inefficient production has been fostered.

The same thing is true of the other measures discussed. General adoption of export promotion schemes and government-sponsored tourist publicity will surely have a much greater effect on the total level of world exports and tourism than on the payments position of any one country, since the measures will largely cancel one another and leave only residual effects on the balance of payments. Similarly, if all countries adopt special tax incentives for domestic investment, the net improvement in competitiveness—which depends as much on incentives abroad as on those at home—will be haphazard and unpredictable. The principal effect may well be not on any one country's balance of payments position but on the total investment and the rate of growth in the world economy at large—so long as these effects are not nullified by a competitive rise in long-term interest rates! Finally, an effort to raise exports and impede imports through changes in domestic tax structure may have little overall effect on foreign trade and leave countries with tax structures which many would prefer not to have.

At any point in time there are often cogent and persuasive arguments for introducing one or more of these measures to improve the balance of payments. If other countries did not respond in kind, the desired improvement would be forthcoming. But if other countries act likewise, the measures largely cancel out. Not only is the purpose of the move nullified, but all countries may find themselves worse off in terms of their other objectives. As a rule, individual countries cannot act unilaterally without inviting reaction. If they are

28. COMMITTEE FOR ECONOMIC DEVELOPMENT, REDUCING TAX RATES FOR PRODUCTION AND GROWTH 39-40 (1962).

successful, they are quickly emulated by their neighbors, so that the initial gains are transitory at best. Countries often must act in self-defense, in response to the behavior of their trading partners. This is particularly so when measures to reduce one country's deficit do not reduce the surpluses of the surplus countries but increase the deficit of another deficit country or move countries in balance into deficit. These third countries then feel compelled to respond defensively and their actions in turn increase the deficit of the initial country. Moreover, many of the measures thus taken are difficult to reverse—countries do not readily contract export credit programs or lengthen the periods of depreciation allowable for tax purposes.²⁹

Today there is little blatant competition among policies, such as the round of tariff increases in the late twenties and the competitive depreciations of the early thirties. But more subtle and sophisticated methods can substitute, albeit imperfectly, for currency depreciation. Taken in sequence by different countries, these measures produce a kind of ratchet effect. We then have a series of competitive depreciations in disguise.

In this case it is balance of payments difficulties, actual or feared, which give rise to the undesirable competition in policies. Competition for the location of industry can also weaken economic policy in the area of regulation and taxation, due to the mobility of business. To attract new firms or to keep the firms they have, local authorities may eschew tax or regulatory measures which in the view of the authorities would benefit the community as a whole, but for the possibility of driving away investment.

National governments have not yet engaged in a scramble to adjust their policies to be most attractive to foreign-owned business firms; on the contrary, a number of countries are concerned about the amount of foreign control already present. Differences in taxation and other measures relating to business activity do, however, affect international corporate location, and some beginnings of national competition for this location can be seen. Luxembourg liberalized its depreciation allowances and offered an investment allowance in 1962 in what appeared to be a deliberate move to attract foreign investment for operations throughout the European Common Market. Belgium and the

29. There are some exceptions. Measures which are subject to a time limitation can be allowed to lapse. As an anti-inflationary measure, Germany finally permitted its provisions for accelerated depreciation to lapse in 1960—after nine years of large payments surpluses.

Swiss cantons have also adopted tax and other features designed to attract foreign enterprise.³⁰

Policy Competition Within the United States

This intrusion of outside considerations on "domestic" policies is a familiar phenomenon to Americans, who can observe at close hand relationships among the States of the Union. The United States represents, by itself, a large and highly integrated trading economy. Under the Federal system, governmental entities with important responsibilities are often much smaller than the regional "economies" which they serve. Though nominally sovereign in many areas, the states are in fact closely circumscribed in what they can do, and they are sometimes compelled in self-defense to take repugnant measures. Corporate regulation and tax policy both illustrate this process.

State corporation laws were originally the most popular and effective way of regulating incorporated businesses.³¹ In 1886, for example, Massachusetts passed new corporation statutes designed to prevent fraud or mismanagement by firms incorporated in the state. The directors and officers of Massachusetts corporations were made personally liable to creditors if the firms' debts exceeded their capital. The valuation of new stock had to be approved by the State Commissioner of Corporations. So long as similar laws prevailed in other industrial states, Massachusetts corporations had little to gain from incorporating elsewhere.

