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PROSPECTS, PROBLEMS, AND PATTERNS

Volume 12—Economic Growth in the International Context

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LETTERS OF TRANSMITTAL

MAY 23, 1977!

To the Members of the Joint Economic Committee:

Transmitted herewith is the 12th volume of the Joint Economic Committee study series entitled "U.S. Economic Growth From 1976 to 1986: Prospects, Problems, and Patterns." This series of over 40 studies forms an important part of the Joint Economic Committee's 30th anniversary study series, which was undertaken to provide insight to the Members of Congress and to the public at large on the important subject of full employment and economic growth. The Employment Act of 1946, which established the Joint Economic Committee, requires that the committee make reports and recommendations to the Congress on the subject of maximizing employment, production and purchasing power.

Volume 12 is the one in the series which extends the horizon of future economic growth considerations into the international arena. The focus is on the interrelationships between economic growth rates in the United States and those of other countries as well as on the increasingly important role of multinationals. The authors of the three studies are Prof. Irma Adelman, Prof. Dennis C. Pirages, and Prof. Ronald E. Müller. The committee is indebted to these authors for their fine contributions which we hope will serve to stimulate interest and discussion among economists, policymakers and the general public, and thereby to improvement in public policy formulation.

The views expressed are those of the authors and do not necessarily represent the views of the committee members or committee staff!

Sincerely,

RICHARD BOLLING,
Chairman, Joint Economic Committee

MAY 18, 1977!

HON. RICHARD BOLLING,
Chairman, Joint Economic Committee,
U.S. Congress, Washington, D.C.

DEAR MR. CHAIRMAN: Transmitted herewith are three studies entitled "Interaction of U.S. and Foreign Economic Growth Rates and Patterns" by Prof. Irma Adelman, "U.S. Growth Policy and the International Economy" by Prof. Dennis C. Pirages, and "National Economic Growth and Stabilization Policy in the Age of Multinational Corporations: The Challenge of Our Postmarket Economy" by Prof. Ronald E. Müller. These three studies comprise volume 12 of the Joint Economic Committee's study series, "U.S. Economic Growth From 1976 to 1986: Prospects, Problems, and Patterns." This series

forms a substantial part of the Joint Economic Committee's 30th anniversary study series.

The papers presented in this study document the increasing interdependence of the American economy not only with the economies of other industrial nations but also with the developing nations. According to Professor Adelman, a higher rate of growth in the United States would contribute to the growth of developing nations by providing export markets in a world economic climate more conducive to internal development and economic restructuring. On the contrary, Professor Pirages states that only a small number of countries would be severely affected by changes in U.S. economic growth rates or patterns. Conversely, there are few countries whose economic policies could significantly retard growth in the United States, with the exception of the OPEC nations.

On another topic, Professor Müller maintains that the U.S. economy has been structurally transformed since World War II so that the generally accepted "Keynesian-based" view of our economy is now inadequate and obsolete. As a result of increasing global interdependence, our major institutions of production and finance are multinational as well as multi-industry conglomerates which must operate as oligopolies. Hence, current policy and the theory it is based on will have to be strongly modified and supplemented with new approaches.

Dr. Robert D. Hamrin of the committee staff is responsible for the planning and compilation of this study series with suggestions from other members of the staff. The administrative assistance of Christal Blakely of the committee staff is also appreciated.

The views expressed are those of the authors and do not necessarily represent the views of the members of the committee or the committee staff.

Sincerely,

JOHN R. STARK,
Executive Director, Joint Economic Committee.

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INTERACTION OF U.S. AND FOREIGN ECONOMIC GROWTH RATES AND PATTERNS

By IRMA ADELMAN*

SUMMARY

This paper treats three questions—the impact of U.S. economic growth on the rates and patterns of economic growth in non-OPEC developing nations, its impact on industrial economies, and the influence of worldwide economic growth on the United States. With regard to the first question, arguments are being voiced by policy makers in developing countries and by liberals in the United States that we should curb the U.S. rate of economic growth in the interest of international equity. This paper demonstrates that these arguments are entirely misguided. In particular, the proponents of curbs on U.S. growth ignore the effect that a slowdown in the United States would have on the rate of economic growth and on the alleviation of poverty in the developing world. Far from benefiting non-OPEC Third World countries, a reduction in the U.S. economic growth rate would lead to a disastrous slowdown in those nations, would increase, rather than reduce, the absolute income gap between the industrial nations and the developing nations, and would lead to further impoverishment of the already miserably poor poorest 40 to 60 percent of the population of the latter. The basic reason for this result is that economic slowdown in the United States would lead to reduced market opportunities for the products of the developing nations and therefore to reduced growth therein. The developing nations would therefore not have the economic capability to increase their share of world consumption. In other words, the reduction in U.S. consumption would be translated into a delay in the consumption of resources by the United States (and the rest of the world), not into increased consumption by the world's poor. A more equitable distribution of world consumption of natural resources can come only as a result of a more equitable distribution of world income, and cannot be legislated by the arbitrary reduction of consumption by the wealthy, industrialized nations.

The impact of U.S. restraint in the consumption of world resources for economic growth on the growth of industrialized nations is less clear. While the effects on the markets for the products of the industrialized nations will be similar to those on the markets for developing nations' products, they will be less severe because of the much stronger internal markets in the developed countries. Further, the pressure on oil prices of high U.S. demand may drive up fuel prices generally, to the detriment of the economies of the industrialized nations. Since the

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Second World War, the general experience has been that worldwide fluctuations in economic growth start in the United States and spread, with some time lag, to other industrialized nations. This interdependence may be expected to continue, even though the developed countries (except for Japan and Canada) have increasingly been trading much more with each other rather than the United States. Added to this traditional interdependence among industrial nations' growth rates, which operates through import demand, is the new interdependence through competition for imported oil. A high U.S. growth rate may be expected to increase the U.S. share of all world oil imports quite substantially, even when current programs for increased utilization of domestic and nonoil sources of energy are taken into account. Therefore, in the absence of measures to intensify oil conservation and to develop alternative sources of energy in the U.S., if the U.S. adopts a high-growth strategy the market for oil in the 1980's is likely to be characterized by upward pressure on oil prices, recurrent shortages of crude oil, balance-of-payment crises and, consequently, lower average growth rates in Europe. Such consequences will, of course, have political repercussions on NATO as well. It is therefore recommended that, as part and parcel of the adoption of a high growth strategy in the United States, the United States intensify its efforts at oil conservation and substitution.

Because the fraction of U.S. GDP involved in foreign trade is small, with the market for U.S. products strongly dominated by the domestic economy, the impact of foreign economic development on the U.S. economy is small, and it is likely to remain so for the next 20 years or more. Competition for sales of intermediate and final goods from foreign industrial nations has increased substantially in the past decade as a result of reduced technological dynamism in the United States and increased technological dynamism in northern Europe and Japan. In principle, two responses are possible: Increased U.S. protectionism or the generation in the United States of an economic climate conducive to increased investment in new technology. The latter course is recommended as being superior for the pursuit of our long-run economic interests as well as for poverty reduction throughout the world. The aggregate effect on U.S. employment from not protecting it against foreign competition is likely to be small. Special industries severely hurt by foreign competition may, however, require some form of readjustment assistance. Among measures to create an appropriate climate for increased technological innovation in the United States, the reduction of uncertainty with respect to future environmental regulation and the future price of energy, appears considerably more critical and more promising than do direct subsidies for research and development and new investment.

BACKGROUND

During the recent period of post-OPEC slowdown in growth of the OECD (industrialized) nations, the growth rate of GNP in the developing world (excluding OPEC) fell from an average of 5.8 percent in 1967-73 to 5.3 percent in 1974 (estimated), with a projected growth rate of 1.4 percent for 1975 and an average growth rate of 3.7 percent for 1974-78. By 1978, in the absence of further major oil price in-

creases, the non-OPEC growth rate is forecast to return to 5.8 percent.¹ Further, a large study by a group of French economists,² based on an integrated, worldwide, regionalized, mutually consistent extrapolation of world trade for 1975–80, concludes the following: An average rate of growth of 4.5 percent for the OECD countries over the 1970–80 decade (with actual 1970–74 results and a simulation for the balance of the period) would lead to a 10-year average growth rate for the non-OPEC developing countries (on the same basis) of 5.4 percent. If the average growth rate of the OECD nations over the decade were to be lowered to 3.4 percent, the 10-year average growth rate would fall to 3.7 percent, a significantly larger drop in growth rate than that of the developed nations. The growth rate decrement would be only slightly less serious for the nations of black Africa (5.6 percent to 4.4 percent) than it would be for Southeast Asia (5.1 percent to 3.3 percent) and Latin America (6.6 percent to 4.6 percent).

The apparent correlation of industrialized nations and LDC growth rates is based on growth rate data over the past 20 years. Thus, in 1955–60, the average real rate of economic growth of the OECD countries³ was 3.6 percent; in the sixties it increased to 4.9 percent; it dropped to 3.4 percent in the 1970–74 period. During the same periods, the average rates of economic growth of non-OPEC developing countries were 3.9 percent, 5.5 percent, and 6 percent respectively.⁴ While such correlations are crude, and may not be valid for the 1970–74 time period, there are sound theoretical reasons for believing that there is a significant positive correlation, on the average, between developed country growth and developing country growth. Such correlations are implicit in virtually all projections of the world economy.

Further, and more important, these correlations are perceived as real in the less developed world. For example, according to Brendan Jones,⁵

Africans agree that there seems to be little prospect for a renewal of development in much of the continent until there is a stronger pickup in the economies of the industrialized countries, particularly the United States. When the prolonged world recession eases its grip, perhaps things will begin to look up for Africa. Meanwhile, its poorest countries hope simply to get enough help to stay alive.

IMPACT OF U.S. ECONOMY ON LDC GROWTH

In the last 15 years or so, the world economy has become much more intimately interrelated than ever before, primarily through increased international trade. Cyclical fluctuations in demand and in prices originating in one bloc of countries are therefore rapidly transmitted to other blocs, as can be seen in the rapid development of the recent worldwide depression. The degree of international interdependence is such that no market economy can afford to shelter itself effectively from shocks to the international economy.

The United States itself is becoming steadily more dependent on the rest of the world. Even though the 1970 U.S. balance of trade constituted only 0.1 percent of U.S. GDP, the share of imports plus

¹ World Economic Indicators, International Bank for Reconstruction and Development (IBRD) report 700/76/04, Apr. 1, 1976.

² The International Trade Crisis: Possible Futures for the World Economy in the Period 1975–80, Groupe d'Etudes Prospectives Internationales, Centre Français du Commerce Extérieur, Paris, 1975.

³ Excluding Greece, Portugal, Turkey, and Spain.

⁴ Prospects for Developing Countries, IBRD report 802, July 8, 1975.

⁵ New York Times, Industrial Economic Survey, Jan. 25, 1976, p. 17.

exports in GDP rose from about 9 percent in 1951 to about 11 percent in 1970 and 15 percent in 1974, an absolute increase of \$95 billion in 1970 and \$245 billion to 1974, in constant 1974 dollars.⁶

The importance of U.S. trade in the international economy can be seen from the fact that, in 1970, the United States accounted for about 17 percent of the world's total commodity imports and 20 percent of total world exports. Since changes in U.S. trade can thus have an enormous impact on the economies of most other nations, the United States has a strong moral responsibility to consider seriously the worldwide impact of its growth and trade policies.

The impact of the U.S. rate of growth on the growth rates of other economies is felt primarily in two distinctly different ways: (a) A high rate of U.S. growth enhances U.S. demand for imports generally, thereby providing a positive impetus to the growth of other economies; (b) a high rate of U.S. growth specifically increases the U.S. demand for external oil, generating pressures for higher oil prices, international oil rationing, or both, and depressing the growth prospects of other countries (except for OPEC). The overall impact of U.S. growth on the world economy depends on the net balance between these two forces.

Under these circumstances, it is useful to examine the geographic breakdown and the commodity composition of U.S. trade in 1970 (see tables 1 and 2). Trade with developed countries accounts for about half of U.S. imports and exports, with the non-OPEC developing countries accounting for about 30 percent; trade with OPEC nations accounts for most of the balance. With both the industrial and the non-OPEC developing countries, the U.S. trade balance is positive, but it is larger with the non-OPEC developing countries. Given the current structure of U.S. trade and trade barriers, the overall impact of an increase in the U.S. rate of growth would make the trade balances of all non-OPEC trading partners more adverse. This effect would be more serious for the non-OPEC LDC's than it would be for the industrialized nations. Further, when the stimulation of the economies of the other industrialized nations is taken into account, the trade balance of the LDC's would become even more negative. The compensatory effect of the increased aid to LDC's in times of prosperity would generally be insufficient to overcome the more direct effects of trade on the balance of payments.

TABLE 1.—GEOGRAPHIC BREAKDOWN OF U.S. TRADE

[In percent of total]

Trading partner	Exports		Imports	
	1960	1970	1960	1970
1. Canada	19	21	22	27
2. EEC ¹	25	26	22	23
3. Other OECD ²	13	20	14	21
4. Rest of world ³	42	33	41	29

¹ Includes Belgium/Luxembourg, France, Italy, the Netherlands, United Kingdom, and West Germany.

² Includes Austria, Cyprus, Denmark, Finland, Greece, Israel, Japan, Malta, Norway, Portugal, Spain, Sweden, Switzerland, and Yugoslavia.

³ Includes Australia, New Zealand, OPEC and non-OPEC LDC's, and the Socialist countries.

Source: Computed from U.S. Department of Commerce, Commodity Trade Statistics.

⁶ International Financial Statistics, International Monetary Fund, April 1969, April 1976.

TABLE 2.—COMMODITY COMPOSITION OF U.S. TRADE
[In percent]

Products	Exports		Imports	
	1960	1970	1960	1970
1. Farm.....	22	15	21	9
2. Processed food.....	6	5	13	10
3. Mineral.....	7	7	19	1
4. Manufactured.....	65	73	48	70

Source: Computed from U.S. Department of Commerce, Commodity Trade Statistics.

For developing countries, however, the balance of payments is less important than is the flexibility that is associated with a prosperous world market. Prosperity in the industrialized nations of the world is generally associated with increased aid to LDC's and, even more important, with greater tolerance for unfavorable trade balances. Under these circumstances, a higher rate of economic growth in the industrialized nations allows an LDC considerably more latitude in changing the structure of its domestic production, thereby allowing a higher long-term growth rate, greater equity in distribution, increased ability to take advantage of economies of scale in the production of export goods, or whatever combination of these is desired.

With world prosperity, countries tend to become more "open." Not only does the overall volume of world trade increase, but also its share in world GDP. While this is, in part, a matter of deliberate policy—protectionism increases with recession—it is more directly a result of natural relationships between income and price elasticity of imports and exports. This follows because income elasticities tend to dominate price elasticities, and because income elasticities of demand for both imports and exports are sufficiently high (greater than 1) to raise the share of both in GDP as income levels increase. In addition, for most countries, in the absence of controls, the income elasticity of imports is higher than that of exports, so that prosperity generally tends to degrade the balance of trade. Countries which can afford to run a trade deficit, or those in which trade is a small portion of GDP, can use policy instruments to alter their structure of trade (and of production and consumption) to fit their patterns of income growth. Countries which do not meet the above criteria (and most developing countries do not) must adapt their rates of income growth and their structure of output and employment to fit the supportable trade balance deficits. To enlarge the supportable deficits it, in fact, a primary function of foreign assistance.

On balance, it would appear that a higher rate of growth of U.S. GDP would contribute to the growth of LDC's by providing export markets and a world economic climate more conducive to internal development and economic restructuring. In the process, it would, at least in the short-to-intermediate term, make more adverse, on the average, the balance of payments of the non-OPEC LDC's. This latter effect, however, is not likely to inhibit LDC growth so long as the developed world is in a state of economic expansion.

The impact of higher U.S. growth rates on the developed nations would also be expansionary. In the longer term, the associated stimulation of international trade would increase the degree of world inter-

dependence and facilitate the transmission of cyclical economic fluctuations.

If increased U.S. growth were to be achieved by increased dependence on oil imports, one result would be a strongly adverse balance of trade with the OPEC countries, probably large enough to make the overall U.S. trade balance negative. It would also contribute significantly to the already negative balance of trade of the LDC's through higher prices for oil. These effects can be reduced if alternative sources of energy can be developed to support the U.S. growth rate.

IMPACT OF SLOWER U.S. GROWTH ON THE LDC POOR

One of the most significant features of any slowdown in the rate of growth of U.S. GDP is the associated general depression of international trade. In such a situation, the international markets for the products of LDC enterprise, as well as for other foreign goods, would be curtailed. Further, as suggested in the preceding section, pressures on the LDC's to reduce their trade balance deficits would be substantial. Under these circumstances, the LDC's generally would be forced to adopt, as rapidly as possible, an import-substitution policy.

Unfortunately, import substitution, except in foodstuffs, hurts both growth and distribution. The deterioration in distribution is due to the fact that nonfood import substitution reduces the relative price of rural versus urban goods, thus lowering the incomes (both relatively and absolutely) of the rural poor. Since the rural poor are, in general, poorer than the urban poor, the resultant change in the rural-urban terms of trade would degrade the overall distribution of income and would increase the overall extent of poverty. The worsening of the agricultural terms of trade for the farmers is due to several processes. First of all, nonfood import substitution makes urban manufactures more expensive. Second, by raising manufacturing costs, it leads to reduced output, lowering the rate of growth of urban incomes and decreasing the relative rate of urban demand for good. Third, the reduced manufacturing output decreases the rate of absorption of would-be rural immigrants into urban employment, thus contributing to continued pressures on land and to unchanged agricultural output in the face of a lower urban demand growth rate. The end result of these processes is a drastic deterioration in the agricultural terms of trade and therefore in income distribution.

If U.S. policy is to encourage economic growth with equity in the LDC's, in preference simply to overall LDC economic growth, it is clear that the U.S. should not participate in economic policies that are likely to force the LDC's to import substitution.

Evidence from a number of studies of the impact of development strategies upon income distribution suggests rather strongly that one of the most hopeful approaches to growth with equity involves emphasis on the promotion of labor-intensive exports. This is because the processes at work in labor-intensive export development are precisely the opposite of those described above for nonfood import substitution. One analysis⁷ suggests that the reduction in the income of the poorest 40 percent of households in South Korea between

⁷ Income Distribution Policy in Developing Countries, I. Adelman and S. Robinson, Stanford University Press (in press).

1968 and 1978 that would result from an import substitution policy in preference to growth based on labor-intensive exports would be 30 percent, with a 50-percent increase in the number of households living in poverty.

It is precisely the labor-intensive export-oriented development strategy, unfortunately, that would be virtually precluded in the climate of (relatively) shrinking world incomes, trade, and aid that would result from a less rapid growth rate in the industrial countries and the consequent slower growth of demands for imports. Ironically, it is the very equity considerations espoused by those who advocate a slowdown in the rate of economic growth of developed countries which make it imperative for the United States, OECD, and other industrial nations to pursue a high growth rate strategy. Indeed, the absence of fast growth in the industrial nations would degrade the distribution of income not only within developing nations, but between the non-OPEC developing nations as a group and the developed nations.

THE IMPACT OF THE U.S. ECONOMY ON THE DEVELOPED NATIONS

The rate of economic growth in the United States has direct effects on the industrialized nations similar to those it has on the LDC's—it stimulates their exports, leading to more rapid economic growth, and, at the same time, it raises the cost of fuel. However, the consequent impact of a poorer balance of payments (because of oil imports) would be less serious for the industrialized nations than for the LDC's, as the former have greater potential for adaptation through changes in the structure of production. The differences between the impact on developed countries and on the LDC's are thus more a matter of scale than of quality.

In particular, since the developed countries (except for Japan and Canada) trade much more with each other than with the United States, they (as a group) have a far larger "internal" market than do the LDC's. The direct effects of increased U.S. economic growth as a stimulus to the growth rate of these nations are therefore relatively small. However, there are two indirect stimulating effects of higher U.S. growth rates. One of these is the fact that the increased demand for exports by the LDC's will be felt (with some lag) not only in the United States, but throughout the industrialized world, and this will have a further stimulating effect. Second, since the Second World War, the general experience is that worldwide economic fluctuations have tended to start in the United States and spread to the other industrialized nations, with some timelag. The improved economic conditions that would thus be anticipated in the industrialized nations after they perceive a high U.S. rate of growth would serve to stimulate the economies of the other developed nations.

Japan and Canada, of course, are special cases. Since a large proportion of Japanese trade (35 percent in 1970) and perhaps 60 percent of Canadian trade is directly with the United States, the direct stimulation of the Japanese and Canadian economies by higher growth rates in the United States is generally larger than the direct effects for either the other OECD nations or for the LDC's. Economic movement in both economies, therefore, also tend to follow those in the

U.S. economy, but with smaller timelags than for the rest of the industrialized world.

The second interaction—that of competition for oil—is of particular importance to relations between the United States and the other industrialized nations of the world. While there appears to be a glut of oil today, the projected increase in aggregate demand for oil is sufficient to create a major shortage in the eighties particularly since few of the OPEC countries are expected to be able to increase oil output significantly during that period. Therefore, if no major breakthrough is made in the development of alternative energy sources and if production of oil and gas inside the OECD area does not increase very substantially, the world oil market of the eighties will most likely be characterized by more or less persistent tension due to the competition for the limited oil supply. The single factor of greatest importance to this state of tension is the anticipated rapid growth in the North America demand for imported oil.

The significance of North America (primarily United States) oil imports is convincingly demonstrated in a recent extrapolation of current trends in the world economic system.⁸ If present world energy consumption trends continue through the eighties a real rate of growth of 5 percent in all OECD countries would result in North America (United States) consuming 46 percent of all world oil imports by 1990, even when increased utilization of domestic and nonoil sources of energy is taken into account. This compares to 33 percent in 1990 at a 3-percent OECD rate of growth, and to 23 percent for 1974. Part of the increase is due to the fact that, by 1990, other OECD countries are expected to meet a larger share of their energy consumption needs from domestic sources than they do today, while North America is expected to move the other way. For example, under the high growth rate assumption, Japan will supply 37 percent of its energy consumption needs from internal sources by 1990 (as compared to 14 percent in 1974) and Western Europe 54 percent (as compared to 39 percent), while the United States will change from 88 to 68 percent.⁹ As a result, European countries fear that rapid U.S. growth without a concomitant successful effort to curtail U.S. dependence on oil imports will lead to higher oil prices, recurrent shortages of crude oil, balance-of-payments crises, and, consequently, lower average rates of economic growth in Europe. Should these fears materialize (and this is a likely development), they will contribute in a major way to U.S.-Western Europe political tensions.

THE IMPACT OF OTHER NATIONS ON THE U.S. ECONOMY

Aside from OPEC, the economic actions of other nations have a relatively small effect on the U.S. rate of economic growth. This is because imports and exports combined, while large in dollar volume, constitute only about 11 percent of the U.S. GDP; the driving forces in the U.S. economy are thus predominantly internal. However, the

⁸ D. Noreng, *International Oil Policy Cooperation Issues, Interests and Alternative Settlements* (Council on Foreign Relations, the eighties Project 1976), mimeographed.

