

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 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 the 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 expendi-

⁴Morgenstern 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.

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

⁶A useful framework for the discussion of economic policy has been provided by the Dutch economist, Jan Tinbergen. He draws a distinction between 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).

⁷In 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 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).