The system of corporate regulation through state law became unstable during the following two decades. First New Jersey, then Delaware began to exploit the provisions in the U.S. Constitution prohibiting impediments to interstate commerce and requiring that contracts made in any state be honored in any other state. New Jersey liberalized its laws of incorporation in 1896 by allowing new stock valuation to be entirely at the discretion of the corporation directors; it had earlier permitted debts to exceed capitalization. Both provisions laid the basis for the Standard Oil Company and other giant firms incorporated in New Jersey. The state benefitted from a modest tax on the value of corporate capital.

New Jersey's bid for corporations undermined the regulatory corpo-

30. Furthermore, the relaxation in France's tough policy on foreign investment may have been dictated in large measure by the prospect of losing investment to other members of the EEC which would nonetheless have free access to the French market.

31. This history is taken largely from Dodd, *Statutory Developments in Business Corporation Law, 1886-1936*, 27 HARV. L. REV. 32-35 (1937).

ration laws of other states. Massachusetts corporations, for example, could circumvent regulation simply by incorporating in New Jersey, and a strict Massachusetts law would fail in its purpose. In 1902 a special Massachusetts commission reported "a general practice" of organizing corporations outside Massachusetts to do business within the state. The commission drafted a new, permissive corporation law which was enacted virtually without change a year later. The restrictions of 1886 were largely eliminated.

In a series of laws starting in the first decade of the twentieth century Delaware relaxed greatly its restrictions on incorporation, and in the end maintained virtually no requirements regarding the capital structure of a corporation registered in the state. Directors were not closely bound by their charters in issuing new stock. Illinois had tried to police the capital structure of corporations, but in 1933 it virtually adopted the latest Delaware revisions of 1927 and 1929, illustrating a kind of Gresham's Law in corporate regulation. In the same year, however, the federal government undertook much greater responsibility for regulating public stock issues under the Securities and Exchange Act.

State taxation provides a second illustration of the severe constraints imposed on the states by close competition with their neighbors. Wide taxing powers are nominally reserved to the states. Yet while authorities in state taxation complain bitterly about the large differences in tax structure and tax treatment of business income and commodities from state to state, these differences are very narrow compared with those between countries. Commodity taxation is predominantly at the retail level—the administratively simpler manufacturers' excise tax is virtually non-existent—and the rates are very close to one another, particularly between contiguous states. State taxation of corporate income also tends to be much the same from state to state, and differences in rates, coverage, and definition of taxable income have narrowed over time.³²

The reasons for increasing uniformity are obvious enough. The freedom of commodities, capital, and persons to move from state to state without legal impediment, and the ease with which they do so, reduces greatly the scope for wide differences in tax treatment since both purchasers and sellers will leave the high tax states. A striking example of the pressures toward uniformity is provided by North Carolina's adoption in 1957 of a new tax law which changed the basis for calculating

32. See SPECIAL SUBCOMM. ON STATE TAXATION OF INTERSTATE COMMERCE OF THE COMM. ON THE JUDICIARY, STATE TAXATION OF INTERSTATE COMMERCE, H.R. Rep. No. 1480, 88th Cong., 2d Sess. 95-136 (1964). See also J. MAXWELL, *THE FISCAL IMPACT OF FEDERALISM IN THE UNITED STATES* (1946) especially Ch. XIII.

state taxes on the net income of corporations engaged in interstate commerce. The new law had the effect of reducing the tax burden on out-of state corporations making interstate sales from bases in North Carolina and, moreover, it relieved in-state corporations from paying North Carolina income taxes on income derived from out-of-state sales.³³ The tax change was frankly designed "to encourage more industry to locate and expand in the State."³⁴ Within three years South Carolina and Virginia had adopted essentially the same formula, as the governor of South Carolina explained, "to keep competitive."³⁵