⁹ While North America currently supplies a larger fraction of its energy consumption from domestic sources than any other OECD area and is expected to continue to do so, total North American energy consumption is so large that a moderate increase in the percentage of energy that must be met by oil imports has a major impact on total world oil imports.

growth of international trade over the past several decades and the anticipated acceleration of the trend toward greater international trade and interaction have already made the preceding statement weaker than it would have been 20 years ago, and, by 1990, it is likely to be weaker still.

A second feature of the world economy that tends to make the United States more vulnerable to the economic activities of other nations is symbolized by OPEC. At the present time, the U.S. economy is sensitive to (but not critically dependent on) OPEC decisions on oil prices and production, and will be far more so in the future in the absence of the ability to break the oil cartel, or, alternatively, to reduce significantly our dependence on imported oil. Should successful cartels arise for other raw materials critical to the U.S. economy, as discussed earlier, noticeable and perhaps significant impacts can be expected on the domestic U.S. economy.

Even more critical for the long-run future of the U.S. economy, however, is the competition with other industrialized nations for markets. U.S. industry, the most efficient in the world not so long ago, is beginning to be significantly burdened by heavy investment in obsolescent technology and is also confronted with relatively high labor costs. As a result, competition for sales of intermediate and final output goods from foreign industrial nations in both the overseas and domestic markets has increased significantly in recent years. The technological dynamism of the Northern European and Japanese economies, in particular, has increased both in absolute terms and relative to that of U.S. industry. This is especially noteworthy in the traditionally capital-intensive sectors of the economy. There is no reason to believe that these trends will not continue over the next decade or so, in the absence of strong policy initiatives to counteract the slowdown in U.S. industrial modernization.

Much of this slowdown, incidentally, is due less to a lack of economic incentives for modernization than to the effects of uncertainty on the part of investors and large corporations as to the nature, extent, and enforcement policies of possible environmental and other regulatory constraints that may be imposed in the future. Similarly, uncertainty as to energy pricing policies and conservation incentives puts a significant damper on investment in modernized facilities of all types, both for energy/material-saving technologies and for technologies based on existing practices.

U.S. agriculture, unlike U.S. manufacturing industry, has retained its competitive edge and, perhaps, will increase it.

The increased competition for markets in the late 1960's and early 1970's has taken on a different form from that of the preceding two decades. In efforts to shelter themselves from competition, the industrialized nations have attempted, more than before, to establish monopoly positions in the LDC's (and elsewhere when possible). At the same time, the emergence of strong multinational corporations, often established to facilitate foreign exchange transfers (that is, to circumvent exchange controls) has worked to much the same effect. In either case, a major result is, de facto, administered rather than market prices for major segments of LDC economies, and strong barriers to entry of alternative producers. That is, world markets have effectively been divided up among the developed nations to reduce overall competition.

While an evaluation of the overall impact of multinational corporations on the United States and world economies is beyond the scope of this paper (as are recommendations for U.S. policy toward the multinationals), it should be noted that, at least at present, the major economic impact of the multinationals on the United States appears to be a reduction of control over the U.S. balance of payments. There is also a significant political consequence of the activities of the multinational corporations. In effect, they may force the United States into international commitments (to protect their investments) that have not been undertaken or approved directly by the U.S. officials responsible for foreign policy. The major economic impact of the national division of markets is to reduce the scope for U.S. companies to expand their overseas operations.

Regardless of the short-run readjustment problems created for the United States by the increased competition for international markets, it is not in the long-run interest of the United States to meet increased competition by increased protectionism. On the assumption that increased U.S. income and consumption are our goals, our long-run interest is best served by allowing the effects of competition to be felt domestically, and by encouraging domestic industry to respond to the stimulus of competition by more R. & D., by technological innovation, and by shifting the structure of production toward outputs in which we have an inherent or potential competitive advantage. The alternative response (greater protectionism) is equivalent to pursuing an import substitution strategy, which is as much to the long-run disadvantage of the United States as it is to the disadvantage of other countries pursuing similar strategies. In addition, since protectionism tends to be matched by reciprocal protectionism, and since our manufacturing exports still exceed our imports, we have more to lose than to gain (in the aggregate) by initiating a protectionist cycle. Import substitution in the United States would work to the detriment of the U.S. poor, by raising the prices of durable and nondurable goods. The aggregate employment effect of import substitution for products of the industrialized nations is probably negligible, as the labor composition of imports is more or less similar, on the average, to that of U.S. exports to the industrial countries. The employment effect of import substitution vis-a-vis products from LDC's is also small but positive for the United States, as it increases the demand for unskilled labor.

The impact of foreign competition is clearly far more serious for the specific industries involved, such as steel production or shoe manufacturing, than it is for U.S. industry as a whole. Nonetheless, because the overall impact of foreign competition on U.S. poverty is small (because of the small proportion of U.S. output that is directly affected by the competition), and because an import-substitution policy would bring retaliation that could injure other industries to a comparable extent, it would be preferable to accept whatever alleviative measures are necessary to compensate for the detrimental effects of competition than to move toward protectionism. Further, the effect of import restrictions on poverty in the already very poor LDC's could be disastrous. Thus, from the point of view of the American poor, as well as from a moral viewpoint, it would be better to tackle the problem of U.S. poverty by promoting greater access to jobs for the

poor and underprivileged in, for example, the service and construction industries than it would be to move toward protectionism and import substitution.

In the long run, the conclusion is even stronger, as a climate of world protectionism leads to technological stagnation and therefore to higher product costs for everyone. The stimulus of foreign competition, on the other hand, will force readjustments toward more efficient industry that will have significant long-term effects on prices and therefore on the U.S. standard of living.

It should be recognized, however, that, if, in the interest of improving U.S. environmental conditions, the United States should choose a lower-growth posture, then the argument against protectionism must rest on the effect such a policy would have on poverty in the LDC's. The LCD's can, of course, be given preferential treatment, but this would raise difficult problems with respect to distinguishing benefits to LDC's from benefits to multinational corporations, and benefits to the LDC poor from benefits to the LDC wealthy.

POLICY ISSUES PERTINENT TO THE LDC'S

The pursuit of labor-intensive export-oriented growth strategies among the LDC's would imply a lowering of trade barriers of all kinds by the developed nations, particularly the United States, against imports from LDC's, as it is unrestricted access to markets in the high-consumption industrialized nations that would permit such a strategy to be successful. In this context, while all barriers are bad, import quotas in the developed nations would be far more constraining on LDC flexibility than would tariffs, as the latter can be countered by direct and indirect export subsidies within the LDC's. The impact of tariff barriers on the LDC's then, would be a reduction in the resources available for domestic programs, which would be quite serious, but it would still permit the accumulation of foreign exchange through exports.

A second policy issue relevant to the potential success of export-oriented growth in the LDC's relates to the possibility of further OPEC price increases for oil. If the latter do take place, it would hurt the LDC's by (a) consuming foreign exchange, (b) reducing foreign aid by the developed world because the latter's trade balance vis-a-vis OPEC would become more adverse, and (c) slowing down the developed world's growth rate because of the added constraints on industrialized nation growth imposed by the high energy costs, with the consequences described earlier. Even direct subsidization of oil prices by OPEC on sales to the LDC's would alleviate only the first of these problems. A policy that would reduce the reliance of industrial nations upon OPEC oil would aid in this problem by reducing the pressures for a price rise. Also, a given LDC could, at least in principle, avoid the problem through development of alternative energy sources.

Another key issue is that of price stabilization for raw materials. The argument is frequently made in GATT and UNCTAD meetings¹⁰ that stabilization of primary commodity prices is a major prerequisite for systematic growth in developing countries. It is argued

¹⁰ Export earnings fluctuations and economic development: An analysis of compensatory financing schemes, T. Morrison and Lorenzo Pesez, AID discussion paper No. 32, 1975.

(correctly) that fluctuations in import earnings impair the ability of developing countries to plan and execute intermediate-term development programs, thereby slowing down investment and leading to lower growth in income, employment, and Government revenue. While, in principle, developing countries could themselves iron out export earnings fluctuations by accumulating reserves in good years and carrying them over to lean years, this does not appear practicable in the real world. However, price stabilization for agricultural exports and raw materials tends to benefit primarily the rich people in developing countries¹¹—large farmers, plantation owners, raw material exporting firms, and, in particular, developed country multinationals. Because the Governments of many LDC's are often more nearly representative of the interests of the LDC rich than of their poor, there has emerged a de facto coalition and convergence of interest among developed country multinational corporations and LDC officials in favor of commodity price stabilization schemes to keep raw material prices high. The case of oil is a striking example, supported by the recent calls for commodity price stabilization in UNCTAD IV.

An alternative to commodity stabilization that would ease the plight of LDC's caught in an adverse commodity market without hurting significantly their internal income distributions might be to vary economic aid in such a way that aid plus commodity income is stabilized. In any event, commodity price stabilization does not seem to be the highest priority area of international reform needed to benefit the world's poor. Rather, the more useful reforms would be those which would enable primary producing and semi-industrial countries to produce and export more labor-intensive manufactures.

In some cases, there may be an alternative to price stabilization by producer-consumer agreement. Indeed, there is strong sentiment among raw material exporting countries that they ought to emulate the example of OPEC and, by cartelization, shift the terms of trade in their favor. Some attempts to cartelize basic products are bound to be made as growth in industrial countries resumes, and some may be successful. To be candidate for cartelization, a commodity must have the following characteristics: developing countries must hold a dominant share of the free-world exportable production and reserves; the output must be sufficiently uniform in quality; and the product must not be subject to substitution in the near term. A few basic products meet these criteria: bauxite, cotton, manganese, and, to a lesser degree, copper and tungsten. Natural rubber, on the other hand, is readily substitutable. In natural gas, the LDC's are dominant only in terms of reserves. Natural phosphates constitute a special case, since Morocco is the only large producer, aside from Eastern Europe and the United States, and has, therefore, been able unilaterally to raise prices somewhat. Even large changes in the terms of trade, however, would have only a relatively small aggregate impact upon the U.S. balance of trade, as only a small fraction of total U.S. imports is in potentially cartelizable goods. Specific industries, of course, may be strongly affected.

¹¹ Adelman, Robinson, *op. cit.*

STRUCTURAL CHANGE IN THE INTERNATIONAL CLIMATE

There are several features of our international environment, all of them converging simultaneously, which make reform in the international system of payments and trade necessary. First, the OPEC-imposed oil price increases have converted the chronic balance of payments problem of non-OPEC developing countries into a major balance of payments crisis. The balance of payments deficits of these nations have quadrupled in 3 years, because of oil price increases and world recession superimposed on an already serious debt service problem. Second, several OECD members have had steady balance of payments problems, again reinforced and converted to crisis proportions by OPEC actions, and have been forced into major devaluations. For these developed countries, it is important to note the balance of payments crises are due as much to uncertainty in future oil prices as they are to the oil price increases themselves. The point serves to dramatize the fact that, generally speaking, OECD countries (other than the United States) are less able than the United States to support major price increases in oil, both because trade is a much larger share of their GDP and because imported oil is, even after significant substitution and conservation efforts, a much larger share of their energy requirements. The United States itself is not "hurting" to any significant extent. But the prospects of continuing major crises and imbalances in our world monetary and trade system are likely to pose significant political problems for us, over and above the direct problem of OPEC and energy costs. This prospect means that it is critically important for the United States to participate in (and even initiate) efforts at reform.

The major reforms needed are:

1. Reforms which give greater flexibility to countries (primarily LDC's) with significant balance-of-payments deficits.

An example would be a bank (like the IMF) which takes national currencies and, by some mechanism (such as issuing its own obligations), converts soft currencies into hard currencies up to certain limits.

2. A stronger oil-autonomy program in the United States (the recommended course), a multinational oil-consumer organization (with oil purchase quotas and negotiated prices), increased efforts to break the OPEC cartel, or some combination of these.

3. Removal of barriers to exports by the LDC's.

4. Measures to stabilize total resource flows to LDC's from both exports and aid.

Because of adverse distributional effects within developing countries (as discussed earlier), price supports for LDC commodity exports (a major target for structural reform at the present time) are less desirable than the negotiation of case-by-case intermediate-term capital inflow commitments aimed explicitly at ironing out the combination of raw material price changes and fluctuations in external aid.

5. Some form of effective international regulation of multinational corporations, to the extent possible.

While multinationals are not yet a major problem, their rate of growth is such that they may rapidly become one. This problem is currently under discussion within OECD.

EFFECTS ON INTERNATIONAL RELATIONS

The new interdependence of the world economy through oil, which is essential to economic growth, will exacerbate United States-Western Europe relationships unless the United States makes more strenuous efforts at finding alternative sources of energy and at energy conservation than it has in the recent past. In the absence of such measures, there may eventually have to emerge an international consuming-nations combine, which, by rationing oil to member nations, in effect rations their growth and their living standards. While each nation would still maintain autonomy in setting its trade and monetary policy, the imposition of oil import quotas would limit growth in a way which could not be bypassed by manipulating trade and monetary policy. To decouple U.S. economic growth from such rationing, an effective energy policy would be necessary that would combine incentives for alternative energy sources with the encouragement of energy-conserving investments for decreasing the growth of demand. The U.S. public is not ready to sacrifice national economic sovereignty nor is it presently prepared to accept rationing of oil to consumers. The public would accept voluntary curbs, if the national leadership were to create the appropriate climate of urgency, and, in that event, the public would respond to economic incentives for conserving energy. However, energy-price incentives alone are insufficient, since the demand for energy is price-inelastic. A national energy conservation effort is also required to reduce the U.S. demand for imported oil in the intermediate term. Without a successful effort to ease U.S. pressures on the world's oil supplies, serious tensions will arise within the Western alliance and between the United States and the LDC's which will greatly inhibit U.S. international policy. The Government must face up to the fact that economic interdependence generated by competition for oil imports will seriously constrain its economic options in the future and strongly affect the national and international political climate. Over the next decade, the only way to decouple, to some extent, our economic policy from that of other nations is to engage in a much more vigorous program of energy conservation and oil substitution from domestic sources (such as coal). Otherwise, after some international tension and uncertainty, we will be faced with the need to agree to an international rationing of imported oil, through a consumer combine, which will seriously constrain our economic autonomy.

CONCLUSION

Morality in a world which contains poor nations as well as rich ones requires that the better off developed nations pursue strategies designed to raise the standard of living of the poor, particularly the poor of developing nations.

The argument that the industrial countries should restrain their economic growth rates and consume less of the world's resources in order to provide more for the developing nations is invalid. The major limitation on consumption in developing nations is not in overall supply—it is primarily in purchasing power. If we curtail our growth and consumption, this will reduce, rather than increase the purchasing power of the developing nations, and hence, it will

inhibit their ability to consume. In the short- to medium-run, curtailment of growth by the United States will merely increase the ability of other developed nations to grow faster. It will hurt, rather than help, the world's poor. With respect to the international environment it is recommended that the United States work for: (1) A high-growth strategy in the industrial world; (2) trade liberalization toward LDC's; (3) movement toward energy autonomy in the developed world, especially in the United States; (4) a more flexible international payments arrangement for both LDC's and the industrialized nations; and (5) increased foreign aid to the LDC's.

U.S. GROWTH POLICY AND THE INTERNATIONAL ECONOMY

By DENNIS C. PIRAGES*

SUMMARY

The international context of U.S. growth policy is explored in this paper. Growth in the United States both affects and is affected by activities of major trade partners. This paper addresses several international political and economic issues including:

- (1) Comparative dependence of the United States and other industrial countries on foreign sources of raw materials.
- (2) The extent to which growth in the United States can be reduced by future actions of exporters of basic commodities.
- (3) Implications of slowed U.S. growth for the economies of major trading partners.

At the present time dramatic changes are taking place in the international economy. The emergence of nearly 80 new independent nations since World War II, many of which have limited prospects for industrial growth, has resulted in demands for a new international economic order. Natural resources are now an instrument in political-economic warfare or "ecopolitics" waged between the less developed countries and the industrial world. Very serious questions are being raised about the adequacy of global reserves of fuels and minerals to sustain future industrial growth. The geographic location of remaining rich deposits of certain minerals raises questions of a strategic and political nature. Because of a long history of heavy consumption of raw materials and a limited initial endowment, many industrial countries have become vulnerable to cartel-like actions by groups of natural resource exporters.

The United States is one of the world's most economically developed countries and is therefore a target for rhetorical attacks by proponents of a new international economic order. Because of a history of natural resource abundance the United States has developed an economy that does not use natural resources in a particularly efficient manner. Per capita energy consumption in the U.S. is nearly twice as high as in many other highly industrialized nations and the 6 percent of the world's population that lives in the United States now consumes about 30 percent of the world's annual output of critical minerals. Compared with Japan and Western European industrial nations, however, the United States is relatively resource self-sufficient at the present time. Most past U.S. growth has been sustained by domestic natural resources. There are serious questions concerning the ability of the

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United States to sustain future resource-intensive industrial growth from domestic natural resources.

For at least the next decade growth of the U.S. economy will not be impaired severely by any actions of exporters of raw materials. New cartels are not likely to be successful in nonfuel mineral markets. Nor would price increases for minerals such as copper, lead, iron or the ferroalloys make an impact on the U.S. economy even remotely akin to that produced by quadrupled petroleum prices. In the next decade retaining access to secure sources of petroleum and natural gas will be the chief dependency problem for the United States. Given likely future geopolitical developments, however, growing insecurity of raw material supplies can be expected beyond the 1980's.

Should growth in U.S. consumption of raw materials slow on account of structural factors or by deliberate design efforts, very few major trading partners would be severely impacted. Trade with developed trading partners such as Canada, Japan, and Mexico would not be diminished. Among the specialized less developed trading partners, only Venezuela, Trinidad, Peru, Jamaica, and Haiti, exporters of fuels and minerals, would find future growth in exports somewhat diminished. Other specialized trading partners export agricultural commodities to the United States and these markets are more likely to be affected by specific tariffs and quotas than by any general change in growth policy. An absolute decline in consumption or negative growth, however, could have a more serious impact on all trading partners.

The United States has been relatively isolated from the economic provocations of other countries by virtue of a generous endowment of natural resources. But there are increasing signs that the United States is at an important turning point in natural resource and growth policy. Empirical studies indicate that the general level of dependence on foreign mineral exports is growing rapidly. Because of great uncertainty regarding the intentions of less developed countries acting within a new international economic order, it is desirable that the U.S. pursue a policy of limited natural resource autarky. This requires careful government monitoring of changing mineral dependency patterns (particularly in energy-related markets), maintenance of adequate stockpiles, and a national economic policy stressing efficiency and incentives for growth in industries that do not depend heavily on throughput of nonrenewable resources. The costs of these suggested policies, both domestically and internationally, would be very low while the tangible economic and intangible ideological benefits of limited resource consumption in an unstable future economic order would be very great.

This paper focuses on the relationship among economic growth in the United States, international trade, and the economic welfare of principal U.S. trade partners. The United States is embedded in an increasingly economically interdependent network of nation-states. Growth policies made in the United States have important implications for other countries in this network. The more dependent any country is on U.S. trade the more important these implications. Similarly, economic actions taken by other nations can have a significant impact on economic welfare in the United States.

Growth policy is one of the most critical areas where concerns of nation-states, both industrial and less developed, overlap. In the international division of labor that has evolved over the last century the economic health of the international community of nations has been considered to be promoted by the economic growth of all of its members. The United States is now the most powerful actor in this world economy. Six percent of the world's population living in the United States consumes approximately 30 percent of the world's annual production of fuels and nonfuel mineral resources. The United States now exports approximately \$100 billion worth of goods into the international economy and imports a similar quantity of goods each year. This \$200 billion worth of merchandise trade amounts to approximately 11 percent of all world imports and exports.

In the present division of labor in international trade some two dozen industrialized countries export mainly chemicals, manufactured goods, and machinery while they import agricultural commodities, crude materials, and mineral fuels. Typically, more than 70 percent of their trade by value is with other industrial countries. The world's less developed countries export mainly food and raw materials and usually are dependent upon only two or three basic commodities for their export earnings. Their imports consist largely of manufactured goods, machinery, and transport equipment.

There are significant exceptions within this international division of labor. The United States is an industrial country but makes a considerable portion of its export revenue from the export of agricultural commodities. The Soviet Union earns revenue from the export of petroleum, natural gas, and nonfuel minerals.

Japan is an industrial country that is highly dependent upon imported raw materials. Japan now imports more than 90 percent of fuels and nonfuel minerals consumed domestically as well as significant quantities of food. Most Western European countries are similarly typical in their dependence upon imports of fuels, nonfuel minerals, and selected agricultural commodities.

At the present time there is great uncertainty about the future of the established international trade system. The economic health of industrial countries is threatened by a large group of less developed countries which is calling for establishment of a new international economic order. They accuse the United States of being an overdeveloped country.¹ They argue that the world has only a small remaining supply of fossil fuels and essential nonfuel minerals that represent the building blocks of industrial civilization. The United States and Western Europe, the argument goes, have rapidly consumed their domestic reserves of these materials in building their industries and now depend on the less developed nations to supply them with natural resources. In spite of increasing dependence on the less developed world these countries continue to increase consumption, thereby shortening supplies and increasing prices. The argument concludes that such growth policies are now shutting off growth possibilities for less developed countries. By the time these less developed countries

¹ See, for example, Ehrlich, P., and Ehrlich, A., "The End of Affluence," New York, Ballentine, 1974; Pirages, D., and Ehrlich, P., "Ark II," New York, Viking, 1974; Mesarovic, M., and Pestel, E., "Mankind at the Turning Point," New York, Dutton, 1974.

are ready to consume large quantities of fuels and minerals there will be nothing left.²

These arguments are also given a political-economic twist. Spokesmen for less developed countries argue that deteriorating terms of trade between industrial and less developed countries exacerbate this problem. Between World War II and 1971 the prices of manufactured products rose more rapidly than the prices of crude materials exported by less developed countries.

This relationship reversed itself between 1971 and 1974 due to rapid global expansion of industrial production and trade. But in 1975-76 global economic stagnation and negative growth drove down prices of raw material exports once again.³ Furthermore, the industrial countries export a wide variety of products while many less developed countries are dependent upon only two or three principle exports. The vulnerability of the economies of less developed countries to shifts in the international economy is very great. In short, the argument goes, the industrial countries hold all of the cards in the present international division of labor, and it is now impossible for many of the less developed countries to begin to catch up with the industrial world unless there is a dramatic transformation of the international economy.

Leaders of less developed countries would like to be able to emulate the OPEC cartel and enter into other effective agreements governing a wide variety of basic commodities. If they could succeed in thus changing the structure of international trade there would be serious repercussions on growth policy in the industrial countries, including the United States. It is therefore important to assess correctly the potential for cartelization of other raw material markets, to understand the relationships between exporters of basic commodities and industrial countries, and to analyze the comparative impact of the New International Economic Order institutions on the United States and other industrial countries.

U.S. TRADE IN PERSPECTIVE

The size and scope of U.S. economic activity makes it a vulnerable target for critics of the present international economic order. By virtue of being the largest of the world's economies and headquarters for a great number of multinational corporations the United States is frequently attacked by political leaders of less developed countries who are dissatisfied with the present distribution of international wealth and income. The United States at present consumes nearly 30 percent of the world's annual production of fuels and nonfuel mineral resources and is vulnerable to charges that profligate consumption by Americans is at least partially responsible for many of the world's current economic ills and impending resource problems.⁴ But U.S. industry has developed in an atmosphere of both global and domestic natural resource abundance. As late as 1951, minerals, crude

² A compendium of Third World points of view is found in Erb, G., and Kallab, V., "Beyond Dependency." Washington, Overseas Development Council, 1975.

³ For a complete record of these relationships since 1954, see "Handbook of International Trade and Development Statistics 1976," New York, United Nations, 1976, pp. 56-57.

⁴ The percentage of world production of each major fuel and nonfuel mineral consumed by the United States varies considerably. The United States now consumes about 30 percent of annual world petroleum production, over one-half of world production of natural gas, and more than one-third of aluminum production. See Park, Charles F., Jr., "Earthbound," San Francisco, Freeman Cooper and Co., 1975, ch. 1.

materials, and agricultural commodities composed 40 percent of U.S. export earnings.

There is much emotion and scant empirical evidence behind such charges from leaders of less developed countries. Both historical and contemporary empirical data show the United States to be an atypical industrial country in its international trade patterns. The United States has supported industrial growth historically largely with domestic natural resources while many other industrial nations have been much more dependent on external supplies. Whether this can continue into the future remains an empirically researchable question.

Table I outlines the contemporary U.S. export contributions to the international economy. With the exception of food exports, which fluctuate from year to year in relation to the size of agricultural harvests in other countries, there have been only very small changes in this pattern. The main strength in exports is in the machinery and transport equipment category, which accounted for 43 percent of U.S. earnings in 1975. Aircraft exports are a significant component accounting for 6 percent of all exports. The United States is an atypical industrial country in that food, fuels, and crude materials still make up nearly 30 percent of all export earnings.

A profile of U.S. imports is provided by table II. While machinery and transport equipment also makes up the largest percentage of U.S. imports, there is a significant net export balance in this category. Fuels made up only 12 percent of imports in 1973, but rising petroleum prices combined with a sharp jump in imports increased fuel imports to 27 percent of all imports in 1975. In 1974, 3.5 million barrels of crude oil were being imported daily. This figure jumped to 4.1 million

TABLE I.—U.S. EXPORT EARNINGS

	1975		1974		1973	
	Value (million)	Percent of exports	Value (million)	Percent of exports	Value (million)	Percent of exports
Food.....	\$15,487	15	\$13,983	14	\$11,930	17
Beverages, tobacco.....	1,310	1	1,247	1	1,008	1
Crude materials.....	9,784	9	10,934	11	8,384	12
Oil seeds.....	(3,134)		(3,819)		(2,954)	
Wood, cork.....	(1,173)		(1,217)		(1,303)	
Crude minerals.....	(262)		(665)		(388)	
Metal ores, scraps.....	(1,355)		(1,475)		(1,080)	
Fuels.....	4,465	4	3,442	4	1,671	2
Coal, coke.....	(3,343)		(2,487)		(1,052)	
Chemicals.....	8,705	8	8,822	9	5,748	8
Manufactured fertilizers.....	(1,083)		(811)		(407)	
Plastics.....	(1,173)		(1,618)		(1,028)	
Manufactured goods.....	10,918	10	11,166	11	7,161	10
Paper.....	(1,448)		(1,522)		(919)	
Textiles.....	(1,625)		(1,795)		(1,225)	
Iron and steel.....	(2,457)		(2,560)		(1,301)	
Nonferrous metals.....	(1,313)		(1,500)		(1,057)	
Machinery and transport equipment.....	45,710	43	38,189	39	27,842	40
Machinery.....	(28,476)		(23,688)		(17,130)	
Transport equipment.....	(17,233)		(14,501)		(10,712)	
Motor vehicles.....	(10,036)		(7,878)		(5,995)	
Aircraft.....	(6,171)		(5,766)		(4,124)	
Miscellaneous manufactured articles.....	5,672	5	5,350	6	3,951	6
Scientific equipment.....	(2,539)		(2,316)		(1,708)	
Other.....	4,106	4	4,010	4	2,528	4
Total.....	106,157		97,143		70,223	

Source: "U.S. Exports: World Area by Commodity Groupings" 1973, 1974, and 1975; U.S. Department of Commerce, Bureau of the Census.

TABLE II.—CHIEF U.S. IMPORTS

	1975		1974		1973	
	Value (million)	Percent of imports	Value (million)	Percent of imports	Value (million)	Percent of imports
Food.....	\$8,508	9	\$9,380	9	\$7,986	12
Beverages, tobacco.....	1,419	1	1,321	1	1,213	2
Crude materials.....	5,425	6	5,915	6	4,988	7
Wood, cork.....	(833)		(1,105)		(1,522)	
Metal ores, scraps.....	(1,960)		(1,838)		(1,291)	
Fuels.....	26,404	27	25,350	25	8,101	12
Petroleum.....	(24,766)		(24,210)		(7,548)	
Chemicals.....	3,706	4	3,990	4	2,437	4
Manufactured goods.....	14,890	15	18,046	18	13,198	19
Paper.....	(1,664)		(1,831)		(1,457)	
Textiles.....	(1,234)		(1,629)		(1,568)	
Nonmetal minerals.....	(1,638)		(1,731)		(1,753)	
Iron and steel.....	(4,695)		(5,405)		(3,009)	
Machinery and transport equipment.....	24,245	25	24,713	24	20,970	30
Machinery.....	(11,998)		(11,862)		(9,909)	
Transport equipment.....	(12,247)		(12,851)		(11,060)	
Miscellaneous manufactured articles.....	9,264	10	9,461	9	8,184	12
Other.....	3,079	3	2,796	3	2,044	3
Total.....	96,940		100,972		69,121	

Source: "U.S. General Imports: World Area by Commodity Groupings" 1973, 1974, and 1975; U.S. Department of Commerce, Bureau of the Census.

barrels per day in 1975 and reached 5.6 million barrels of crude petroleum per day plus 2.2 million barrels of refined products in 1976.⁵ The United States also imports significantly more manufactured goods, such as paper, textiles, and processed materials, than it exports.

The U.S. trade pattern differs significantly from those of other Western industrial countries. Table III breaks down exports from five major industrial countries into three categories; agricultural products, crude materials, and minerals and manufactured goods.⁶ Japan, West Germany, and Great Britain export manufactured goods almost exclusively. Agricultural production in all three countries is inadequate to meet domestic demand. In 1973, both Japan and West Germany imported more than \$8 billion worth of agricultural commodities.⁷ All three countries are also deficient in fuels and minerals.

TABLE III.—EXPORTS BY CATEGORY¹

	Agricultural	Crude materials and minerals	Manufactured goods
United States.....	19	14	64
West Germany.....	5	5	89
Great Britain.....	7	6	84
Canada.....	13	33	54
Japan.....	2	2	95

¹ Data for 1973 in percent. There has been little change in these percentages since 1973.

Source: Data derived from World Trade Annual, 1974, New York, the United Nations, 1975.

⁵ "Economic Recovery Spurs Oil Demand Rise," World Oil, Feb. 15, 1976.

⁶ The Standard International Trade Classification (S.I.T.C.) divides exports of goods into nine categories. In this study categories 0, 1, and 4 (food, beverages, and animal and vegetable oils) are called agricultural products, categories 2 and 3 (crude materials and minerals fuels) are called crude materials, and categories 5, 6, 7, and 8 (chemicals, manufactured goods, machinery and transport, and miscellaneous goods) are called manufactured goods. These nine categories have been aggregated to form the three categories in table III and in the tables which follow.

⁷ This amounted to \$79 per capita in Japan and \$133 per capita in West Germany.

In 1974, Japan produced less than 10 percent of the energy consumed domestically, West German, 49 percent, and Great Britain, 55 percent, although Great Britain has good prospects for increasing this percentage because of North Sea petroleum discoveries. These three countries balance international payments, when possible, by transforming imported minerals and fuels into industrial goods.

The United States and Canada are much less limited in export variety. Almost one-half of Canadian exports and one-third of U.S. exports are agricultural commodities and crude materials. Dependence on "throughput" of imported raw materials and export of manufactured products for economic well-being is mitigated by relative abundance of natural resources in both countries.

The historical development of these differing trade profiles in industrial countries is outlined in tables IV-VI. The Industrial Revolution began at different times in different countries and took place in nations with differing endowments of natural resources. The early days of the Industrial Revolution in each country were marked by population increases and rising standards of living as new technologies and increased applications for fossil fuels led to greater economic productivity. Initially, production of fossil fuels, nonfuel minerals, and agricultural commodities within the borders of each nation were adequate to insure autarkic economic growth. But as aggregate demand for these commodities continued to grow it eventually outstripped domestically available supplies. Thus, Japan and many Western European countries expanded outward and began to sustain industrial growth with extensive raw material imports, usually from a network of colonial possessions.⁸

TABLE IV.—EXPORTS OF MANUFACTURED GOODS¹

	1951	1961	1973	1974
United States.....	58	62	64	66
West Germany.....	81	88	89	89
Great Britain.....	85	84	84	83
Canada.....	42	43	54	50
Japan.....	88	89	95	94

¹ Data in percent of all exports.

Source: Data derived from World Trade Annual, New York, United Nations, 1951-75.

TABLE V.—IMPORTS OF CRUDE MATERIALS AND MINERALS¹

	1951	1961	1973	1974
United States.....	40	29	19	31
West Germany.....	45	29	23	31
Great Britain.....	44	33	23	30
Canada.....	26	16	10	15
Japan.....	67	64	53	63
Average.....	44	34	26	34

¹ Data in percent of all imports.

Source: Data derived from World Trade Annual, New York, the United Nations, 1951-75.

⁸ Choucri and North have explained European expansion as being the result of lateral pressures generated by increasing demands for resources. See Choucri, N., and North, R., Nations in Conflict, San Francisco, W. H. Freeman, 1975, chs. 1 and 2.

TABLE VI.—AGRICULTURAL IMPORTS¹

	1951	1961	1973	1974
United States.....	31	24	14	11
West Germany.....	38	24	17	14
Great Britain.....	36	35	20	17
Canada.....	11	11	9	8
Japan.....	25	12	16	14
Average.....	28	21	15	13

¹ Data in percent of all imports.

Source: Data derived from World Trade Annual, New York, the United Nations, 1951-75.

The recent record of exports of manufactured goods shown in table IV indicates differences in patterns of export growth. By 1951, Great Britain had already reached a peak of 85 percent of all exports being in manufactured goods, a figure that has been sustained over two decades. Japan and West Germany reached similar dependence on the export of manufactured goods in 1951 but continued to increase exports in this category. The United States and Canada, by contrast, earned half of export revenues from food and raw material exports in 1951 and have increased exports of manufactured goods only very slowly since then.

The shifts over time in import patterns shown in tables V and VI are confused by more general changes in patterns of world trade. The general trend in these countries has been toward a decrease in the value of imports of crude materials and agricultural commodities as related to the value of all imports. But this masks the fact that the absolute quantity of raw materials imported has been increasing. The apparent decrease in the import impact of raw materials shown in these tables has been due to changing terms of trade as well as to a rapid increase of trade in all industrial goods among these five industrially developed countries.

The data reveal Japan to be well above the five-country average in percentage of imports in crude materials and minerals while Canada is well below the average. West Germany, Great Britain, and the United States cluster near the industrial average. Both Canada and the United States are below the five-country average in agricultural imports. When mineral and agricultural imports are combined, differences in patterns of imports are accentuated. Seventy-seven percent of Japan's imports fall into these categories. This is well above the five-country average of 47 percent. Canada, by contrast, is well below the average with only 23 percent of all imports falling into these categories. In the aggregate, then, the United States and Canada are much less vulnerable to future initiatives by exporters of raw materials and agricultural commodities than are Japan, West Germany, and Great Britain.

In summary, the five leading Western industrial nations are operating within the constraints of different natural resource endowments. Some of these industrial countries have moved much farther beyond natural resource self-sufficiency than others. This movement has been accompanied by intensified export of finished industrial products. Originally, a network of colonies provided a source of raw materials for some major powers. Prior to 1973 a flow of raw materials

was facilitated by stable or even decreasing prices for basic commodities. In some cases low prices resulted from free market forces while in others, such as in the case of petroleum, low prices resulted from cartel-like actions of multinational corporations.

The vulnerability of these industrial countries to price increases for basic commodities and the extent to which the potential actions of less developed countries can influence their growth policies varies considerably. At present there seems little immediate possibility of cartels successfully raising prices for nonfuel minerals. The tin market is controlled by a producer-consumer organization, the bauxite cartel has raised prices as much as is feasible, and there is little potential for cartels in other metals.⁹ While this generalization holds for at least the next decade, changing market conditions could well encourage cartel formation in the more distant future.

Table VII outlines comparative import dependence of the United States, Japan, and O.E.C.D. Europe for critical nonfuel minerals. Japan is clearly in the most exposed position, the United States is the most self-sufficient, and the European countries fall between these extremes. Japan imports more than 90 percent of its annual consumption of all important minerals except lead and zinc. The United States, by contrast, is heavily dependent only on foreign bauxite, manganese, and nickel.

TABLE VII.—COMPARATIVE IMPORT DEPENDENCE, NONFUEL MINERALS
[In percent of 1972 consumption]

	United States	OECD Europe	Japan
Bauxite, aluminums.....	88	51	100
Copper and copper ore.....	17	93	90
Iron ore.....	32	37	94
Lead and lead ore.....	19	75	76
Manganese ore.....	95	98	90
Nickel and nickel ore.....	90	89	100
Tungsten.....	42	100	100
Zinc and zinc ore.....	55	61	80
Average.....	55	76	91

Source: "Special Report on Critical Imported Minerals," Washington, Council on International Economic Policy, December 1974, p. 43.

An adequate energy supply is much more essential to the welfare of industrial economies than are nonfuel minerals and it is the key to agricultural and economic productivity. Current solar income is the dependable flow of solar energy that drives the earth's weather system, is responsible for photosynthesis, and indirectly, for the production of fossil fuels. An indefinitely sustainable economy would exist within the constraints of current solar income. Fossil fuels result from highly specialized geological processes that have laid down copious quantities of fuels in relatively few geographic locations. All fossil fuel represents solar income stored through photosynthesis over the past 300 million years. The processes by which new fossil fuel is created move extremely slowly and in relation to present demand the yearly creation of new fossil fuels is insignificant.¹⁰

⁹ See Pirages, D., *Global Ecopolitics*, North Scituate, Mass., Duxbury, 1977, ch. 5.

¹⁰ See Cook, E., *Man, Energy*, Society, San Francisco, W. H. Freeman, 1976, ch. 4 for more detail.

Energy is important to the overall economic well-being of any nation. With abundant energy, for example, lower grades and more inaccessible reserves of mineral ores can be exploited. Even contemporary agriculture is closely tied to fossil fuels through the use of energy-intensive methods of production. Production and use of pesticides, herbicides, fertilizers, and farm machinery all require abundant energy. There is a direct relationship between this fossil fuel energy input and yields per acre of land. It is estimated that in the United States at the present time one calorie of fossil fuel energy is required to grow two and one-half calories of food energy.¹¹ Furthermore, if energy requirements of the entire system of American food production and distribution, rated as the best in the world, are taken into account, nearly 10 times as many fossil fuel calories of energy go into American agriculture as comes out in calories of food energy on the table.¹²

World reserves of fossil fuels are not equitably distributed over the earth's surface. Nearly two-thirds of the world's petroleum reserves are found in the Middle East. Saudi Arabia alone possesses one-fifth of all known reserves, more than 100 billion barrels. Kuwait, Iran, the U.S.S.R., and Iraq all have larger reserves than those found in the United States. When added together, the known reserves of these five countries total almost 60 percent of the world's petroleum reserves.¹³ The distribution of natural gas reserves closely parallels those of petroleum.

The United States historically has been one of the world's biggest producers of petroleum and natural gas. This environment of relative natural resource abundance has shaped a society that is by far the world's largest consumer of fossil fuels on a per capita basis. With the exception of the Alaskan discoveries in 1970, United States known reserves of petroleum and natural gas have declined since the mid-1960's. Production of petroleum peaked in 1970 and production of natural gas in 1973. Production of both has been on a steady decline since then, and there is little likelihood of reversing this trend. There has been no major discovery of petroleum in the United States since 1973.¹⁴

Energy policy will be the crucial aspect of future United States growth policy. The period 1973-75 marked a turning point in U.S. energy self-sufficiency as reserves and production declined and imports dramatically increased. In 1975, imports of crude oil and refined products amounted to 38 percent of total domestic consumption. In 1976, this figure rose to 42 percent of domestic consumption.¹⁵ Table VIII indicates comparative levels of energy self-sufficiency for major industrial countries. Of these industrial countries, the United States ranks seventh. Other key industrial countries such as Japan, Sweden, Italy, and France are clearly much more vulnerable to any future petroleum boycott and are locked into a trade pattern that requires aggressive export of industrial products to compensate for the heavy cost of imported fuels.

¹¹ Pimental, D., et al., "Food Production and the Energy Crisis," *Science*, volume 182, 443-449, 1973.

¹² Steinhart, J. and Steinhart, C., "Energy Use in the U.S. Food System," *Science*, volume 184, 307-316, 1975.

¹³ Data taken from *World Oil*, August 15, 1975, pp. 41-44.

¹⁴ "U.S. Production: No Help Until 1977," *World Oil*, February 14, 1976.

¹⁵ "Middle East, North Africa Imports up 63 percent in 1975," *World Oil*, February 15, 1976.

TABLE VIII.—ENERGY SELF-SUFFICIENCY: INDUSTRIAL COUNTRIES

	1965 †	1973 †	Decrease or increase (percent)	Consumption, ‡ 1973
Denmark.....	0.04	0	-----	5,642
Finland.....	.10	.06	0.40	5,007
Japan.....	.35	.10	.71	3,932
Belgium.....	.43	.14	.67	7,035
Sweden.....	.17	.16	.06	5,973
Switzerland.....	.19	.18	.05	3,951
Italy.....	.22	.19	.14	3,103
France.....	.48	.21	.56	4,491
Austria.....	.57	.36	.37	3,968
West Germany.....	.74	.49	.34	5,993
Great Britain.....	.69	.54	.22	5,588
Norway.....	.49	.59	+ .20	5,028
Hungary.....	.76	.67	.12	3,153
East Germany.....	.84	.73	.13	6,375
United States.....	.91	.82	.10	11,897
Romania.....	1.18	.97	.18	3,493
U.S.S.R.....	1.12	1.12	-----	5,058
Canada.....	.89	1.15	+ .29	9,921
Poland.....	1.15	1.16	+ .01	4,596
Netherlands.....	.40	1.20	+2.00	6,260
Australia.....	.74	1.25	+ .68	6,064

† Production/consumption.

‡ Measured in kilograms of coal equivalent per capita.

Source: United Nations Statistical Yearbook 1975, New York, United Nations, 1976, various tables.

In summary, the United States has been castigated by some leaders of less developed countries as a negative force in the international economy because of excessive consumption of natural resources. Suggestions have been made that additional cartels similar to that organized by the Organization of Petroleum Exporting Countries are needed to extract wealth from countries like the United States. The trade data in this section reveal that many other industrial countries are much more dependent on imported foods, fuels, and minerals than is the United States, and growth in these countries would be affected by future price increases or embargoes to a much greater extent. While additional exporter cartels are very unlikely to be successful or to have a significant economic impact for a number of reasons, the United States is not nearly as vulnerable to such developments as are the other industrial countries.¹⁶ United States industrial growth in the past has not been supported by large quantities of foreign raw materials. In fact, a net energy analysis of United States imports and exports would undoubtedly reveal a considerable historical energy export surplus.

But in spite of the past record, the United States is now becoming vulnerable to producer machinations, particularly in petroleum and natural gas markets. Projected future economic growth cannot be supported without increasing energy imports. If the pressures of intensive export competition with other industrial countries are to be avoided, future growth sustained by rapid development of capital-intensive alternative energy sources, a return to current solar income or a "sustainable growth" pattern, a massive energy conservation campaign coupled with carefully directed economic growth designed to minimize energy consumption, or a combination of all of the above will be required.

¹⁶ This assertion is documented in greater detail in Pirages, D., *Global Ecopolitics*, North Scituate, Mass., Duxbury, 1977, ch. 5.

MAJOR TRADE PARTNERS

The focus in the previous section was on what the United States contributes to and takes from international trade relations. U.S. vulnerability to withholding actions and price increases by exporters of agricultural commodities, fuels, and nonfuel minerals was discussed in a comparative framework. In this section the emphasis is on with whom the United States trades. There are two types of growth-related questions implicit in identifying major trade partners. The first concerns slowed growth in the United States. Which countries would be most affected by changes in growth policy in the United States? The second set of questions involves identifying those countries that export critical materials to the United States. Is it possible or likely that growth in the United States could be adversely affected by deliberate actions on the part of one or a small group of these countries?

Recent discussions of domestic growth policy have spawned several different growth limitation scenarios. A neolimits to growth thesis holds that rapid economic growth in industrial countries must come to an end because of new economic pressures from materials exporters. Proponents of this thesis argue that a major redistribution of wealth is now under way in the international system, and that OPEC is only the first of many exporter cartels.¹⁷ Another position is taken by advocates of "directed growth." They argue for a series of structural changes in the U.S. economy that would preserve present standards of living while halting growth in requirements for scarce resources.¹⁸ It is also argued that real growth is already slowing in the United States because of structural economic reasons. According to this argument, the United States has already exhausted a substantial fossil fuel subsidy, economies of scale, and the benefits of new technologies that have been responsible for the industrial revolution. Progress, as traditionally defined, is coming to an end because of diminishing returns implicit in the original sources of economic growth.¹⁹

No proponent of growth limitation has argued for negative economic growth or a real and immediate decrease in consumption of raw materials. Almost all critics of present growth policies recognize that a forced decline in consumption would spark a major recession and does not represent a politically viable option. Since present levels of consumption would be maintained under all growth limitation schemes there would be no immediate change in economic relations with key U.S. trade partners under most growth limitation schemes that have been proposed. Expansion of imports from some less developed countries would undoubtedly be curtailed but present patterns would not be adversely affected.

Table IX lists the major recipients of U.S. exports. The percentage of total U.S. exports going to individual countries is listed in the first column, and the percentage of individual country total imports that this quantity represents is listed in the second column. One-half of all U.S. exports are accounted for by trade with only six countries.