Under this pressure of acute competition for industry, measures are taken which benefit industrial firms but which, since most states are following similar practices, may not much affect the actual location of industry. It is not surprising, therefore, that there are perennial cries for greater coordination of state taxation, and even for uniformity. In 1957 the National Conference of Commissioners on Uniform State Laws approved a model Uniform Division of Income for Tax Purposes Act which would eliminate the pointless competition among states in their tax laws. But to date only three states have adopted the approved act in its entirety, and even then not without modifications;³⁶ no state acting alone has much incentive to adopt it. Hence, even state tax commissioners and others who might be supposed to be jealous of states' rights have called on the federal government to impose uniformity on state taxation of corporations engaged in interstate commerce (which means in effect virtually all direct taxes on business).³⁷

A noteworthy feature of this competition among the states is that much of it arises from the mobility of business. Taxation and regulatory activities are less effective if the range of feasible business locations

33. The first of these two features recalls some of the tax privileges of foreign corporations setting up sales offices in Switzerland. The second, amounting to a remission of direct taxes on export sales, would at the international level be a clear violation of GATT rules.

34. Advertisement in N.Y. Times, Nov. 17, 1957.

35. STATE TAXATION OF INTERSTATE COMMERCE, *supra* note 32, at 123-26.

36. *Id.* 133.

37. The situation is actually somewhat more complicated than this implies. States, faced with rapidly increasing needs for revenue, widened their business taxes considerably during the fifties to include a number of taxes touching significantly on interstate commerce. In 1959 the Supreme Court in *Northwestern States Portland Cement Co. v. Minnesota*, 358 U.S. 450 (1959), upheld the right of Minnesota to tax the net income of an out-of-state business arising from sales in the state. A series of decisions on related cases made clear the wide taxing powers of the states. The business community was alarmed, and in late 1959 Congress passed a law limiting the rights of states to tax interstate commerce. Many states resented the limitation on their taxing powers, but—caught between rising revenue needs and competition with other states—urged the Congress to legislate *uniform* standards for defining tax base, apportioning income, etc. See *Hearings on State Income Taxation of Mercantile and Manufacturing Corporations Before a Special Subcomm. of the House Comm. on the Judiciary*, 87th Cong., 1st Sess. 367 (1961).

exceeds the jurisdiction of the taxing or regulatory authorities. State regulatory laws began to lose effect around the turn of the century when American corporations increasingly became truly national in their operations.

To some extent, however, similar problems arise from mobility of persons. Especially when a metropolitan area is made up of several governmental jurisdictions, persons working in the area can choose to live where taxes are lowest even while enjoying the public benefits of the central city.

In Summary

In a highly integrated economic area which surpasses in size the jurisdiction of governments, each group of policy-makers is subject to such strong interactions with the surrounding area that the constraints on its actions become very severe. Indeed, in the hypothetically limiting case, these constraints determine entirely the course of action each jurisdiction must take. The region—or the nation—in a highly integrated economy becomes analogous to the perfect competitor—or at best the oligopolist—in a market economy. The range of choice it has, consistent with economic survival, is very small; for the most part it simply adapts its behavior to stimuli from outside. Awareness of the high interactions will eventually inhibit action.

A. C. Pigou and John Maynard Keynes pointed out long ago that the sum of individual decisions by consumers and producers may not always be optimal for society as a whole (and hence for its members), even though its members may be acting individually on entirely rational grounds.³⁸ Some kind of collective action is therefore required to produce an optimal outcome.

The same can be true among nations, or among regions within a nation, if the interactions among their decisions are sufficiently strong. One jurisdiction gropes for new instruments in an attempt to improve its position. If it succeeds, others follow and there is a competition in policies which defeats everyone's objectives and in fact can even lead all participants *away* from their national or local objectives, like the members of a crowd rising to their tip-toes to see a parade better but in the end merely standing uncomfortably on their tip-toes.³⁹

38. A. PIGOU, *THE ECONOMICS OF WELFARE* (1932). This was also the central underlying message of J. KEYNES, *GENERAL THEORY OF EMPLOYMENT, INTEREST, AND MONEY* (1936).

39. A recent illustration of this, drawn from the United States, is provided by the

National Economic Policy

An invisible hand seems to be working in economic policy as well as in the market place. Competition in the market place is alleged to lead to the most efficient allocation of resources. Whatever the merits of this claim, we can be much less confident that competition among policies will be optimal. Governments seek many ends, not the efficient allocation of resources alone; and the process of policy competition can certainly thwart some of those objectives.