¹⁷ See Bergsten, C., "The Threat From the Third World," *Foreign Policy*, Summer, 1973; Mikesell, R., "More Third World Cartels Ahead?" *Challenge*, Nov. to Dec. 1974.

¹⁸ Seealy, H. D., *Toward a Steady-State Economy*, San Francisco, W. H. Freeman, 1973; Ford Foundation, *A Time to Choose*, Cambridge, Mass., Ballinger, 1974.

¹⁹ Renshaw, E., *The End of Progress*, North Scituate, Mass., Duxbury, 1976.

TABLE IX.—MAJOR TRADE PARTNERS: U.S. EXPORTS¹

	Percent of total U.S. exports	Percent of country's imports
Canada.....	20	67
Japan.....	11	20
West Germany.....	5	8
Mexico ¹	5	63
Great Britain.....	5	10
Brazil ²	3	29
Italy.....	3	8
Venezuela ³	2	45
Australia.....	2	21
Belgium-Luxembourg.....	2	7

¹ Data for 1974 unless otherwise specified.

² 1973.

³ 1972.

Source: Data derived from World Trade Annual, New York, United Nations, 1975.

Three of the top six export partners are bordering on Western Hemisphere countries. Canada is most closely tied to the U.S. export economy receiving two-thirds of total imports from the United States. Mexico and Venezuela are also closely tied to U.S. exports.

Table X lists countries that depend on the United States as a market for exports. In general, those countries that import most from the United States are also the countries that export most to the United States. The two exceptions in the top 10 trade partners are Iran and France, both countries that export more to the United States than they import from the United States. Data in this table are derived from 1975 United Nations sources and do not include the rapid rise of Nigeria and Saudi Arabia as a major source of U.S. petroleum imports in 1975-76, which is shown in table XII. Canada, Mexico, and Venezuela are closely tied to U.S. markets and are most affected by fluctuations in rates of growth in the United States. But Nigeria, Venezuela, and Saudi Arabia are increasingly dependent on the United States as a market for their petroleum.

Stability over time in the U.S. trade partners is indicated by table XI. Canada, Japan, and West Germany have remained the chief markets for U.S. exports over time and collectively accounted for \$36 billion worth of exports in 1975. Mexico and Brazil are assuming larger roles in U.S. export patterns. But in the 4-year period covered by these data, fluctuations are extremely small.

TABLE X.—MAJOR TRADE PARTNERS: U.S. IMPORTS¹

	Percent of all U.S. imports	[Percent of all country exports
Canada.....	22	67
Japan.....	12	23
West Germany.....	6	8
Venezuela.....	5	40
Great Britain.....	4	11
Mexico ²	3	69
Italy.....	3	8
France.....	2	5
Iran ³	2	1
Brazil ³	2	18

¹ Data for 1974 unless otherwise specified.

² 1973.

³ 1972.

Source: Data in this table are derived from World Trade Annual, New York, United Nations, 1975.

TABLE XI.—DESTINATION: U.S. EXPORTS

[Dollar amounts in millions]

	1972		1974		1975	
	Amount	Percent	Amount	Percent	Amount	Percent
Canada.....	\$12,415	25	\$19,932	20	\$21,358	20
Japan.....	4,980	10	10,679	11	9,421	9
West Germany.....	2,808	6	4,986	5	5,082	5
Mexico.....	1,982	4	4,855	5	5,063	5
Great Britain.....	2,658	5	4,574	5	4,387	4
Netherlands.....	1,871	4	3,979	4	4,126	4
Brazil.....	1,243	3	3,089	3	3,034	3
France.....	1,609	3	2,941	3	2,952	3
Italy.....	1,434	3	2,752	3	2,843	3
Belgium-Luxembourg.....	1,138	2	2,285	2	2,377	2
Total exports.....	48,876		97,143		106,157	

Source: "United States General Exports; World Areas by Commodity Groupings 1975," U.S. Department of Commerce, Bureau of the Census, and "World Trade Annual", United Nations, New York, 1973-75.

TABLE XII.—SOURCE: U.S. IMPORTS

[Dollar amounts in millions]

	1972		1974		1975	
	Amount	Percent	Amount	Percent	Amount	Percent
Canada.....	\$14,907	27	\$22,282	22	\$22,170	23
Japan.....	9,068	16	12,455	12	11,425	12
West Germany.....	4,250	8	6,427	6	5,409	6
Great Britain.....	2,987	5	4,021	4	3,773	4
Venezuela.....	1,297	2	4,679	5	3,625	4
Nigeria.....	271		3,286	3	3,281	3
Mexico.....	1,632	3	3,386	3	3,066	3
Saudi Arabia.....	194		1,672	2	2,623	3
Italy.....	1,757	3	2,593	3	2,457	2
France.....	1,369	2	2,305	2	2,164	2
Iran.....	199		2,132	2	1,398	1
Total imports.....	55,555		100,972		96,940	

Source: "United States General Exports; World Areas by Commodity Groupings 1975," U.S. Department of Commerce, Bureau of the Census, and World Trade Annual, United Nations, New York, 1973-75.

The same three industrial countries were the primary sources of U.S. imports during this period. Collectively they accounted for 40 percent of the total. The impact of an increase in the quantity of petroleum imported as well as quadrupled prices is indicated by the emergence of oil exporting countries as major sources of U.S. imports. Venezuela accounted for only 2 percent of total U.S. imports in 1970 and 4 percent in 1975. Iran, Nigeria, and Saudi Arabia were not major sources of U.S. imports in 1972, but in 1975 they collectively accounted for 7 percent. Nigeria, Venezuela, and Saudi Arabia supplied almost half of U.S. imports of crude petroleum in 1975 while Iran declined in importance as a trade partner.²⁰

Table XIII views U.S. imports from a somewhat different perspective. In quantity terms the U.S. economy is closely tied only to Canada and Japan. Fluctuations in trade with lesser partners would not be damaging to the U.S. economy. But for many lesser trade partners the United States is the principal market for their exports and the primary source of imports. In some smaller countries economic fortunes rise and fall with those of the United States.

²⁰ "Middle East, North Africa Imports up 63 Percent in 1975," World Oil, Feb. 15, 1976.

TABLE XIII.—HEAVILY DEPENDENT TRADE PARTNERS

	Year	Percent of exports to United States	Percent of imports from United States	Major exports
Mexico.....	1973	69	63	Diverse basic commodities.
Canada.....	1974	67	67	Diverse industrial products and raw materials.
Haiti.....	1972	66	44	Coffee and bauxite.
Dominican Republic.....	1971	64	47	Sugar, coffee, and tobacco.
Honduras.....	1972	56	44	Bananas.
Panama.....	1973	45	35	Do.
Surinam.....	1971	45	34	Bauxite.
Trinidad.....	1972	45	19	Fuels.
Philippines.....	1974	42	24	Lumber, sugar, and copper.
Jamaica.....	1973	41	39	Bauxite.
Venezuela.....	1972	40	45	Petroleum.
Ecuador.....	1972	38	30	Bananas, coffee, and cocoa.
Korea.....	1974	34	25	Various manufactured goods.
Peru.....	1972	33	30	Fish meal and metal ores.
Nicaragua.....	1973	33	34	Coffee, cotton, and meat.
Costa Rica.....	1973	33	35	Bananas and coffee.

Source: Yearbook of Trade Statistics 1974, New York, United Nations, 1975; and World Trade Annual, New York, United Nations, 1975.

Sixteen countries derive more than one-third of their export earnings from markets in the United States. They can be identified as diverse and specialized traders. Canada, Mexico, and Korea have developed a diverse trading pattern with the United States. Trade relations with these countries are not dependent on only a few products and would not be disrupted unduly by changes in any particular market segment.

The specialized countries gain most of their export revenue from only one or two basic commodity exports. The specialized countries are vulnerable to fluctuations in U.S. economic activity. Foremost among these are the so called "banana republics," Honduras, Panama, Costa Rica, and Ecuador. Nicaragua, the Dominican Republic, and the Philippines also deal mainly in basic agricultural exports. The remaining five specialized U.S. trade partners export fuels and non-fuel minerals. Venezuela exports both crude petroleum and refined products and Trinidad makes its export earnings from refined petroleum products. Haiti and Jamaica are large exporters of bauxite while Peru depends on metallic ores and anchovies.

In summary, there is only a small number of countries that would be severely affected by changes in United States growth policy. Canada, Japan, and possibly Mexico and Korea are the diverse traders that would be affected because of the volume of trade with the United States. Among the specialized traders slow growth in the United States might most adversely affect the economies of Haiti, Jamaica, Peru, Trinidad, and Venezuela, all countries that supply either fuels or nonfuel minerals to U.S. industry. The rest of the specialized traders export mainly agricultural commodities and would be much less affected by changes in growth policy than they would be by special tariffs and quotas on agricultural products. It is essential to remark the difference between slowed growth and negative growth. Slowed growth in the United States might restrict future potential markets for these countries, but would not have an immediate and harsh impact on any of them. Negative growth, on the other hand, would have an effect on trade partners proportional to the seriousness of the economic decline, the proportion of the trade of each major

trading partner that is linked to the United States, and to the diversity of the export economy of each of these countries.

Just as there are very few countries that would be affected adversely by slowed U.S. economic growth there are also very few countries that can significantly retard growth in the United States through their economic policies at the present time. The major exception is a small group of petroleum exporters. Table XIV shows changes in U.S. sources of crude petroleum since 1970. A dramatic increase in barrels imported per day has taken place along with economic recovery in 1976. Saudi Arabia has emerged as the chief source of United States petroleum followed by Nigeria, Indonesia, Canada, and Libya. Canada is becoming a much less important source of petroleum because of an announced policy of eliminating fuel exports to the United States in the very near future. Even with the loss of Canadian oil, however, it is clear that the United States has now spread the economic and political risk involved in petroleum importation. Saudi Arabia is the only significant Arab exporter, Nigeria and Indonesia desperately need export revenue for development, and Venezuela would like to increase exports. OPEC can still influence U.S. growth policy through possible collective sanctions, but individual members or small factions cannot.

TABLE XIV.—U.S. IMPORTS OF CRUDE PETROLEUM

[In thousands of barrels daily]

	1970	1973	1974	1975	March 1976
Canada.....	672	1,001	865	610	282
Nigeria.....	48	448	655	729	897
Iran.....	33	216	535	264	286
Saudi Arabia.....	17	462	338	655	1,145
Venezuela.....	268	345	302	302	152
Far East (Indonesia).....	70	201	275	375	552
United Arab Emirates.....	63	71	80	138	159
Ecuador.....		47	60	58	42
Algeria.....	6	120	203	280	323
Angola.....		48	50	77	
Libya.....	47	133	5	179	372
Other.....	146	152	132	487	370
Total.....	1,323	3,244	3,500	4,096	4,738

Source: "Oil and Gas Journal," Jan. 27, 1975; "World Oil," Feb. 15, 1976; "International Oil Developments," Office of Economic Research, Central Intelligence Agency, Sept. 9, 1976.

The United States is not particularly vulnerable either to price increases or embargoes in nonfuel minerals. There are several minerals such as nickel, cobalt, manganese, tin, and bauxite, which the United States imports from foreign sources, but present U.S. stockpiles are adequate for more than 2 years' normal consumption. Nonfuel mineral dependence is mitigated by a significant emergency stockpile, an ability to absorb higher prices since each mineral makes up only a small portion of U.S. trade, and the possibility of developing mineral substitutes. Furthermore, in 1973 the U.S. deficit in nonfuel mineral trade was only \$1 billion, an almost insignificant fraction of the petroleum deficit.²¹ Recent increases in bauxite prices by Jamaica

²¹ Detailed analysis of U.S. vulnerability in nonfuel minerals is presented in "Special Report: Critical Imported Minerals," Council on International Economic Policy, see especially pp. 5, 6, 24, 26.

have been easily absorbed by the U.S. economy. An increase in price or an embargo on any of the other nonfuel minerals, an unlikely event, would be more a nuisance than a long-term threat to the U.S. economy. Furthermore, there is no single country that has a monopoly on the export of any mineral to the United States. Short of formation of a "macrocartel" covering a large number of nonfuel minerals among exporters, an event which is not even remotely possible within the next decade, there is little that nonfuel mineral exporters can do to adversely affect U.S. growth.

SUSTAINING FUTURE GROWTH

The preceding analysis could produce rather optimistic conclusions because it concentrates on present U.S. trade relationships. With the exception of petroleum and natural gas, there is presently little potential for exporters of other nonfuel minerals to adversely affect growth in the United States. And slowed growth in the United States would affect very few other countries as long as depression and negative growth can be avoided.

A projection of recent consumption trends in the United States yields more sobering results. The United States has been generously endowed with natural resources, particularly in comparison with Japan and Western Europe. Among the industrial countries only Canada and the Soviet Union have superior resource reserves. But the recent disturbing increase in dependence on imported petroleum may well signal a turning point in overall U.S. mineral independence. It is now clear that fossil fuel energy self-sufficiency can never again be attained. Without careful planning and conservation policies the United States could develop similar vulnerabilities in nonfuel minerals and follow the path that has been followed historically by Japan and Western Europe. This would mean exposure to the risks of initiatives from the less developed countries that currently plague the other industrially developed countries. A rational resource-efficient national growth policy is now needed if the United States is to maintain a strong position during future periods of "resource bargaining" and "ecopolitics" which will undoubtedly be initiated within the framework of a new international economic order.

Many studies have emphasized that fossil fuel reserves are finite and that only limited reserves remain to be exploited. Other studies have indicated that nonfuel minerals will become much more expensive as less rich grades of ore must be mined and processed or as expensive mining of manganese nodules begins. Furthermore, the emergence of the New International Economic Order, unrest in the Middle East, and other changes in both international and domestic politics make future access to foreign supplies of food, fuel, and nonfuel minerals questionable. The United States is much more fortunate than its principal industrial allies because, at the present time, most of them have become much more vulnerable to pressures from resource exporters.

The United States, the world's largest consumer of natural resources, now faces some critical choices in growth policy. With the exception of a few minerals used in small quantities for specialty purposes, most past industrial growth has been sustained by reliable supplies of

domestic natural resources. But in the 1970's the United States has begun to develop unnecessary vulnerabilities in raw material imports. This is emphasized by increasing imports of petroleum which will likely reach half of U.S. domestic consumption in 1977. Over the next few decades similar dependencies will develop in the natural gas, uranium, and increasingly in selected nonfuel mineral markets such as bauxite, nickel, and manganese, in the absence of a coherent national minerals policy. And it is during these next few decades that a natural resource-related, North-South confrontation over growth and terms of trade can be expected.

Unregulated markets and trade encourage use of cheapest available fuels and ores by private industry in the United States. Economic logic leads private actors to exploit richer and cheaper ore deposits and petroleum supplies in other countries. The collective economic welfare of future U.S. citizens that might be harmed by boycotts does not enter into their calculations. Neither do the strategic disadvantages of unnecessary resource dependencies. If national minerals policy is to be shaped by private forces acting with little concern for the national interest, the United States could easily find itself in an exposed economic and military position.

Many studies indicate that supplies of petroleum, natural gas, and uranium will become very tight in only three or four decades. Very long leadtimes and large amounts of capital will be required to develop alternative energy sources, and serious risks will be involved in the proliferation of nuclear powerplants. At present there are very serious problems with nuclear power and the industry is pretty much at a standstill. There is little reason to doubt the persistence of a period of global energy insecurity triggered by political as well economic considerations over the next few decades accompanied by growing insecurities in nonfuel mineral markets.

In a future environment of increasing competition for fuels and eventually nonfuel minerals among industrial and yet-to-be-industrialized countries, prudence dictates limits to dependency on other countries for natural resources. The inability of industrial countries to compromise on an energy policy has already been demonstrated over the past 3 years. Compromise will not be more likely as competition in international mineral markets becomes more intense and aggressive. Alliances can be expected to shift and ideological beliefs can be expected to erode in response to new energy imperatives just as Japanese foreign policy took a distinctly pro-Arab turn during the petroleum embargo of 1973-74.

Even the future growth of less developed nations cautions the United States against development of excessive mineral dependence. The predominant view in international development policy is one of developing countries following the same resource-intensive paths to industrialization that have been followed in the past. In many cases this growth cannot be financed by indigenous supplies of natural resources, and soon there will be greater numbers of countries competing for remaining resources. Furthermore, it is not logically possible for 30 to 40 countries to follow the Japanese solution in the future and intensively export industrial products in order to balance their payments. Industrial countries will be attempting to export manufactured goods to a shrinking number of markets. The competition

among present industrial states has already reached high levels as the United States, France, West Germany, and Japan all vie to sell arms and nuclear reactors to OPEC countries.

In conclusion, this analysis suggests that future U.S. policy must focus on growth that can be sustained by reasonable mineral self-sufficiency. The elements of and philosophy behind sustainable growth policies are sketched out in other papers in this series. A conscious attempt to redesign U.S. industry and transportation patterns to move away from fossil fuel and nonfuel mineral-intensive production and lifestyles toward abundance based upon domestic resources and new efficiencies is required. There are few other countries that would be harmed by such policies in the United States and these policies would protect the United States from machinations by less developed countries.

Sustainable growth policies should encompass the following considerations:

(1) Increased use of indefinitely available current solar income through rapid development of solar technology;

(2) A stringent energy conservation program stressing more efficient transportation, better insulation of homes, and less energy-intensive industrial processes;

(3) Incentives to direct economic growth into expansion of the economy in those areas that are less energy and mineral intensive and contraction of those activities that are more energy and mineral-intensive;

(4) Support and subsidies for recycling industries wherever possible;

(5) Appraisal of the U.S. export profile and possible selective withdrawal from international competition in certain export industries. It makes no sense, for example, for the United States to export steel or aluminum to other countries when this requires imports of additional raw materials; and

(6) Careful Federal review of and limitations on imports in several key mineral markets. This includes development of a coherent national policy on the importation of petroleum, uranium and natural gas.

There is no way that the United States can withdraw from the international trade system into fortress America in the foreseeable future. Nor is it politically or economically desirable to do so. But an emphasis on sustainable growth as outlined above can keep the United States from developing excessive dependence on a small number of petroleum and nonfuel mineral exporting countries which could use their natural resources for political and economic purposes as competition for them intensifies.

NATIONAL ECONOMIC GROWTH AND STABILIZATION POLICY IN THE AGE OF MULTINATIONAL CORPORATIONS: THE CHALLENGE OF OUR POSTMARKET ECONOMY

By RONALD E. MÜLLER* **

SUMMARY

The economic growth of the United States is inexorably linked to the ability of Government to effect shortrun stabilization policy for overcoming simultaneous inflation and unemployment, balance-of-payments deficits and international monetary uncertainty, and energy bottlenecks. The major thesis of this paper is that current policy is ineffective. It can no longer be relied upon to provide successive periods of necessary shortrun stability conditions for the economy's future growth and development. Thus, for example, it is irrelevant to talk about longrun (5-10 years) growth if our current stabilization policy cannot help us avoid a 1980 scenario of the United States and world economy being in the midst of a major recession—an outcome the probability of which is quite significant and rising, according to a growing number of economists including this author. As threatening as this is, however, actual stabilization policy is not addressing the conditions which could, between now and 1980, either avoid such an outcome or at least minimize its dimensions.

The primary reason why stabilization policy is no longer adequate is because it is based on a now obsolete view of our economy. This mainstream "Keynesian-based" view—whether in its conservative Chicago or its liberal Brookings versions—stems from a theory of macroeconomic policy developed for the market-based national economy of the 1930's through the early 1950's. But the post-World War II economy of the United States has undergone a fundamental structural transformation, significantly changing the manner in which it behaves and responds to policy stimuli of the Federal Government. The turning point in this transformation, the period when policy began to break down, is estimated to be between 1965 and 1968.

There are two major aspects of the economy's structural transformation which, as obvious as they are, have yet to be incorporated into our policy formulation. First, the economy has achieved unprecedented levels and new forms of global interdependence. Second, its major institutions of production and finance—accounting for over 70 percent of total private activity—are not only multinational but are also multiindustry conglomerates which, given their size and fewness of numbers, must operate as oligopolies if there is to be any

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**With the assistance of Scott McCready and David Moore.

stability whatsoever to their operations. In short about three-quarters of our private sector has become a globally interdependent, post-market economy of some 800 multinational conglomerates.*** In the residual private sector, hundreds of thousands of small businesses form what is still a market-based national economy. In contrast to this dual reality, policy continues unfortunately to assume that our economy behaves like a market-based national entity.

Today, the use of conventional monetary and fiscal policy results in a series of vicious circles. Monetary policy, for instance, helps increase aggregate concentration, a major cause in making this policy tool too often an ineffective and unpredictable weapon for fighting inflation. A similarly perverse effect is found in the application of tax policy for dealing with unemployment. To these domestic-conglomerization effects of transformation can be added those arising from the new global interdependence. The development of corporations' global accounting control over liquid assets, modern multinational banking, and the Eurocurrency market have had the unintentional, but nevertheless systemic impact of eroding the potency and autonomy of national monetary policy. New instruments of international policy coordination have yet to fill this void. The problem is even further compounded by the convergence in national business cycles among advanced nations. This, in addition to the erosion of competitive markets, means that policy can no longer rely on these two traditional and automatic mechanisms of stabilization.

To overcome the nations policy lag, it is important to note that the contemporary situation is the result of a systemic process, neither intended nor foreseen by the principle actors in business or government. The historic parallel is the transformation of the U.S. economy between 1870 and 1930, led by the evolution of the small, regional family firm into the nationally integrated corporation. The Great Depression and the policy lag in economics of the 1930's, was overcome by the theoretical breakthroughs of Keynes and a host of new policy approaches by the Federal Government. This lesson of history can be applied to the present circumstance.

Current policy (and the theory it is based on) will have to be strongly modified and supplemented with new approaches. These include an explicit incomes policy; the modification of the policy formulation process to take account of theoretical breakthroughs like the Tinbergen rule and second best theory; the micro-targeting of monetary and fiscal policy for differential impacts in different sectors of the economy; and an agenda for U.S. foreign policy to effect multi-lateral agreements for the harmonization of certain national economic policy tools in such areas as monetary flows, taxes, antitrust, and so forth. These various approaches toward stability, however, will have to be formulated and coordinated through an explicit national development planning effort for meeting the needs of balanced economic growth.

While the scope and organizational form of U.S. development planning can learn from the nations of Scandinavia, Japan, and certain Third World countries, it will be uniquely North American. The

***In technical terms, multinational conglomerates base their price and resource allocation decisions on optimizing their assets across their entire worldwide, multiindustry operations. In the aggregate, this generates different behavior and responses than an economy made up of single industry, price-competitive national firms.

developmental challenge of a post-Bicentennial United States will be to harness the productive advantages of our transformed private enterprise system with the Nation's traditional democratic principles: The right of a people and their national institutions to both stable economic growth and social accountability over concentrated political and economic power.

I. INTRODUCTION

During its first 200 years, the United States has fortunately been able to achieve sustained economic growth while proving the resiliency of its democracy. The decade which follows, however, will become a proving ground for developing alternative balanced growth and development policies that can adapt to the transformed post-market nature of our contemporary economy, while maximizing the virtues and minimizing the defects of private enterprise. Home nations, which in 1976 are feverishly debating the power and economic performance of multinational corporations (MNC's) as characteristic of saints or sinners will have to begin to develop new national mechanisms for guiding a globally transnationalized private sector. Current Government policy has been antiquated by the fact that MNC's represent a fundamental transformation of the private sectors. New policy will have to be based upon a realization that private conglomerate enterprise has replaced "private individual enterprise," and that the "free markets" envisioned by Adam Smith in his "Wealth of Nations" have largely disappeared. Policymakers face the challenge of merging the productive advantages of this transformed private enterprise system with the Nation's traditional democratic principles: The right of a people and their national institutions to both stable economic growth and social accountability over concentrated political and economic power.

Throughout Western democracies in the mid-1970's, electorates are sensing a crisis of understanding, a crisis of leadership. Vicious circles of overlapping scandals have rocked the most powerful institutions of government, and big business. Thus, an oil executive, when asked why his company had made secret campaign contributions to re-elect a U.S. President, could unabashedly reply: "Where would we have been on the totem pole of Government contracts had we not gone along?" Fred T. Allen, chairman of Pitney-Bowes noted, after reviewing a 1976 private survey on executives' attitudes toward bribery, that the results are "a sad commentary on the state of American business ethics."¹ From Bonn and the Hague, to Washington and Tokyo the common plea of the "Realethic" of the Lockheeds, ITTs, and many others is the "global oligopolists dilemma," manifest in the complaint, "if I don't payoff, one of my international competitors will." It is a dilemma perpetuated by a shared legal characteristic among nations, the impotence of their antiquated corporate disclosure laws to reveal illegalities conducted through nonmarket transfers; that is, transactions between subsidiaries of the same parent MNC across industries and nations. This achille's heel of functioning democracy, blocked information about power, will remain until an

¹ Fred T. Allen quoted in Francis, David R., "The Multinational Corporations: Payments Abroad—Tough Ethics Question," Christian Science Monitor, Nov. 25, 1975.

international agreement harmonizes new national laws such that no one country's MNC's and, therefore, its economy, fear competitive losses to others.

The U.S. economy in its post-Bicentennial era, is radically different. This is an age of postmarket, multinational conglomerates, less than 1,000 of which are responsible for over 70 percent of all corporate transactions in what has become a postmarket economy. It is a world where too often profit without market accountability has rendered obsolete the prerequisites to stable economic growth policies for full employment and price stability. Yet to date there has been no fundamental, concomitant change in the public sector policies charged with the macroeconomic stabilization and regulation of this transformed private sector. The abuses of economic power will continue as will a faltering economic growth rate, that is, until this basic public sector policy lag is overcome.

Current policies, designed only to meet a single problem and drafted by singularly-specialized advisers, are failing to come to grips with the holistic and interrelated, dovetailing nature of multiple new bottlenecks to U.S. economic growth: Capital shortages, secular declines in productivity, fiscal crises in cities and States, rapid shortfalls followed by sudden gluts in food and energy, a decaying U.S. transportation system and the growing disappearance of small business. These symptoms of instability testify themselves to a new phenomenon, "stagflation"—simultaneous inflation and unemployment—affecting all and understood by virtually none. Long the curse of underdeveloped countries, it seems to have become a permanent part of the economic landscape of the United States. The orthodoxy of Keynesian theory cannot explain it, and thus it has yet to be controlled by the Federal Reserve or the Council of Economic Advisers. Long run economic growth involves, by definition, multiple shortrun periods of stability and advances in the economy. Not unless we can stabilize the shortrun environment can we expect the Nation to return to a path of secular development. Shortrun stabilization is thus a sine qua non for future U.S. economic growth.

This is not the first time our economy has undergone a transformation, and, as in the past, during the transition economic growth can falter. In the United States, the rise of multinational corporations had its historic parallel in the transformation of the small, regional, family firm into the large, nationally integrated corporation during the 60 years prior to the transition marked by the Great Depression. It is no coincidence that in the United States, the MNC debate of the 1970's is like that surrounding the 1930's New Deal when policy reforms were aimed at the excesses of too many Teapot Domes as well as at the economic instability and stagnation of a depression. Both debates initially were misinterpreted as attacks on private enterprise. In fact, however, both came as a response to worries about the erosion of free markets; this in turn, leading to fears about the stability of economic prosperity and concern about accountability over new levels and new forms of power concentrations. As Arthur Schlesinger, Jr. recently has written, today is a time bound, "to remind a historian of the way representatives of academic and business orthodoxy were talking about depression in 1930." A philosophically diverse variety of others are beginning to agree.

On the eve of the Nation's Bicentennial, Arthur Burns lamented, "Our economic system is no longer working as we once supposed." "We need entirely new concepts of what produces economic cycles and what to do about them," concludes business economist Norma Pace. "The economics profession is in a crisis," agrees Myron Sharp, editor of *Challenge* magazine, adding that "Keynesian economics has held the stage for quite a few years, but we have a new set of problems now that it doesn't seem to cope with." In addition, management philosopher Peter Drucker observes that "the impact of societal transformation on theory always, in the past, has given birth to a new major economic theory. We know we need new economic theory that focuses on the world economy rather than on the national economy alone."² In short, a new theory of political economy will have to emerge, one which understands and incorporates the fact that the very success of the MNC has brought with it historic new levels and forms of both global interdependence and concentration, both major transformation causes of today's political and economic instability.

Nor should we be surprised that the "New Economics" is outdated: its founder, John Maynard Keynes, who in the 1930's was the radical challenging an orthodoxy incapable of understanding depression, knew well that today's heterodoxy becomes tomorrow's orthodoxy:

Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist. Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic scribbler of a few years back.³

Whatever the catchword for describing the late 1970's, it is now clear that policy's inability to stabilize the economy will be a major threat to U.S. growth during the next decade. For example, a growing number of observers are beginning to assess just what is the likelihood of protracted economic stagnation taking the form of destabilizing pseudobooms followed by real busts. Or will national growth be thwarted by chronically high unemployment as the only means to contain explosive levels of inflation? Whatever the form of instability impeding growth, the basic proposition of this paper is that we can no longer rely on current policy. It is ineffective because it was designed to stabilize and promote the growth of the national market economy of the 1930's and 1940's, and not the globally interdependent, postmarket economy of today.

In this paper, we shall attempt to understand this transformation of the economy so as to explain why present policy approaches for insuring stable economic growth are inadequate. In turn, this analysis will permit us to outline what new forms policy will have to take, including, I believe, the necessity for explicit balanced growth and national development planning. To arrive democratically at the correct mix and to effect the timely implementation of these new policies is, of course, one of the major national challenges facing us in the years ahead.

To best understand the transformed behavior of our economy and its impact on future U.S. growth, it is necessary to focus explicitly on

² Burns, Arthur, Commencement Address, Albion College, Michigan, Dec. 20, 1975.

³ Keynes, John Maynard, "The General Theory of Employment, Interest and Money," London: McMillan and Co., 1936, p. 333.

the major engines of the transformation, the so-called multinational corporations, including banks. That this focus has been chosen should be of no surprise. MNC's are the dominant production and distribution structure of our economy, accounting for about 70 percent of U.S. private sector activity. They are the economy's major "transmission vehicle," taking human, financial, and material inputs and processing and transferring them on to users. Should they significantly change the way in which they perform those functions—i.e., the manner in which they behave—then the policy relevant question is how such change affects the overall economy as well as particular groups within it. The question is particularly important when other institutions and individuals do not change, or not as fast, or not in a compatible direction. Our present concern is to analyze the systemic impact of that change on economic stability as it affects U.S. growth. In this sense, we are following a long tradition in political economy starting with Adam Smith and his *Wealth of Nations*, which found that numerous small, national single-industry private firms, each competing with the other based strictly on personal profit motive, would result in a systemic outcome of stable economic growth. Our analytical approach here is identical. The only difference is in the real world landscape under observation. No longer that of 1776, the "representative firm" today is one of a relatively few, very large "transnational conglomerates" controlling subsidiaries operating across many nations and across different industries. Thus, it is primarily this revolutionary change in our representative firms that leads us to speak of a and explicitly recognizes and adapts to these changes can we be assured of the systemic outcome of stable economic growth.

Thus an explicit analysis of future U.S. economic growth via a focus on the three-way relationship between our dominant firms, the behavior of the overall economy, and government stabilization policy should be considered neither as an attack on private enterprise nor MNC's per se. The MNC is a permanent part of our contemporary landscape of economic and political institutions. In the foreseeable future, MNC's will continue undoubtedly to occupy an important position in the economics and politics of this and other nations. The most immediate task of policy will be to learn how to make this newly transformed institution at least as responsive and predictable to the goals of a democratically derived policy as was its national, single-industry ancestor.

We turn now first to a description of the overall dimensions of the post-World War II transformation of the U.S. economy. Thereafter follows an analytical explanation of exactly why our current policies no longer can be relied upon to steer us toward stable and continuing growth. From there we take a brief excursion to demonstrate empirically just how our current policies have backfired. In the conclusion of the paper, our focus rests squarely on the most important policy recommendations for implementing explicit and coordinated balanced growth and national development planning as the only feasible means to assure future U.S. economic growth.

II. THE CONTOURS OF U.S. TRANSFORMATION

The advanced nations of North America, Europe, and the Pacific basin have now all witnessed the rapid evolution of the newest form of the private economic institutions which characterize their societies.

Their largest and most dynamic enterprises, from industry, finance, and communications, had undergone a dual transformation. The typical firm had evolved from a nationally integrated corporation into (1) the worldwide integrated transnational enterprise; and (2) from a single-industry dominant—i.e., oligopolistic—company into a multi-industry conglomerate operating across both related and unrelated industries. The globalization, or so-called “multinationalization” of the firm was the first of these two characteristics to be particularly recognized; its “conglomeratization” has yet to be understood on a wide-scale basis.⁴ Both types of change significantly affect the economy’s behavior. Before proceeding to analyze that behavior, we pause first to catch a glimpse of the dimensions of change the economy has undergone as a result of the corporate transformation.

A. The MNC and the Economy’s Global Interdependence

In the United States by the boom times of the mid-1960’s, business magazines were rushing to add additional columns to their annual statistical surveys of the Nation’s top 500, showing that more and more of the giants were becoming truly globalized as the ratios of their foreign-to-domestic assets, sales, and profits began surpassing the 30-percent, and in many cases, the 50-percent mark. The globalization wave was led by industrial firms, but they were quickly followed overseas by banks, advertising, and public relations agencies determined to serve their industrial clients on a worldwide basis. With increasing frequency the head managers of these corporations began referring to themselves as “the new globalists,” the “advance men” of “economic one-worldism,” wearing “the robes of diplomats,” to use the words of former First National City Bank president William I. Spencer.⁵ Writers began coining such terms as the “World Managers,” the “Earth Managers.”

By the late sixties, business economists had identified the unique characteristic of the MNC as its ability to bring together and coordinate resources from many different countries for production in still another nation, and then for marketing in as many other nations as possible.⁶ In essence, the unique advantage of the MNC is its mobility compared to national business—or for that matter to any other nation-bound institution. That is, its transnational mobility and control of its three most vital resources—its mechanical and managerial technology, its finance capital, and its advertising-communication techniques. This mobility has led to the dramatic increase of its importance in the world political economy. For all sectors of the world economy, MNC’s number about 1,200 with more than half home-based in the United States. In the industrial sector where statistical information is more refined, the United Nations counts some 650; between them they control 50 percent of total nonagricultural trade between non-Socialist countries.⁷ With regard to

⁴ Although conglomerates have been studied to evaluate their economic efficiency, there has been little analysis of their price behavior and thus their impact on macroeconomic stabilization policy. Cf. Markham, J. W., “Conglomerate Enterprise and Public Policy,” Cambridge: Harvard University Press 1973. Scherer, F. M., “Industrial Market Structure and Economic Performance,” Chicago: McNally 1973, chapter (11-13).

⁵ Spencer quoted in Newsweek Nov. 20, 1972.

⁶ The United Nations has officially adopted the term “Transnational Corporation” (TNE) to refer to a multinational business. For a description of the MNC’s general characteristics see, Brooke, Michael A. and H. Lee Remmers, “The Strategy of Multinational Enterprise,” New York: Elsevier, 1970.

⁷ United Nations, “Multinational Corporations in World Development,” (ST/ECA/190) New York: United Nations, 1973.

the world's money supply, MNC's control somewhere between \$160 billion to \$270 billion in liquid assets—from one and one-half to two times the total world reserves in the hands of governments.⁸

Yet what is important for our present macroeconomic policy purposes is not so much the extent to which the individual firm has been multinationalized. Nor is it overly revealing for U.S. stabilization policy to look at only the relative role of all MNC's in the world economy. Emphasis, instead, should be placed on the level of total global interdependence which the entire U.S. economy has now achieved through the multinationalization of its own firms. This is what will give us an appreciation of the magnitude of one of the economy's two major transformation processes. The other, aggregate concentration, we shall turn to momentarily.

The true extent of the U.S. economy's global interdependence cannot be gleaned by focusing on exports and imports as a percentage of GNP. Note rather that in 1960, the proportion of total corporate U.S. profits derived overseas was only 7 percent with exponential increases commencing around 1967. Today, an estimated 30 percent of total U.S. corporate profits are derived from overseas. Another indicator of the globalization of the U.S. economy is the amount of total U.S. corporate investment which goes overseas versus that at home. In 1957, foreign investment in new plant and equipment was 9 percent of total U.S. corporate domestic plant and equipment expenditures. By 1972 it had reached a figure of some 28 percent; again exponential increases occur starting in the years 1965-67. In 1961, the sales of all U.S. manufacturing abroad represented only 7 percent of total U.S. sales; by 1965, the figure had crept up to 8.5 percent; by 1970, foreign sales were more than 13 percent of total sales of all U.S. manufacturing corporations. For the U.S. banking sector, current foreign dollar deposits of the Nation's largest global banks are estimated at more than 65 percent of their domestic deposit holdings, up from 8.5 percent in 1960.⁹

B. The MNC and Aggregate Concentration

That the U.S. economy has attained significant levels of global interdependence for the first time in its history is not the only major form of current transformation. The second major and interrelated transformation process of the post-World War II economy is the historically high levels and new forms of industrial and financial concentration which have been attained. Are the economy's globalization and new concentration processes related? There is empirical evidence which verifies that hypothesis and which indicates that each process appears to feed on the other.¹⁰ The same firms which are now the full-fledged MNC's of our Nation are also the ones controlling a greater and greater percentage of private sector assets.

This concentration process is of a new type, however. Slowly and then with a pace which began accelerating in the 1960's, MNC's have

⁸ Detailed sourcing of these well known-statistics are found in Bernet, Richard J. and Ronald E. Müller, "Global Reach: The Power of the Multinational Corporations," N. Y.: Simon & Schuster, 1975, pp. 286; 454.

⁹ Ibid. pp. 258-9, 443-4, gives detailed documentation.

¹⁰ The relation between domestic concentration and foreign direct investment is demonstrated by Bergsten C. Fred, Thomas Horst and Theodore Moran, "American Multinationals and American Interests," Brookings Institutions, unpublished manuscript 1976, chapter 8. Using profitability (price/cost margin) as a proxy for concentration, Bergsten, et al. find a positive relation between increasing domestic market power and direct foreign investment for the period 1965-1971.

branched out from their original industry, where they already were a dominant oligopolist, and are "conglomeratizing" by acquiring control of production in a diverse range of other industries. It is this new form of expansion that explains what, on first glance, appears to be a statistical quirk and which has caused confusion among economists: to wit that while concentration within many individual industries has been relatively constant, fewer and fewer firms are controlling a growing proportion of the private sector's total assets and production. That is, aggregate concentration across all industries is increasing. If in the mid-1960's business magazines rushed to add statistical columns on multinationalization, by the mid-1970's they were devising ways to inform their readership of the riddle of classifying a company as predominantly of one industry or another, or for that matter, of one sector or another. Multinationalization and increasing aggregate concentration seem to go hand in hand. As we analyze below, there would appear to be systemic reasons why this is so. The causality question aside, the statistics tracing out the momentum of increasing concentration leave little doubt however, about the magnitude of this transformation force.¹¹

Between 1955 and 1970, the Fortune top 500 industrial corporations increased their share of total manufacturing and mining employment, profits, and assets from slightly more than 40 percent to over 70 percent. Whereas during the fifties the largest 200 were increasing their share of total industrial assets each year by an average of 1 percent, by the 1960's this annual rate of increased concentration had doubled. The same trend is also underway in the nonmanufacturing and nonmining sector of the economy. The drive of cumulative concentration is in part reflected by the corporate merger movement. Of the 14,000 individual mergers during 1953-68, the top 100 firms accounted for only 33 percent, but acquired 35 percent of all merged assets. More importantly, during the past few years, the largest MNC's have been responsible for over 75 percent of all acquisitions. In the mid-1960's the merger movement accelerated at an exponential rate; almost 60 percent of the \$66 billion of total merged assets between 1953-68 were acquired in the last 4 years of that period. In 1965, for example, the 1,496 mergers were the highest annual increase in the history of the United States.¹²

Increases in banking concentration started somewhat later than in the industrial sector, but by 1970 the top 50 of a total of some 13,000 banks had over 48 percent of all bank assets. From 1965 to

¹¹ The historical process of increasing concentration in the American economy cannot be represented by a smooth continuous curve. Rather, the process of economic concentration has moved forward in starts and fits. For instance, the impact of the Sherman Act in the early 1900's was to bring about a spurt of further aggregate concentration. This serves as but one example of the discontinuity in increasing secular concentration. For systemic reasons discussed in the text, the secular trend is upward although there are short-run cyclical ebbs and flows.

¹² Barnett and Müller, "Global Reach," *op. cit.*, pp. 220-3; 431-3; gives detailed statistics. In addition the following is further evidence of the aggregate concentration trend: In 1962, the U.S. IRS listed a total of about 20,000 corporations in the manufacturing and mining sector of the economy. Of these firms, the top 500 (as listed in Fortune) account for over 63.44 percent of sector assets, and 55.6 percent of the sector sales; by 1966 the top 500 had increased their share of sector assets and sales to 66.59 percent and 58.21 percent respectively; and by 1971 to 67.70 percent and 65.30 percent respectively.

For 1962, of the approximately 3,500 financial firms in the United States, the largest 150 banks, insurance companies, and diversified financial corporations controlled 30.67 percent of that sector's total assets. By 1971 the largest 150 had increased their share of the total sector assets to 40.99 percent.

Data for manufacturing and mining is from Fortune, August 1963, June 1967, and May 1972 editions. Aggregate data on the financial sector is from "Corporate Income Tax Returns" Pub. No. 16 (1-76) Internal Revenue Service, Washington, D.C. 1976. These are crude estimates, but for time series purposes they are indicative.

1970 the top 50 were increasing their share of total assets at more than double their expansion rate during the previous 10 years. Federal Reserve Board studies show that almost all foreign deposits of U.S. banks are in the hands of the top 20 American globalized banks, with four holding 38 percent of these deposits, and 12 having 83 percent of all foreign banking assets. On the lending side, the 220 largest banks account for virtually all of industrial bank loans. Nine of the largest global banks account for more than 26 percent of all total commercial and industrial lending by American banks. In addition, these same nine hold 90 percent of the entire indebtedness in the U.S. petroleum and natural gas industry, 66 percent in machinery and metal products, and 75 percent in the chemical and rubber industries.¹³

C. Timing of Economy's Transformation

These quantitative indicators are presented as evidence of the transformation of the economy itself. The statistics on globalization and aggregate concentration are not, however, the only indicators of transformation. Others of a qualitative and behavioral nature include national business cycles, money flows, and the use and sources of corporate credit. Of significance here, however, is that an analysis of these various indicators shows that they all broke their historical trend-paths sometime during the mid-1960's.¹⁴ This suggests that the turning point in the structural transformation of the economy occurred somewhere between 1965 and 1967, which correlates well with, for example, the beginning of a new form of the macro economy's behavior, the "stagflation" phenomenon; an occurrence unaccounted for by mainstream economic theory based as it is on our economy in its pretransformation era.

The correlation between stagflation and the turning point of transformation could obviously be a coincidence. No manner of statistical tests will settle this question. Our behavioral analysis of the economy, however, which follows below, leaves little doubt that the two are associated. To arrive at a more precise date of turning point will have to await further investigation. But of policymaking importance is really not whether the year was 1965 or 1966, etc. What is crucial is that over the past 25 years our economy has undergone fundamental changes while our model and approach for policy has remained largely unaltered.

D. Transformation and Policy Sovereignty

The rapid rise of the MNC into its current position of dominance in the economic affairs of nations was made possible by a number of technological and institutional innovations occurring shortly after World War II. In the private sector, the war effort had led to breakthroughs in the technology of management, accounting, and communications, thereby making feasible the control from parent headquarters of a global network of expanding and diverse subsidiaries. In the public sector, individual nation-states led by the United States created the international institutions which made the globali-

¹³ Barnet and Müller, "Global Reach," *op. cit.*, pp. 233-4; 270; 432-3; 449.

¹⁴ *Ibid.*, chapters 9 and 10.

zation process feasible. The international monetary system of Bretton Woods guaranteed the relatively free movement of finance capital and exchange rate stability, an essential prerequisite of the early multinationalization of business. A second necessary condition, that of relatively "free trade" among nations, was promoted by the General Agreement on Tariffs and Trade (GATT).

Although national governments had provided the institutional framework for taking much of the risk out of global business mobility, their decision would begin to come back to haunt them some two decades later. For where the corporation had achieved global mobility and control over resources, the nation-state government found itself more restricted: the immobility of its sovereignty being defined by the concept of territoriality. Does not the juxtaposition of MNC mobility with the immobility of nation-state sovereignty threaten a government's policies and ability to control the way in which resources are used for the development of the national economy? It was in this general and unspecified form that liberal academics raised the sovereignty question in the late sixties.¹⁵ As we shall examine shortly, it was the first in a series of systemic problems to be identified with the transformation ushered in by MNC's.

By the late 1960's, the global visionaries admitted that the "cosmocorps," as George Ball has written, "do have the power to affect the lives of people and nations in a manner that challenges the prerogatives and responsibilities of political authority." Yet, "the logical and eventual development of this possibility," in the opinion of John Diebold, "would be the end of nationality and national governments as we know them." This is a necessary outcome according to Jacques Maisonrouge, head of IBM Europe, because "the world's political structures are completely obsolete. They have not changed in at least a hundred years and are woefully out of tune with technological progress." A 1967 consulting report in *Business International* concluded, "the nation-state is becoming obsolete: tomorrow . . . it will in any meaningful sense be dead and so will the corporation that remains essentially national."¹⁶ Whatever the longrun future of the nation-state, however, it is now clear that global interdependence will require increasing harmonization of national economic goals and policies to achieve greater amounts of the goods and services which MNC's are currently producing. As the web of this interdependence increases so too will the degree of necessary international harmonization. The so-called Mondale Initiative, the first official foreign policy act of the Carter administration, for a tripartate restimulation of the world economy including the United States, West Germany, and Japan, highlights the necessity of international harmonization.