Existing rules of international behavior as set forth in GATT and in the IMF Agreement do limit the use of direct and straightforward means of policy competition such as open export subsidies and multiple exchange rates, and they therefore slow the process of policy competition since the more subtle and sophisticated methods—loopholes in

growing use by States and municipalities of their privilege to float tax-exempt securities for the purpose of raising funds for new businesses locating there. This practice was used by only three states as recently as 1956, with such issues totalling less than \$2 million; but by 1966 these issues had been made in 28 states and exceeded \$500 million. As the process spreads, the actual effect on the location of industry diminishes, and the net effect will be simply to erode the federal corporate tax base and to *raise* interest charges on all tax-free state and municipal securities, thus in the end hurting the protagonists in the process.

A simple game offers a suggestive if inexact analogy to the consequences of policy competition. Consider a "game" in which each of two persons must name an even number between two and ten. If they name the same number, each player receives half of that number. If they name different numbers, the player naming the lower number wins the number he named; the other player wins nothing. The "payoff matrix" for either player looks like this:

Number chosen by one player	Number chosen by the other player				
	2	4	6	8	10
2	1	2	2	2	2
4	0	2	4	4	4
6	0	0	3	6	6
8	0	0	0	4	8
10	0	0	0	0	5

Maximum joint gains are reached if both players choose ten; in that case each of them wins five. But for each player the choice of "eight" dominates the choice of "ten" in the sense that the payoff is sometimes higher and is never lower, no matter what the other player chooses. If the choice of "ten" is ruled out by both players on these grounds, choice of "six" then dominates the choice of "eight" by reasoning similar to that above; and so on, until both players end up choosing "two" as the only safe strategy yielding some sure payoff.

The mutual gains from cooperation are obvious in this case, and should be obvious to both players. The temptation to cheat will always be present, but if the game is played again and again the long-run loss from deviating from a jointly agreed choice of "ten" should induce both players to stick to their agreement. If, however, this kind of game is extended to include many players—each player naming the lowest number shares the reward with others who do so, but wins nothing if someone else has named a lower number—any one player may feel he can violate the agreed conventions to his own benefit without inducing retaliatory action by all the others. Since *all* the participants may reason in this way, all may be made worse off than necessary.

International trade and financial policies have something of this character: *if* all the other players adhere to the rules which benefit all, any one of them may gain by deviating from them, and therein lies the risk of unraveling. The rules will be workable only if all play by them.

GATT and the IMF Agreement—usually involve strong domestic considerations which delay their implementation. But existing rules do not fully accomplish the aim of preventing self-defeating policy competition and of freeing domestic policy measures to pursue largely domestic objectives. Moreover, the pressures on domestic policy are likely to become greater as the world economy becomes more interdependent. Freedom of action in economic policy formation can be lost through the need for each country to compete in policies with its competitors in commerce.

To minimize adverse effects from this competition, countries can coordinate closely their national economic policies, attempting to define and reach an optimum combination of policies for the community as a whole. This route involves extensive “internationalization” of the process of economic policy-making, transferring this governmental function to the larger integrated area.⁴⁰

Alternatively, countries can attempt to remove the major source of pressure on their actions—deleterious effects on their international payments positions—by providing each country with ample liquidity to finance any deficit and allowing it to go its own way. Or this goal can be accomplished by reversing the process of economic integration, artificially breaking down or reducing the numerous economic links between countries. While some movement can be seen on all three of these fronts, actions in the United States and Europe in the mid-sixties seemed dangerously pointed toward the third alternative.

40. The same is true for regulation and taxation as well as balance of payment policies. A governmental unit spanning a territory which equals or exceeds the locational domain of the firm can make and enforce regulations without inviting socially undesirable relocation of industry. As the locational domains of business firms increase, it is necessary also for the jurisdictions of governments to increase correspondingly—at least in some dimensions—if subsequent “policy competition” among governments is not to result in practices and policies which are socially sub-optimal. Water and air pollution control provide topical examples. It is this, rather than the narrower question of possible misallocation of resources, which suggests that the pressure for “harmonization” of policies—*i.e.*, joint decisions—makes sense.