E. Instability Symptoms of Unfinished Transformation

This then was the visionary response to the sovereignty issues orchestrated by the globalists of the late 60's and early 70's—a vision equalling "the prologue to a New World symphony," as a dean of Columbia Business School once phrased it. But the world of 1976

¹⁵ Vernon, Raymond, *Sovereignty at Bay: The Multinational Spread of U.S. Enterprise*, New York: Basic Books, 1971.

¹⁶ Barnett and Müller, *Global Reach*, *op. cit.* chapter 1.

is far different than the vision of the globalists would have it. Internationalism is faltering and in its place nationalism is on the rise. Close and distant neighbors, once considered the best of U.S. allies, are now taking a new look at the implications of global interdependence in a world rocked by resource scarcities and persistent inflation. The international monetary system of Bretton Woods is dead and disagreement persists on what to replace it with. Meanwhile plagueing unemployment and fears for the loss of access to raw materials are giving rise to consideration of economic blocs and bilateral swaps in place of the GATT principle of world-wide "free trade." What is beginning to emerge in this situation is a change in the foreign policy of many nation-states, a "New Geopolitics" bluntly asking the question of whether the post-WWII system of international economic and political relations can maintain itself so as to assure the individual nation continuing access to foreign resources and markets.¹⁷

The international transmission of economic disturbances, however, does not limit itself to the question of uncertain supply of natural resources and high unemployment.¹⁸ It encompasses a potentially more serious problem for stability, namely, inflation due to the interdependence of world money markets (more accurately, the interdependence between one nation's money supply to that of others), manifest in the \$200 billion plus Eurocurrency market. This unregulated transnational pool of dollars and other currencies comes under the institutional control of no one government. Some observers argue that, given the interdependent web of worldwide financing engaged in by global firms and banks, a major default or sudden large withdrawal of deposits in the unregulated Euro-dollar market could trigger, at the end of an inflationary boom, liquidity crises in other countries. Such financial collapses, could carry with them the danger of subsequent heavy recession or depression. Other economists maintain that inflation is further fueled by Eurobank transactions which lead to unaccounted additions in the world money supply.¹⁹ The Euro-currency market is, in part, a product of the transformation in private financing. Its lack of regulation is but one aspect of the lag in the public sector's own transformation.

In reviewing these international problems, the late Brookings president, Kermit Gordon, concluded before the December 1973, American Economic Association meetings that "the present situation is clearly unstable. The United States has lost . . . effective leadership in the creation of new institutions and arrangements and other sources of leadership have not yet appeared."²⁰ By June 1976, the threat of debt liquidation crises had subsided because of the intervening worldwide recession. The pressure for immediate reform has subsided, but the vacuum in leadership and new public regulatory

¹⁷ The following works address themselves to various aspects of contemporary global instability and its implications for U.S. economic policy and foreign policy. Ullman, Richard H. "Trilateralism Partnership for What?" *Foreign Affairs* vol. 55 October, 1976 pp 1-19. Preeg, Ernest, *Economic Blocs and U.S. Foreign Policy*, Washington, D.C.: National Planning Association, 1975; Amuzegar, Jahangir. "The North-South Dialogue from Conflict to Compromise" *Foreign Affairs* v. 54, No. 3 April 1976, pp 547-562; and Cooper, Richard N. "Trade Policy is Foreign Policy" *Foreign Policy* No. 9, Winter 1972-73, pp 18-36. Also, Bergsten, Horst and Moran op. cit.

¹⁸ Ralph Bryant, Senior Fellow at the Brookings Institution, in his forthcoming book, "Money and Monetary Policy in an Open Economy," provides the basic structure of an economic model which allows for the transmission of instability between nations as a result of new levels and forms of global interdependence.

¹⁹ See, Müller, Ronald E. and Robert Cohen, "The Transformation of U.S. Banking and Economic Instability: A Systemic Dilemma", Executive, the Journal of Cornell University's Graduate School of Business and Public Administration, February, 1977.

²⁰ Cited in *ibid.*

institutions still remains. Unless this lag is overcome—and at this time that appears unlikely—the threat of financial instability will return with the next surge in world inflation.²¹

These symptoms of international instability—in natural resources, foreign trade and finance—are but one side of the unfinished transformation process. The other side is the lag in national policies to deal with the more apparent domestic instability symptoms mentioned earlier—fiscal crises, a decaying transport system and its incompatibility with the new energy constraints, and most importantly, stagflation itself. Each of these is, in turn, a symptom of the lag in the public sector's own transformation to meet the policy and planning challenge of stable national growth in a post market economy.

What do we mean by a post market economy? How has it negated our policy instruments? What will be the parameters of a transformed public sector policy process? To answer these questions we turn now to a detailed analytic treatment. Our chief diagnostic example will be stagflation and the ineffectiveness of standard monetary and fiscal policy. Following this analytic demonstration, the empirical review of policy inadequacies will reference other types of instability symptoms as well.

Before proceeding, however, let us note that although economists usually separate short-run monetary and fiscal policy from questions relating to economic growth, it is clear that this is an artificial separation. Instead, we must recognize that the problems of long-run economic growth and short-run stabilization policy are intimately related. Obviously the process of economic growth is but a collection of short-run periods. Successive periods of instability, for example, high unemployment and/or inflation, cannot possibly lead to a path of sustained economic growth. Thus the legitimacy of discussing short-run stabilization policy as related to economic growth should be evident.

III. THE ANALYTICS OF CURRENT INEFFECTIVE POLICY: AN OUTDATED THEORY

Our monetary and fiscal policy to steer the economy to noninflationary, full employment growth is derived from Keynesian economic theory. In turn, this mainstream theory, in either its "conservative" interpretation by the so-called Chicago School, or in its "liberal" version, is built upon a set of necessary but rarely explicated assumptions about the microeconomics of the economy's "representative firms" and their so-called "market" behavior. If these microeconomic assumptions of Keynesian theory are wrong then its conclusions, that is, the basis and recommendations it provides for Government monetary and fiscal policy, are no longer necessarily correct. In short, it loses its basis as a general model for policymaking. In this section we show in detail why mainstream theory's microassumptions are incorrect, and we develop the outlines of an alternative theory of the firm relevant to the needs of macroeconomic policy. In the next section we review the empirical evidence portraying ineffective and occasionally perverse performance of current policy.

²¹ For speculation from various sources on the consequences of the next wave of global inflation, cf. *Euro-money* August 1975, pp. 5-6; and May 1975, pp. 58-59; and *Wall Street Journal* Oct. 18, 1978, p. 1.

A. Microeconomic Foundations of Macroeconomic Policy: Toward a New Theory of the Firm

Keynesian-based theory of macroeconomic policy is founded upon four assumed notions about the behavior of firms in the economy. First, it is assumed that firms sell their goods in relatively "perfect markets" so that they must pursue a flexible pricing behavior. That is, short-run increases in demand relative to supply result in higher prices. Decreases in relative demand result in lowering of prices. A second assumed notion about firms in the economy is that they all behave in a like manner. For example, firms more or less simultaneously contract and expand output as well as change prices together and in the same manner. This is tantamount to assuming that differences in size and scope among firms do not produce any differences in behavior. Stated otherwise, the corner grocery and the multibillion dollar conglomerate behave alike. A third assumption underlying current uses of monetary and fiscal policy is that firms' operations are independent and are not influenced by activities in other nations and/or other industries in either the domestic economy or overseas. This is equivalent to saying that the firm is a single-industry, single-nation economic actor. It may buy or sell with some other industries and/or nations but such transactions are carried out only with other independent, nonrelated firms. Finally, the theory of our present macroeconomic policy assumes that the underlying motivation and reason for a firm's price decisions are to maximize its short-run profits and that these profits are derived largely from activities in a single industry and a single nation.

If all of these microeconomic assumptions about firms' behavior were valid, the theoretical Keynesian solutions for fine-tuning aggregate demand and supply via the prescribed use of monetary and fiscal policy could, in fact, produce noninflationary, full-employment economic growth. In addition, Keynesian-based theory allows that governments may, for political reasons, permit aggregate demand to increase too fast relative to supply expansion such as during the period of the Vietnam war. The resulting inflation, mainstream economists contend, can be constrained and resolved by belated application of a correct policy mix after inimical political pressures subside. This is an important point because it reveals the dual purposes for which the theory was thought applicable. On the one hand, the theory supposedly tells policymakers how to avoid causing inflation or unemployment. On the other hand, should a nations' realpolitik override this advice, the theory gives politicians a "second chance" to use monetary and fiscal policy to correct situations of inflation or unemployment, regardless of the latter's causal origins. In short, the orthodox theory of macroeconomic policy is held to be a general theory; meaning whatever may cause instability, this approach can be used to correct it. Unfortunately, this is no longer true if, in fact, it ever was. That notwithstanding, many mainstream theorists continue to hold on to the post World War II myth that the Keynesian revolution had all but eliminated severe business cycle frustrations. Nothing can be further from the truth, but in science old theories die painfully slow as Keynes himself discovered. The limitations of this theory can be further highlighted by noting that it does not allow for the occurrence of substantial unemployment during the inflationary buildup nor for

significant levels of inflation in the recessionary phases of unemployment. This theory (and therefore its policy derivatives) concludes that prolonged stagflation is an impossibility!

Recent history has made federal policymakers, if not orthodox theorists, aware just how erroneous too many of the mainstream conclusions are.²² Less apparent is why theory and its policies do not work or work only sporadically. We contend a significant part of the answer can be found, by an analytical examination of the modern firm which would demonstrate how erroneous are our theoretical, microeconomic foundations of macroeconomic policy. In fact, the real world transformation of the firm leads us to ask questions not only as concerns standard monetary and fiscal policy but also about balance of payments policy. In short, there are implications for policies both to maintain internal balance, that is price stability and full-employment in the domestic sector, as well as external balance of our economy vis-a-vis other nations.

The transformation of the firm which we have already alluded to can be shown diagrammatically as in figure 1. This illustrates what the representative firm of our economy is: A system of many firms, better stated, subsidiaries. It is a global system of subsidiaries operating in "i" industries across "j" nations. Thus, the multinational conglomerate corporation is in reality a wider-ranging production and distribution system; in theoretical terms, a matrix of subsidiary cells. The subsidiary cells do not operate independently, for example, in isolation, of each other. For example, close to three-quarters of total U.S. exports and upwards of one-half of all imports are now transactions between the domestic and foreign subsidiaries of the same parent multinational conglomerate corporations. Similarly, an increasing proportion of U.S. domestic, across-industry transfers of resources and intermediate goods are between subsidiaries of the same parent.²³

Some of the different industries in which the MNC operates are in fact related, that is there is vertical integration. In other cases, the industries are not necessarily related, for example, soft drink bottling and vehicle leasing. However, there is complementarity even here since the subsidiaries can contract with each other for certain factors of production, including human resources (particularly managerial), advertising techniques, accounting procedures, financial loans, for example. In any case, however, the important point here is that exchanges of inputs and/or outputs between the parent's subsidiaries across different industries and/or nations do not comprise market transactions.

Besides being a multination and multi-industry system of subsidiaries, there are two other important characteristics of our economy's representative firms. The third characteristic is that each of its subsidiaries are likely to be operated as an oligopolist and not necessarily as the assumed competitive firm of mainstream theory. It is here that we can begin to see the multiple types of price behavior open to the MNC. As noted below, the MNC could have a subsidiary cell

²² For example, Harvard economist, Wassily Leontieff, in testimony before the Joint Economic Committee (Nov. 10, 1976) indicated that Keynes' 10 equation model of the economy is far too general to reflect reality and, therefore, cannot be useful for direct policy application.

²³ Statistics and estimates of foreign and domestic intracorporate trade are given in Barnet and Müller, *Global Reach*, op. cit., pp 267 and 447.

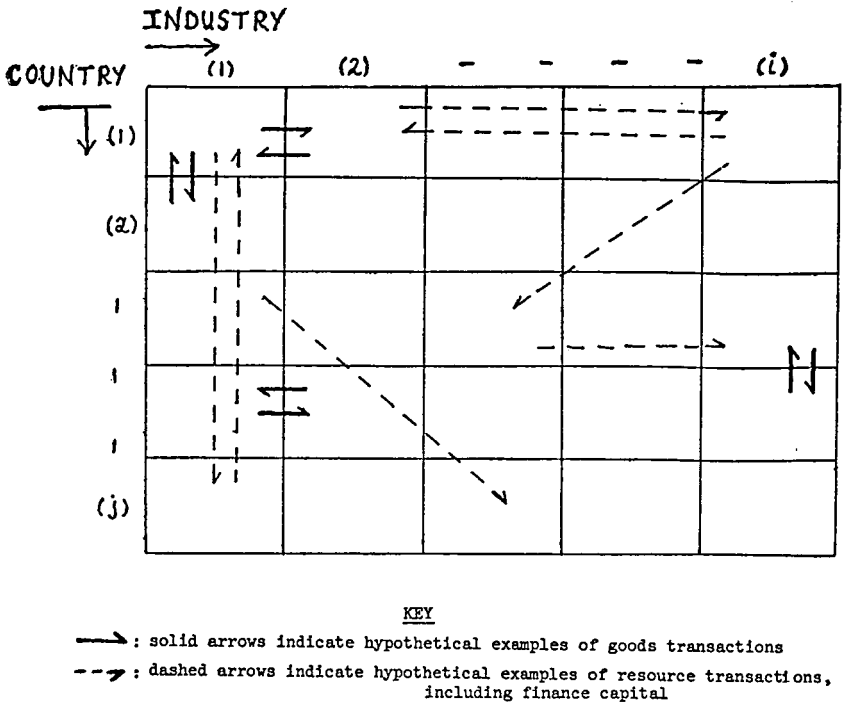


FIGURE 1.—The multinational conglomerate: The economy's representative firm.

price competitively, but there are overriding arguments why it normally pursues one form or another of full cost oligopoly pricing. At the minimum this means that the firms responsible for the dominant part of the private economy's transactions need not determine their prices in a manner which permits macroeconomic policy to be effective. It has been empirically verified by many traditional students of industrial organization such as Gardiner Means and John Blair,²⁴ that oligopolist behavior could include maintaining rigid prices, or even raising prices, at a time (if macroeconomic policy is to work) the firms should be decreasing their prices.

But this is not the only two possible forms of price behavior, that is, competitive or oligopolist behavior, which multinational conglomerates exhibit. To understand these firms' pricing behavior—essential for an understanding of their implications for macroeconomic policy, we must turn to the fourth characteristic exhibited by our economy's representative firm. Contrary to an assumption imbedded in macroeconomics, there is no a priori basis to suppose that short-run profit maximization is the sole criterion by which multinational conglomerates determine the prices charged by their subsidiaries. This can be illustrated by the now well-known example of overpricing imports

²⁴ Means, Gardiner C. "The Administered Price Thesis Reconfirmed", *American Economic Review*, vol. 62, no. 3, June 1972, pp 292-306. Blair, John, "Market Power and Inflation: A Short-Run Target Return Model", *Journal of Economic Issues*, vol. VIII, no. 2, June 1974, pp 453-77. The most recent econometric demonstration is Wachtel, Howard and Peter Dolf Adelsheim, "The Inflationary Impact of Unemployment: Price Mark-Up during Post-War Recessions", Joint Economic Committee, Washington, D.C., November 1976.

and/or underpricing exports with an overseas subsidiary located in a country with lower corporate tax rates.²⁵ There are also the cases of one subsidiary underpricing component sales to another subsidiary in a different domestic industry for one of two reasons. This is done either to transfer profits and have them reported in a different industry so as, for example, to influence its wage negotiations with a trade union. Alternatively, the underpricing would be to "cross-subsidize" a subsidiary in a different industry so that the latter may have a competitive advantage for increasing its market shares vis-a-vis other firms, particularly when these other firms are independent, single industry, smaller companies. These two examples have obvious distributional implications in terms of policy which seeks to regulate the allocation of cost and/or profits among industries, regions and/or nations. Distributional policies, however, do not concern us here.

Our concern is whether or not the multinational conglomerates pricing behavior can thwart the stability function of Keynesian based macropolicy. Theoretically, the answer is yes. To see this, let us continue outlining the MNC's motives and flexibility in choosing a type of price behavior. For instance, government could raise corporate income taxes in order to fight inflation, but companies could then underprice exports and/or overprice imports in order to transfer profits (and by implication investment) to foreign nations. Depending upon what one assumes about first- and second-round effects of such pricing decisions, the net impact could be either reinforce or weaken the policy's objective. Again we note the behavioral goal of global profit maximization of MNC's makes uncertain what their response to and, therefore, outcome of, a national policy tool will be. We also see this when cross-subsidization between domestic subsidiaries is an important consideration for multinational conglomerates' price determination decisions. The cross-subsidization of subsidiaries which represent new entry into other industries by the parent may quickly promulgate oligopolistic pricing behavior in that industry. This can either come about because the new subsidiaries increase their market shares rapidly and/or because cross-subsidization permits the early use of non-price-competitive forms such as product differentiation through advertising and/or the introduction of consumer credit. In this last case, it should be noted that oligopoly pricing can commence even if concentration ratios do not increase in the industry into which the new subsidiaries have entered.²⁶ Thus, with conglomeratization of our representative firms can come the spread of non-competitive-pricing behavior even though industry-specific concentration ratios need not necessarily increase.

There are still other implications for macroeconomic policy of these actual, as opposed to assumed, characteristics of our representative firms. One concerns pricing behavior not only over the business cycle but differences in that behavior depending on the *amplitude* of a particular cycle. A multinational conglomerate in terms of managing its longer established subsidiaries in various industries may be quite

²⁵ Robbins, Sidney M. and Robert B. Stobaugh, *Money in the Multinational Enterprise: A Study of Financial Policy*, New York: Basic Books 1973.

²⁶ The fact that the entry of large firms through conglomerate merger into an otherwise competitive industry can initiate oligopolistic pricing has been recognized by both industrial organization economists and the judiciary. See Blair, John M. *Economic Concentration: Structure, Behavior and Public Policy*, N.Y.: Harcourt, Brace Jovanovich, 1972 pg. 47 and "Federal Trade Commission vs. Proctor and Gamble Company", 386 U.S. 568 (1967), 575-78.

accustomed to pursuing specific target rate of return pricing policies because of the perceived stability of the various industries in question. The parent firm's expectations as to the intensity of the recessionary phase of the cycle will determine to what extent it continues its target rate of return pricing behavior. As is well known, both Blair and Means have given theoretical and empirical demonstrations that target rate of return pricing results in either price rigidity and/or perverse price behavior in terms of the needs of macroeconomic policy. The result of target rate of return pricing, therefore, is that it can give the economy an inflationary bias even during the recessionary phase of the cycle.

If, however, the cycle in its downward phase achieves a very intense decline it need not follow that oligopolists continue target rate of return pricing. In fact it is quite likely with reference to standard cost minimization criteria, that after some threshold level of excess inventories is reached (e.g. to the point where marginal costs drop below average variable costs) firms will resort to short-term price competition. Nevertheless, note that by the time price competitiveness finally returns to such an industry, the damage has already been done in terms of eroding stabilization policy's fine-tuning capacity. Thus, for example, automobile manufacturers resorted to price competition in mid-1974 only after industrywide unemployment was at about 25 percent and national aggregate unemployment at 8 percent. Up until this point auto manufacturers followed the target rate of return policy of reducing volume while maintaining and/or increasing prices even in the phase of declining demand.²⁷ Macroeconomic policy was ineffective both in reducing inflationary pricing during the early downward phase and ineffective in bringing about increases in employment during the later phases. To repeat, the expected solution of mainstream theory did not take hold until the damage of 8 percent national unemployment had already been felt. In microeconomic terms there were no price-competitive markets operating in this industry until acute drops in aggregate demand were experienced. That is these firms were effectively able to negate the market; they operated as if in a postmarket world. But, as the recession increased in intensity, the firms discarded their postmarket Mr. Hyde costumes and returned to the robes of Dr. Jeckle, finally acting out the role of a competitive market enterprise.

B. Implications for Phillips Curve Analysis

What we have here is a reality of corporate pricing behavior which in effect could explain what some economists believe to be an outward shifting of the Phillips Curve in recent years. In our analysis, however, higher rates of unemployment at a given rate of inflation are associated not with changes in expectations and/or bargaining strength of labor and their organizations but rather in changes in corporate structure and behavior of representative firms.

²⁷ This is empirically demonstrated in Cowles, David L. *The Pricing Behavior of U.S. Auto Firms in the 1970's*, Graduate Research Paper, The American University, Department of Economics, Washington, D.C.: fall 1976.

While completing this paper for the JEC, the author received Albert Eichner's *The Megacorp and Oligopoly: Microeconomic Foundations for Macroeconomic Dynamics*, Cambridge University Press, 1976. The agreement between Eichner and myself is most heartening, particularly as regards the link between a theory of the firm and macroeconomics. In addition he appears to derive a unique determinant theoretical solution to firms' pricing behavior using a target rate of return model. This model assumes, however, no inter-industry or international cross-subsidization by the firm.

This brings us to a final characteristic of the modern firm which must be taken into consideration for developing a more relevant microeconomic foundation for macroeconomic policy. Current theory assumes that a production unit within an industry is independent of any other national or foreign firm. We have seen how false this is. What does this imply about maximization principles of the modern multinational conglomerate? As referenced earlier, the maximization or optimization principle followed by a multiindustry, multinational conglomerate system is what one theoretically would suspect, that is, total global systems profit maximization. What is important about this behavioral principle however is that it need not necessarily imply that such a global system's maximization comes about via the maximization of each individual subsidiaries' profits. We have already seen how this can work in the above example on minimizing subsidiaries' profits in countries which have higher tax rates through the appropriate setting of transfer prices on interaffiliate exports and imports of goods and/or factors. The distributional implications for a nation are obvious and can be summed up by noting that Charlie Wilson's famous quote of "what's good for GM is good for the United States and vice versa" no longer necessarily follows. In fact, the "harmony of interests" distribution solution of classical and neoclassical economics can only be achieved through governments' multilateral intervention to effect lumpsum transfers. We have also seen that the advantages of sheer size and transnational and transindustry mobility can lead to behavior in behalf of fulfilling global system's maximization which thwart the efficacy of stabilization policy.

A recognition of these advantages of size and transnational, transindustry mobility along with the behavioral principle of global system's profit maximization allows us to make an important generalization about our alternative theory of the firm. As concerns shortrun price determination there is no a priori determinant, unique solution. A posteriori investigations also support this conclusion. That is, neither theory nor empirical findings allow us to conclude that our representative firms follow a singular mode of price determination, let alone one which is conducive to permitting stabilization policy to work. The price determination solution is in fact a priori indeterminate.

It is in this sense we must develop a new microeconomic foundation for macroeconomic policy. The new theory of the firm will have to acknowledge what has been learned in foreign trade and balance of payments policy through the innovation of the general theory of second best. We cannot say how firms will price-behave generally. Only within either a specific hypothesized or empirical context is the price decision determinant. If for example, a subsidiary is a new entry in an industry, it may in fact exhibit competitive pricing behavior; or, if aggressively engaged in increasing its market shares, it may in fact be underpricing through the capacity of its parent organization to cross subsidize it. Then again such a new entry subsidiary could immediately go to noncompetitive pricing because of rapid introduction of product differentiation in a formally competitive industry. Mature subsidiaries of the parent organization could be following target rate of return pricing directly inimical to the goals of stabilization policy. Yet again, if the downward phase of the business cycle is perceived as extremely acute, or already has become acute, these same subsidiaries could revert to competitive pricing habits. It is in

this sense then that we live in a postmarket society. As aggregate concentration increases, that is, as fewer firms influence and control more and more of production across the economy and in our transactions with the rest of the world, the degree of indeterminacy in their pricing decisions will continue to mount.

C. Economic Structures and Macroeconomic Policy: Theoretical Implications

Macroeconomists do not build into their models any consideration of what used to be called a theory of market structure. For obvious reasons, I prefer now to call this a theory of economic structures. In developing a theory of modern economic structures of the U.S. economy an important finding emerges for the future of macroeconomic policy. Our theory of economic structures can shed light on the importance of the preceding section's conclusion that with increasing transnational, transindustry aggregate concentration, corporate pricing behavior will conform less and less to the expectations of current macroeconomic stabilization instruments. The question then becomes what is the likelihood of further increases in aggregate concentration; that is, how much more severe can the problem become? To this we answer first that current levels of aggregate concentration already are negating current mainstream policy and in fact mandate that policy be modified as well as partially supplanted by new tools (see pt. IV, below). As to future increases in aggregate concentration, our modern theory of economic structures would conclude that a systemic process of increasing aggregate concentration is operating in the United States and world political economy. To understand this important finding we must turn to a brief but specific examination of the nature of worldwide oligopoly competition between global conglomerates.

Oligopoly competition, as orthodox economics correctly teaches, is characterized not only by nonprice forms of competitive behavior, but more importantly for our present purposes, by a particular short-run management goal for assessing the stability of the corporations' long-term profit stream. This shortrun goal of the oligopoly is minimally the maintenance or preferably the increase in its market shares vis-a-vis its other competitors. When an oligopoly, competing to maintain or increase its market share in one industry, is in fact a subsidiary of a parent conglomerate operating in many industries, the parent can choose to "cross-subsidize" the subsidiary with one or more of its three basic resources: technology (including mechanical, managerial, and accounting), finance capital, and marketing resources.

If the subsidiary of a conglomerate is competing in an industry with other oligopoly firms that are not subsidiaries of conglomerates, then the likely systemic outcome is that these nonconglomerate firms will eventually experience a decline in their market shares, go out of business or be absorbed by conglomerate enterprises. This is true because compared to the single-industry firm, the conglomerate's sheer size and mobility allows it to generate internal pecuniary economies of scale which over time give it an inherent competitive advantage over smaller concerns. Such internal economies include, for example, easier and usually cheaper sources of external finance, lower effective corporate tax rates (see next section), lower input costs

(e.g., advertising) due to quantity discounts and/or greater expertise, greater finance leverage to sustain cyclical periods of profit decline, and/or more easily sustained losses during shortrun price competition at times of initial entry to new industries. If in addition the oligopoly competition just described is between the subsidiary of an MNC (i.e., a global conglomerate) and a single-industry, strictly national, oligopoly, then the systemic outcome of increasing concentration is even more likely to occur.

Industrial organization economists have produced a rich empirical literature to demonstrate that cross-subsidization between subsidiaries of conglomerates is a practice in modern corporations.²⁸ It is also well known that wherever MNC's expand, there is usually associated with that expansion an increase in individual industry and/or aggregate concentration. Increasing concentration takes place first in both the more and less developed countries into which global companies expand and in which they can cross-subsidize their initial foreign entries with the resources of the parent's home network. Later it feeds back to the home country. After a wave of foreign expansion, the MNC can use the added internal economies of scale from its now increased size to supplement its competitiveness at home. That is, globalization leads, with a timelag, to increasing domestic concentration in the home nation. That this proposition on the systemic outcome of global oligopoly competition should be taken seriously is further confirmed by recent empirical studies of the changing nature of industrial/financial organization and concentration in the countries of the European Community.²⁹

These studies show that the only way European firms could stop and/or regain declining market shares, lost during the fifties to U.S. MNC's, was through a duplication of their American counterparts' expansion pattern of globalization and domestic mergers and acquisitions.³⁰ Thus by the early sixties, after recovery from World War II, the European response to the "American challenge" was to expand first globally and later through mergers and acquisitions in the home territory of the European Community. The timing of the historical concentration increases in the U.S. economy of the sixties would also appear to be explained by this proposition of the systemic outcome of global oligopoly competition. This concentration spurt occurred after the initial global expansions by U.S. corporations into Europe and the less developed countries (LDC's) in the 1950's.³¹

We should not believe, however, that the systemic process of increasing concentration takes place in a smooth uninterrupted fashion. The process of industrial concentration, unlike that for other economic indicators such as per capita GNP or the money supply, cannot be represented in a smooth continuous curve. Rather changes in industrial and financial concentration are of an institutional type. That is they are affected by a number of forces, political, economic

²⁸ For the presentation therein and further sources, cf. Blair, "Economic Concentration," *op. cit.*

²⁹ The Commission of the European Community has initiated studies in industries such as food, textiles, and pharmaceuticals in various European countries, including Belgium, The Netherlands, Great Britain and France. See various "Industry Studies," Commission of the European Economic Community, 1975-76. See also papers of H. W. DeYoung; K D. George and A. Silverstone; Helmut Arndt; S. J. Paris and C. Reed; and Ronald Müller, given at the Nijenrode International Conference on Industrial Organization, Holland Aug. 12-17, 1974 and published in H. W. DeYoung and A. P. Jacquemin (eds.), "Market, Corporate Behavior and the State," The Hague: Martinus Nijhoff, 1976.

³⁰ *Ibid.*

³¹ Barnett and Müller, "Global Reach," *op. cit.* pp. 220 and 428.

and social. As an example consider the dramatic increase in industrial and financial concentration of the early 1900's spurred by a change in legal institutions; that is, the Sherman Act. This was followed by a period of consolidation and relative constancy in aggregate concentration until the next surge in the late 1920's. More recently consider the impacts of antitrust law upon the conglomerate merger boom. As the courts enforcement of horizontal and vertical antitrust provisions became tougher, firms sought alternatively to increase their size by acquisitions outside of their home industry base. Also note that during the Great Depression, with the general decline in economic activity, many smaller firms were forced into bankruptcy leaving only the larger firms as survivors and concentration was increased.³²

With reference to the more recent increase in concentration promoted by a feedback loop from foreign direct investment, the pattern varies among sectors (broadly defined, for example, finance vs. manufacturing) and according to the geographic origin of MNC's.³³ For example, with U.S. bank-holding-company conglomerates, the advantages of size and mobility led to a feedback loop of initial domestic concentration which propelled foreign expansion, in turn, feeding back to a rise in domestic concentration.³⁴ Also, the systemic nature of the concentration process can be nullified by a change in the existing pattern of institutional relations, that is, parameters, defining the economic system. Thus new forms of government intervention can, in fact, half the process. This can be illustrated in the case of a growing number of LDC's, for example, Brazil, Mexico, or Peru.³⁵

The rhythm of increasing aggregate concentration is characterized by frequent interruptions. When viewed for the United States over a period of the past 30 years, there are numerous intervals of fits and starts. But the secular, long-run trend is obviously upward, and it is this trend which provides a strong empirical verification of our a priori hypothesis on systemic concentration increases. Our approach in deriving this theory of economic structures is akin to Gunnar Myrdal's methodology for analyzing the interaction between economic actors of unequal power in LDC's as well as his analysis of the outcome of unequal economic power characterizing the historical relations between LDC's and the industrialized nations.³⁶ Only here our focus is on the impact to U.S. economic structures growing out of the differences between small single-industry national firms and large multinational conglomerates. Restated, our proposition is that for the United States and other advanced nations, a systemic process

³² A brief history of the pace of increasing concentration is presented in Blair, "Economic Concentration," *op. cit.*, ch. 11.

³³ See Müller, Ronald E. and Robert Cohen, "The Transformation of U.S. Banking and Economic Instability: A Systemic Dilemma." *op. cit.*

³⁴ Budzeika, George. "Lending to Business by New York City Banks," *The Bulletin*, New York University, Graduate School of Business Administration, Institute of Finance, Nos. 76-77, September 1971. See also Jane D'Arista, "International Banking," part IV of *Financial Institutions and the Nation's Economy*, Committee on Banking, Currency, and Housing, House of Representatives, book II, Washington, D.C.: Government Printing Office, June 1976.

³⁵ Barnett and Müller, *Global Reach*, *op. cit.* chapter 8; a more detailed version is Ronald E. Müller, "The Underdeveloped and the Developed: Power and the Potential for Change," *World Congress of Sociology: Papers and Proceedings*, Toronto: August 1974; and Newfarmer, J. and W. Müller, *Multinational Corporations in Brazil and Mexico: Structural Sources of Economic and Non-Economic Power*, Senate Committee on Multinationals, Washington, D.C.: Government Printing Office, August 1975.

³⁶ Myrdal, Gunnar. *Richlands and Poor*, New York: Harper and Row, 1957, chapter 2. The use of Myrdal's methodology for the study of macroeconomic stabilization policy is found in Ronald Müller, "Systemic Instability and the Global Corporation at Home: The Role of Power in Economic Analysis," in H. W. DeYoung and A. P. Jaquemin, *Markets, Corporate Behavior, and the State*, *op. cit.*

of cumulative causation leading to secular increases in aggregate concentration is occurring. In turn, this structural change has significant implications for future U.S. growth, particularly as regards its impact on Keynesian-based macroeconomic policy. As already stated, the question of economic growth is usually considered only in a long-run context. Yet, successive short-run periods of high unemployment and inflation, and increasingly ineffective short-run policy prescriptions, cannot help but severely weaken the long-run growth capacities of the U.S. economy.

Insufficient attention to these dynamic complexities has caused some analytical confusion among economists about the nature and impacts of the concentration process. For example, too often it is still maintained that because single industry concentration ratios have been relatively constant, there is therefore, no greater likelihood of rigid or perverse price behavior than say 20 years ago.³⁷ Obviously this argument overlooks the newer motivations and forms of behavior, namely transfer pricing and cross-subsidization, noted in the prior section. As noted here earlier, it also makes the serious omission that the conglomerate spread into relatively unconcentrated industries can lead to oligopoly price behavior at concentration ratios much lower than historically has been the case.³⁸ A similar argument has also been made with regard to the notably increased activity in the United States of foreign-based MNC's from Europe and Japan. This new inflow of foreign direct investment would, it is held, lead to increased competition. Yes, we may witness more intense competition. The question, however, is whether this competition will be of the price or nonprice type. For purposes of stabilization policy, it is only the former which is relevant yet that is the least likely type of competition to occur among long established oligopolists. The literature of industrial organization, from Mason through Bain and Blair, should make us most skeptical about the likelihood that prices will become less rigid due to an influx of foreign-based MNC's.³⁹

In fact, the weight of historical studies on oligopolistic rivalries would lead us to conclude the opposite. That is, even if there is price competition in the short run (at the time of entry), thereafter various forms of implicit and/or explicit collusion evolve which eliminate prices as an acceptable type of competition among oligopolists. Given that foreign- and home-based MNC's have a long experience of dealing with each other around the globe, it is likely that there will be a steep learning curve in applying these rules of the game learned elsewhere to avoid price competition in the United States.

It is in this sense that we can understand why increasing global interdependence and concentration are interrelated aspects of the U.S. economy's structural transformation in the post World War II period: interrelated and to be directly associated with the globalization and conglomeratization of its largest corporations. These firms are pursuing

³⁷ For a typically outdated view and use of concentration figures that miss the point of price behavior, see Weston, J. Fred. "Do Multinational Corporations have Market Power to Overprice?" in Carl H. Madden, (ed.) *The Case for Multinational Corporations*; New York: Praeger and the National Chamber Foundation, 1977, pp. 10-69.

³⁸ A finding made through econometric testing by Wachtel, Howard M. and Peter D. Adelsheim. "The Inflationary Impact of Unemployment: Price Mark-ups During Post War Recessions, 1947-1970." *op. cit.*

³⁹ The relevant point from this literature is the well-known trend that over time as oligopolists compete with each other, there usually develops an implicit or explicit collusion to avoid price competition; for a review of this literature cf. Blair, J. *op. cit.*, or Scherer, F. *op. cit.*

a new strategy of oligopoly competition—across nations and industries, with competitors who are more and more themselves global conglomerates. Analytically restated, there is a systemic and cumulative process toward increasing global interdependence and aggregate concentration of the national economy. Concomitantly, there is a diminution of the accuracy and efficacy of the market as an indicator of economic performance and activity.

Given this transformation one notes some significant structural lags, for example, a public sector lag in governmental regulatory institutions and policies. Thus, antitrust laws primarily have emphasized horizontal, and secondarily, vertical integration, with a relative neglect of conglomerate mergers. The result: of the some 14,000 mergers between 1953 and 1968, the Government challenged 199 cases, won 90 of these, and required divestiture in only 48 instances.⁴⁰ Associated but more fundamental: the agencies like the FTC which are charged with holding down industry-specific concentration ignore the yardstick of aggregate industrial concentration, for example, the top 50, 100, 200, or 500 firms ratio against the economy as a whole. Aggregate as opposed to industry-specific concentration are so quantitatively different that it is safe to assume the methods of analysis would surely have to be qualitatively different. But herein lies another vicious circle of a lagging policy analysis: such new methods are difficult to conceptualize, let alone implement, because the type of data currently available, not only de facto, but also legally, is inappropriate and therefore misleading.

IV. CONTRADICTIONS OF MARKET-BASED POLICY IN A POSTMARKET WORLD

We have looked at the theoretical shortcomings of mainstream macroeconomics as concerns its microeconomic foundations. It is now time to examine the facts portraying the failure of our policy tools and in so doing prepare for a discussion of the needs of future policy for bringing about a process of stable U.S. economic growth. The quickest way to summarize the theoretical discussion and thereby best understand the empirical findings on the failure of mainstream theory and policy is to examine the myth, still held as an article of faith by many economists and policymakers, that we live in a market economy.

The conglomerate characteristic of MNC's and the nature of global oligopoly-conglomerate competition affect trade such that the private sector's total domestic and international transactions are increasingly between subsidiaries of the same parent corporation. Thus the MNC is largely a postmarket enterprise, since a significant share of its total transactions are not with independent buyers and sellers dealing at arms length through the market. Given the dominance of total MNC transactions in the domestic and foreign sectors, and given the systemic outcome of increasing aggregate concentration which results from global conglomerate competition, it is empirically verifiable that our contemporary national and world economic system is becoming increasingly a postmarket economy.

⁴⁰ Complete documentation is found in Barnet and Müller, *Global Reach*, op. cit., pp. 230-1, 431-2.

Let us reemphasize what is meant by a postmarket economy. It is one in which the social function of the market, as an institution for equilibrating the economy, has been negated. Yes, there are markets in the sense of a "commodity-space" indicating the total number of goods produced or consumed, but in the institutional, functional sense, which is explicit in the classical and neoclassical foundations of macropolicy, the market has largely been negated. The function of the market as a social institution is to generate price signals through the forces of supply and demand as carried out by independent buyers and sellers. In the Keynesian synthesis, these signals are relied upon by private business people, unions, and public policymakers as indicators for decisions which govern the allocation of resources and the distribution of income. Where the market is operative, these decisions theoretically should result in full employment, price stability, and balance-of-payments equilibrium. Systemically, that is, neither by intent nor design, but by the outcome of modern corporate competition, MNC's are a major source of market negation. They are so first, by the process of increasing aggregate concentration accompanying their expansion which, as shown in the preceding section, increasingly distorts price signals. Second, intracorporate transactions negate the market's social function, by definition, because they completely bypass the market. Market negation is another significant aspect of the post World War II structural transformation of the U.S. political economy which has yet to be met by a transformed public policy outlook.

A. Vicious Circles of Monetary and Fiscal Policy: Effects of Aggregate Concentration

As aggregate concentration increased during the 1950's and early 1960's, a threshold level seems to have been reached which made apparent a set of "vicious circles" arising out of the impacts of Keynesian monetary and fiscal policy and leading to increasing policy inefficacy. Using a wide variety of methods, recent econometric analyses of actual policy impacts add to the evidence which verifies our theoretical investigations.⁴¹ During the boom phase, stabilization policy is aimed at reducing inflation via a reduction in aggregate demand. The empirical findings are revealing however: The more widespread conglomerate concentration has become, the greater has been the occurrence of continuing relative price increases; that is, the opposite of intended policy impacts.

Examining the vicious circles inherent in fiscal and monetary policy is helpful in understanding these unintended impacts. Thus, for fiscal policy it has been shown that tax reductions to stimulate the economy are disproportionately absorbed by the largest firms. (Internal economies of scale can explain much of this result.) On average, for instance, the effective 1973 tax rate of the 100 largest manufacturing companies is 24.9 percent, while that of all other companies is about 44 percent. On the expenditure side, studies also reveal dis-

⁴¹ Blair, John, "Market Power and Inflation," op. cit. also Wachtel and Adelsheim, op. cit. See, in addition, the findings of Eckstein, Otto and David Weiss "Industry Price Equations," Conference on Econometrics of Price Determination, Washington, D.C., October 30-31, 1973; and Eckstein, Otto and Gary Fromm, "The Price Equation," American Economic Review, vol. 58, December 1968, pp. 1159-83; and Barrett, Nancy S., Geraldine Gerardi, and Thomas P. Hart, Prices and Wages in U.S. Manufacturing: A Factor Analysis, Lexington, Mass.: Heath, 1973.

proportionate amounts going to the largest firms.⁴² In both cases, the effect is to give large corporations a greater expansion capacity than smaller firms, thereby promoting further concentration. In the next round, the increased concentration leads to policy's increased ineffectiveness. The vicious circle is complete; policy is itself negating its effectiveness over successive rounds.

A similar phenomenon takes place with monetary policy. On the borrowing side, during periods of credit restriction, the largest industrial firms do not (in the short-run) respond to higher financing costs since their oligopoly positions permit them to pass on increased credit costs to their buyers. Smaller firms, because of their relatively weaker oligopoly power, must respond immediately and lower their investment demands. As in the case of fiscal measures, these differential structural impacts of monetary policy promote further concentration. Similarly, on the lending side, there are vicious circles at work. Take, for example, George Budzeika's recent findings on the behavior of the large New York City banks, published by New York University's Institute of Finance; or those of Jane D'Arista in a study for the House Committee on Banking, Currency, and Housing. Budzeika concludes, for example, that "New York City bank behavior in the past two decades has shown that it is very difficult to control large banks whenever the demand for credit is heavy." The reasons for this again turn out to be the internal economies unique to the large but not the smaller banks which, because of a "lack of information and skills, prevent them from adjusting quickly to changing levels of monetary restriction." For large banks "the only way to restrain efficiently is to reduce the overall liquidity of the banking system."⁴³ But since the costs in unemployment of such a strong measure are politically unacceptable, only mild monetary restraint has been pursued. This leads to further bank concentration and makes the next phase of policy restraint that much more ineffective.

B. National Monetary Policy Versus Transnational Financial Structures

Another major characteristic of the post-World War II large corporation is the change in the manner by which it finances its expansion across industries and nations. The sheer pace and quantitative magnitude of expansion has necessitated that global enterprises shift significantly their basis of financing from internal to external source.⁴⁴ This shift was accelerated by governmental capital restrictions such as the U.S. voluntary and mandatory balance-of-payments program. The latter, or course, was a catalyst to the development of the Euro-currency market, a further important structural characteristic of the new pattern of corporate financing to be discussed immediately below. In addition, the growth of output from this rapid expansion could

⁴² Vanik, Charles "Corporate Federal Tax Payments and Federal Subsidies to Corporations for 1972," Congressional Record, House of Representatives, Aug. 1, 1973, and Oct. 7, 1975, vol. 121, No. 150; and also his "On 1971 Corporate Income Tax," in "Tax Subsidies and Tax Reform," Hearing before the Joint Economic Committee, Congress of the United States, 92d sess., Govt. Print. Off., Washington, D. C., 1973, p. 17; and Musgrave, Peggy, "Tax Preference to Foreign Investment," Congress of the United States, Joint Economic Committee, "The Economics of Federal Subsidy Programs, Part II—International Subsidies," Washington, D. C., 1972, and her "International Tax Base Division and the Multinational Corporation," Public Finance, vol. 27, 1972. For data on the expenditure side see, Bluestone, Barry, in his review of the literature, presented in testimony, to the Joint Economic Committee, U.S. Congress, Feb. 29, 1972.

⁴³ Budzeika, *op. cit.* and D'Arista, *op. cit.*
⁴⁴ Barnett and Müller, *Global Reach*, *op. cit.* pp. 270-1; 450. Also see, Müller, Ronald E. and Robert Cohen, *op. cit.*

not be absorbed given actual increases in consumer incomes. Corporations reacted, particularly in consumer durables, through the establishment of ancillary credit-mechanisms and advertising, emphasizing the use of credit, a marketing strategy pointedly and successfully aimed at changing the psychology and propensities of consumers to incur recordbreaking debt increases over increases in current income. National governments correspondingly have provided the liquidity to meet the financing needs of this form of expansion, bring about historic increases in the money supply. This took place at a time when other new structural characteristics of finance (e.g., credit cards, "checking-plus," leasing) have contributed further to unprecedented increases in debt and the velocity of money.⁴⁵

From the perspective of current shortrun stabilization policy, however, the Eurocurrency market is one of the most important structural innovations of the post-World War II period. Global banks' justifiable and understandable creation of the Eurocurrency market to meet the needs of global corporate expansion was permitted to evolve without normal public regulatory control. This omission by national governments is one of the most notable indicators of the structural lag between the public sector's regulatory function and a now transformed private corporate sector. The lack of deposit reserve requirements, particularly, has made this \$200 billion-plus pool of deposits an incalculable and unpredictable source of further increases to the world money supply. A second characteristic of the Eurocurrency market is that U.S. and other global banks operating within its domain regularly violate the first principle of sound banking: never borrow short to lend long. These aspects of the Eurocurrency market have led observers like Harvard's Prof. H. S. Houthakker to note its impact as a "huge creation of private international liquidity," and in his view, "almost certainly contributes powerfully to the inflationary pressures that no nation has succeeded in keeping under control."⁴⁶

Finally, the intracorporate, nonmarket basis of much cross-nation financial flows, the development of an accounting technology for global optimization of firms' liquid assets, combined with the sheer magnitude and rapidity (relative to the past) of these financial transfers has eroded the autonomy or sovereignty of a nation's money supply, implying the increasing inability of national authorities to control it. "Leads and lags," for example, is a standard tool of business, invented long before the age of global companies, to preserve the value of liquid assets during periods of foreign exchange instability. Central bank procedures to account for the effect of leads and lags on the domestic money supply are also age old. But today, given systemic increases in global concentration and improved accounting technology, these same procedures cannot match the more massive and more rapid liquid transfers by many fewer actors than could have ever been foreseen only a few years ago.

Leads and lags immediately affect the money supply of a country, yet since they are unrecorded transactions, reflected only in the "errors and omissions" component of a nation's balance-of-payments account, their actual impact on changing the money stock is dis-

⁴⁵ Barnett and Müller, *Global Reach*, op. cit. p. 450.

⁴⁶ Houthakker, H. S. "Policy Issues in the International Economy of the 1970's," *American Economic Review* vol. 64, No. 4, May 1974, pp. 139.

covered by central bankers only after considerable delay. The German experience of the late 1960's and early 1970's illustrates the problem and adds a further reason why current monetary policy has become an unreliable tool for regulating the economy. Studies of the German Bundesbank have found that although its policy led to "complete neutralization of the liquidity inflows to domestic banks * * * it does not curb the expansive effects exerted by the inflows of funds from abroad to nonbanks on the money stock."⁴⁷ Additional work on these nonbank inflows by Michael Porter and published in the IMF Staff Papers showed that the Bundesbank's required reserves policies to control the money supply "were substantially and rapidly offset in their effect on bank liquidity by capital inflows recorded mainly in errors and omissions * * * within 1 month and by some 80 percent."⁴⁸ It should be noted that this use of leads and lags is an entirely separate subject from other forms of liquid transfers. Thus, for example, a recent Brookings-sponsored study examined corporate asset sheets and concluded erroneously that MNC's were not involved in destabilizing transfers. The Brookings team unfortunately had not examined the question of leads and lags.⁴⁹

This is but one example of the loss of sovereignty over the money supply by national governments. Another is reflected in the 1968-early 1969 episode involving the Fed, U.S. global banks, and the Eurocurrency market. The latter two, in combination with U.S. global firms, has led to what IMF consultant Frank Tamagna has called the "convergence of U.S. multinational corporations and multinational banks into an integrated U.S. economy in exile".⁵⁰ The episode involved an attempt by the U.S. Fed to constrain money supply growth by lowering interest rates on certificates of deposit (CD's) with the hope of absorbing these released moneys into treasury bills which, unlike bank deposits, are not lent out for business expansion. Since the money is absorbed by the public sector for its own allocation purposes, making treasury bills an attractive investment is a standard way to reduce the liquidity available to the private sector. Instead, these moneys were drawn to the higher interest rates of the Eurocurrency market. Overnight, these liquid assets were brought back into the United States by the intrabank borrowings of global banks from their overseas branches. The U.S.-based parent banks in turn used these borrowed deposits to create additional loans to their largest industrial clients which, because of their oligopoly positions vis-a-vis their customers, were not deterred by the significantly higher interest costs they could be passed on. The then low fractional reserve requirements on borrowed Euro-deposits yielded an actual expansion in the U.S. money supply, the exact opposite of the CD-interest policy's intended result. Here we see how the twin forces of globalization and concentration structurally erode the efficacy of the nation-state's aggregate stabilization tools.

Although fractional reserve requirements were increased in late 1969 (and again in early 1971) the inflationary damage for the early

⁴⁷ Monthly Report of the Deutsche Bundesbank, March 1973, p. 3; see also Katz, Samuel, "Imported Inflation and the Balance of Payments," New York University, Graduate School of Business Administration, Institute of Finance, The Bulletin, Nos. 91-92, October 1973.

⁴⁸ Porter, Michael G. "Commercial Flows as an Offset to Monetary Policy: The German Experience," IMF Staff Papers, July 1972, pp. 395 and 415.

⁴⁹ Bergsten, Horst and Moran, op. cit.

⁵⁰ As cited in, Barnett and Müller, Global Reach, op. cit. p. 434.

1970's had already been done. Nevertheless, even after further adjustments by the Fed, financial analysts continued to worry about the gap in, and therefore, uncertainty of, monetary policy fully "to integrate into its decisionmaking apparatus the most dynamic and expanding aspect of American banking, the foreign branch operations."⁵¹

The banking operations of the Euro-currency market remain one of the most notable and dangerous of the symptoms of our public sector's policy lag versus the dynamism of a rapidly changing transnational private sector. What is so glaring here is the need to regulate these Euro-currency banking activities, including the establishment of reserve requirements. If for no other reason than to regain one element of sovereignty over their domestic money supplies, regulation would appear to be in the interests of all the advanced nations—including the United States. Even if we accept the view (which this writer does not) of some economists that the "new awareness" of the FED to be a lender of last resort—as in the Franklin National Bank case—along with its use of swap arrangements will stop debt liquidation problems, there is still another profound implication of no regulation. This is the problem of unaccountable liquidity creation and reductions affecting domestic money supplies in a manner which central banks cannot control. This phenomenon has led some central bankers like Guido Carli and even the West German Chancellor Helmut Schmidt to demand regulation.⁵²

Yet here we see the national policymakers dilemma of implementing policy in a globally interdependent world of concentrated actors: Each nation fears to take the initiative of regulating its own banks' Euro-market operations lest its banking sector suffer competitive disadvantages by other nations not taking the same initiative. Why the major nations, however, do not promulgate a multilateral agreement to harmonize their regulatory initiatives is a question that escapes this purely economic analysis. Its answer is more likely to be found by the social scientist studying the political power of economic lobbies.

C. Convergence of National Business Cycles: The Decline of Another Stability Mechanism

Besides the decline of competitive markets, there has occurred one other negation of an automatic stabilizing force for our economies. In 1972, the business cycles of advanced nations converged such that each economy's upswings and downswings were occurring almost simultaneously. This had only happened once before in the history of modern political economy: at the beginning and throughout the Great Depression of the 1930's.⁵³ The causes of the 1972 convergence are still largely a mystery, which perhaps explains its scant recognition by the media and among politicians. Its occurrence, however, has great import. Previously, nonconvergence among national business cycles acted as an automatic stabilizing mechanism to help put limits

⁵¹ Mastrapasqua, Frank "U.S. Bank Expansion via Foreign Branching: Monetary Policy Implications," *The Bulletin*, Graduate School of Business Administration, Institute of Finance, New York University, Nos. 87-88, January 1973.

⁵² Helmut Schmidt and Guido Carli as quoted in the latter's "Why Banks are Unpopular," *The Per Jacobsson Foundation, Special Monograph*, June 12, 1976 p. 10.

⁵³ Kindleberger, Charles "The World in Depression: 1929-39," Berkeley: University of California Press, 1973; and also Rolfe, Sidney and J. Burtie, *The Great Wheel: The World Monetary System, Reinterpretation*, N. Y.: McGraw-Hill, 1974.

on the depths of recession and the heights of inflation. Formerly in the United States, for example, inflationary pressures were dampened because its major trading partners' downturns meant a relative decrease in their demand for American goods. Conversely, a European downturn and its consequent unemployment was limited by the U.S. upturn and its increasing demand for the continent's exports. But by 1972, business cycle convergence had accelerated and reinforced inflationary and depressionary forces among nations.⁵⁴

Although indepth research has yet to commence, our preliminary findings suggest that the remarkable technical achievements in MNC transnational production and financial planning has a role in explaining the disappearance of business cycle lags among nations. This is because MNC's worldwide planning over harmonized and complementary production facilities results in shortened foreign trade and financial lags among economies; such lags are, of course, a major factor underlying nonsynchronistic business cycles. Similarly, the operations of multinational banks, particularly through the Euro-currency market, have integrated short-term capital and foreign exchange markets to an unprecedented degree. Not only has Euro-currency operation resulted in a notable increase in concentration in international banking, that is, fewer actors with increasingly centralized decisionmaking over a greater number of international financial centers than ever before, but global coordination within these organizations has partially or completely eliminated timelags from the interactions between these centers.⁵⁵

The convergence of business cycles is, like the erosion of competitive markets, an example of the systemic outcome when one sector of society, the MNC private enterprise sector, changes rapidly and the other sectors, government, small business, and labor, lag behind. It is no one's fault. It is part of an historic institutional process; yet, we are now confronted with the mutual responsibility of developing new stabilization mechanisms for our economy.

D. Mobility Versus Immobility: The Information Crisis

The capstone characteristic of the MNC is its structural mobility as a social institution compared to other primary institutions of our society. As the classical economists from Smith to Schumpeter used the term, structure refers not only to physical dimensions like composition of output, employment, et cetera, but also to the behavioral aspects of institutions. What distinguishes the global conglomerate today from its pre-World War II predecessor is its greater structural mobility, that is, its increased capacity to change rapidly where and what it produces and an accelerating change in its managerial techniques for controlling that production. What distinguishes the global corporation from other social institutions is that the latter are relatively immobile in the physical sense and much slower to adapt or change in the behavioral sense. Thus, for example, government, national business firms, and organized labor are globally immobile,

⁵⁴ Convergence has occurred at other points during the postwar period, but with the U.S. accounting for over 50% of OECD production, its significance was limited. As the U.S. share of production has declined to below 40%, the destabilizing impact of convergence upon the world economy has accordingly increased. This and other points were made by Robert Lawrence, completing a comprehensive Ph. D. thesis on business cycle convergence for Yale University, in an interview by David Moore, August 8, 1976, at the Brookings Institution.

⁵⁵ Our appreciation is extended to Jane D'Arista, staff economist of the House Banking and Currency Committee for her insights on the banking system aspects of business cycle convergence.

being largely constrained in their institutional jurisdiction to the home nation-state; behaviorally their dynamism lags far behind the planning tools of the large transnational conglomerate.⁵⁶

This theme of mobility versus immobility characterizing the structural lag of particularly our public sector has as its major symptom a "crisis of information." That is, information once provided via the workings of the market is today increasingly either missing or unreliable. To take but one example, the U.S. foreign sector: large-scale corporate sampling surveys reveal over 50 percent of total trade transactions are now of the nonmarket, intracorporate variety. Yet official corporate disclosure information requirements of the Government can account for only about half this number.⁵⁷ Across the board there is a situation quite akin to the "information crisis" in oil when during the crunch of late 1973, the Federal Government found that only the companies possessed the necessary planning data on, for example, available supply.

The use of intraconglomerate transfers and the advent of such substitute financing as leasing, combined with the growth mentality of the 1960's, has led Leonard Spacek, former chairman of Arthur Andersen & Co. to comment that the words "generally accepted accounting principles" on corporate consolidated balance sheets are a "fiction." "My profession appears to regard a set of financial statements as a roulette wheel." David Norr of the American Institute of Certified Public Accounting agrees, "Accounting today permits a shaping of results to attain a desired end. Accounting as a mirror of (economic) activity is dead."⁵⁸ Whatever legitimate corporate reasons consolidated balance sheets may serve, from the objective of social purposes, however, they now hide more than they reveal. For instance, a growing number of university studies are now documenting the frustration of unions to make, as a basis of their wage demands, an accurate assessment of the profitability of the particular subsidiary with which they are negotiating since profits may have been shifted to another part of the parent conglomerate's system.⁵⁹ For government policymaking, reported corporate trade flows, profits, and debt burdens are the basis of decisions for managing employment, price, and balance-of-payments stability. However, when the statistical basis of these decisions is unreliable and/or misleading, the outcome of policy is uncertain, and possibly perverse.

These behavioral aspects are not the only characteristics of the new corporate mobility. There is also the physical dimension. In the 1960's, the pace of global oligopoly competition accelerated with the full-fledged entry of European and Japanese enterprises. Driven by international comparative cost differences first in labor and subsequently by the overvalued U.S. exchange rate, and then tax and antipollution costs, American companies offset their declining market shares by use of a remarkable mobility: the transfer of their U.S.-based production to export platform subsidiaries in underdeveloped countries. From these plants they then were able to export back to the

⁵⁶ For an overview of the public-private sector lag and the role of the public sector in promulgating that lag, see Lindbeck Assar "The Changing Role of the Nation State" KYKLOS, fasc 1 pp. 23-46. Also Ronald Müller, "Global Corporations and National Stabilization Policy," Journal of Economic Issues June, 1975.

⁵⁷ See documentation cited in, Barnett and Müller Global Reach, op. cit. pp. 259-61; 443-6.

⁵⁸ Ibid., page 264.

⁵⁹ Craypo, Charles, "Collective Bargaining in the Conglomerate, Multinational Firm: Litton's Shutdown of Royal Typewriter," Industrial and Labor Relations Review, vol. 29, No. 1, October 1975.

United States and overseas markets formerly lost to foreign competition. What Boston University's dean of business, Peter Gabriel, has termed the herd instinct of global corporations showed itself dramatically as the latecomer Japanese and Europeans began to duplicate export platform foreign investments of the pioneer American companies. This pattern, starting in labor intensive industries and quickly shifting to more capital intensive sectors, further reinforced the global interdependence of nations while adding new forms of structural lags and tensions in the home countries. For example, unions found another aspect of their countervailing power eroded as the threat of strike was effectively offset by the threat of production transfer overseas.⁶⁰ Smaller, domestic subcontracting firms also felt their bargaining power decline vis-a-vis their sales to MNC's because of these production transfers.

In the static theoretical market world of orthodox growth economics, changes in international comparative costs, dictating changes in the composition of national output and world trade, should lead to a new equilibrium situation via a path of smooth and rapid adjustments. This model underlying our current policies assumes that factors like labor are domestically mobile and that basic economic institutions such as the market and the corporation never significantly change their behavioral characteristics. The real world of imperfect and non-existent markets, global profit maximization and oligopoly competition, structural rigidities in labor, and governmental immobility, all compounded by rapid changes in certain institutions and none in others, promulgate outcomes which are substantively different than those predicted by orthodox theory.

Again the relation between shortrun stabilization policy and longrun and shortrun economic growth problems cannot be overemphasized. First, it is difficult to talk about an adequate rate of economic growth in the context of continuing inflation, unemployment, and ineffective monetary and fiscal policy. Second, shortrun stability is a prerequisite which must be achieved before one can consider policies for affecting the pattern and composition of longrun U.S. economic growth. An obvious example is the problem of energy policy: In the context of the present levels of shortrun instability, it is politically and fiscally unfeasible to make the structural changes necessary to meet the longrun growth constraints. Given high unemployment and near term inflation, it is difficult to generate public acceptance of the dislocation which would ensue from adaptation of an alternative energy supply and new modes of energy-conserving public transportation.

V. POLICY RECOMMENDATIONS OF A HETERODOX APPROACH TO MACROECONOMIC POLICY

The analytical findings of our investigation leads us to the major conclusion of the necessity to develop a new, formal approach toward macroeconomic policy. Our basic findings reveal first, that we live in a postmarket society where stabilization policy can no longer rely on the shortrun laws of supply and demand to make it effective. Second, our postmarket economy is also an economy which functions through new forms and at historic levels of global interdependence.

⁶⁰ *Ibid.*, pp. 19-25 for review of the literature of labor's bargaining power.

Despite the empirical reality of a postmarket economy highly interdependent with the rest of the world, we continue to use stabilization policies based upon the assumption that our economy is characterized by competitive markets and is functionally autonomous from the international arena of economic relations. This is a major reason why stabilization policies have failed us.

A. The Theory of Macroeconomic Policy

This is not to say, however, that we must totally discard a Keynesian-based theory of macroeconomic policy. The basic principles of this theory, macromanagement of the economy through aggregate application of monetary and fiscal policy, still have relevance. But this relevance will only be realized when these Keynesian principles no longer operate in isolation and are no longer applied in an unmodified form. Instead, Keynesian theory will have to be refitted and retooled within the context of new approaches: Together these will comprise a heterodox theory of macroeconomic policy, that is a new political economy. It will be a new political economy based upon the recognition, explained below, that ours is a world where policy cannot be based on the attainment of first-best solutions, but will instead have to select its goals from a variety of alternative, second-best solutions.

Welfare economists have long recognized the difference between the ideal world of theory and the real world.⁶¹ In terms of policy, they differentiate between two solutions: first-best solutions are drawn from the theoretical world; and second best which are those not theoretically optimal but feasibly attainable in the real world. The transformed economy with which we now deal requires a policymaker to recognize fully the significant message of what is called by welfare economists second-best theory. Policy based upon recognition of second-best objectives will be a fundamental cornerstone of a new theory of political economy. In a sense we must shift our bias. The working assumption of the new policymaker must be the recognition that the first-best solution of standard economic theory are more often than not irrelevant. The consideration of second-best solutions must become the rule rather than the exception.

Besides incorporating second best theory into its formal structure, the new theory of macroeconomic policy will have to be based on our Nation's historical roots: its premises will replace those of neoclassical economics with the political economy principles of Jefferson, Hamilton, Madison, and others who knew that economics and politics were but two interrelated bases of power, each necessitating its own checks and balances. While these early practitioners of political economy originally designed institutions subject to explicit controls within the public sector, they had no cause to duplicate an extensive system of formal checks and balances for the private sector. They accepted the laissez-faire principles laid down by Locke and Smith, not because these were absolutely and forever correct. Rather, they realized that the private sector of the late 1700's was largely self-regulatory by virtue of the existing competitive markets which limited concentrated power and at the same time allowed the laws of supply and demand

⁶¹ Lipsey, R. G. and K. J. Lancaster, "The General Theory of the Second Best," *Review of Economics and Statistics*, XXIV (1956) pp. 11-32.

to function for stable economic growth. The U.S. economy in its post-Bicentennial era, however, is radically different. It is an age of postmarket, transnational conglomerates, less than 1,000 of which are responsible for over 70 percent of total corporate transactions in what has become a postmarket economy. Our approach to deriving policy recommendations from a new political economy will not negate private enterprise, but rather instill it with new checks and balances so as to generate stability along with political accountability. In short, the new theory of political economy develops new policy to deal with the transformed, real-world politics and economics for which the current orthodoxy and its theory-policy synthesis can no longer be used.

B. The Stability Problem and Balanced National Growth and Development Planning

Modifying and establishing new limits for Keynesian-based monetary and fiscal policy would be part of a necessarily expanded and explicit national development planning effort by the United States. Coordinated planning for balanced national growth and development will have to evolve if we are to solve the stability problems hampering our economic growth. On a scale far greater than Keynes' own skepticism of the laissez-faire doctrine, the new political economy has to recognize more than just market malfunctioning. It will have to incorporate the empirically valid premise that much of the sector no longer has functioning markets, or at best, has only sporadically functioning markets. For macromanagement purposes the economy is in need of an ersatz, in need of a new social institution to replace the stability functions which used to be performed by markets. Without stability, U.S. economic growth can proceed in only a haphazard fashion. Bolder approaches are needed than just, for example, a revitalization of antitrust laws which erroneously assume the existence of markets and the general desirability, let alone, feasibility of restoring competition of markets. Here is but one example of a significant lag in policymaking. Our antitrust policy has yet to be coordinated to the needs of stabilization policy. Nor has antitrust policy applied the lessons taught by the only major breakthrough in neoclassical economics since Keynes', namely, the General Theory of Second Best. When testifying before congressional committees it never ceases to amaze this author how surprised policymakers are when they hear that stricter enforcement of antitrust, to increase competition, does not necessarily result in either greater efficiency or in greater price responsiveness. These "first-best" theoretical outcomes need not occur; in fact their opposites could occur. The actual outcome of any policy, and this is the essential message of second best theory, depends on the specific situation to which it is applied and can no longer generally be forecasted a priori.

For the United States, balanced national growth and development planning will not bear the faintest resemblance to the "centralized planning mechanisms" of the U.S.S.R. True, the traditions and experiences of nations such as Germany, Japan, the Scandinavian countries, and the Third World undoubtedly make them more prepared than the United States for the institutional modifications demanded by a postmarket world. Nevertheless, we can still learn

much from nations like Sweden and many of the less developed countries (LDC's). It is the LDC's, in fact, which have the most experience in dealing with the dilemmatic problems of stagflation. LDC's were among the first to acknowledge market negation and to modify stabilization policy accordingly. Also, institutional planning postulates—like the Tinbergen Rule (see below)—have been used extensively to combat stability problems in LDC's. And, it is in these countries where stabilization policy has dealt with such dovetailing imperfections and rigidities as industrial and financial dualism, structural bottlenecks in the labor force, stagflation, foreign exchange uncertainties, capital shortages, etc. We can learn from these countries and the advanced nations of northern Europe.⁶² Together they give us a good idea of the tasks which lie ahead of us, although our execution of these tasks will be uniquely North American. These planning tasks are really new forms of macroeconomic management. They are much in the tradition of the "Keynesian revolution" but proceed beyond that last great breakthrough in political economy. Building upon this foundation, the new political economy will be aimed at the needs of a postmarket society in an age of global interdependence.

Explicit planning activities of the Federal Government increasingly will have to replace the disappearing market mechanisms which no longer can provide for stable equilibrium solutions to meet the growth needs of our Nation. Another way to arrive at this same conclusion is to ask, "Who are the 'planners' of our economy?" Today's planners are the multinational corporations. Prof. Scott Gordon writing in the *Journal of Political Economy* has characterized the transformation of these firms as "one of the most momentous facts of the modern age, the emergence of the corporation as a primary social institution." What we find is that these de facto social institutions engage in explicit detailed planning on a rather vast scale. In many ways what our economy is, is some 1,000 "planning centers," that is, the MNC's, which together dominate private sector activity. Myrdal, Galbraith, Walter Adams and other modern writers have pointed out that this planning activity focuses on the management of consumer demand. It does not stop there, however; the firm plans not only for the purchase of large amounts of resources, but also plans the prices at which it will purchase those resources. Here its negotiations with labor unions are an epitome of nonmarket planning to maximize the firm's interest—so too, of course, the activities of unions in this regard. No longer living in a world of short-run forces of supply and demand which make them change their prices, our representative firms, instead, plan their "target rate of return" price. Indeed, they exhibit a degree of surprising planning inflexibility to alter those prices unless the economy is in an extreme nosedive. These firms are the dominant actors, the "planners," of our economy but there is a most ironic missing element in this picture. There is no mechanism to coordinate "planners." One social function of the market was its short-run coordination of the interactions between suppliers and demanders so as to produce a stable, full employment growth scenario. With the negation of the market, the institutional coordination of

⁶² For discussion of direct foreign invest laws in Europe and Japan, see Bergsten, Horst and Moran op. cit.: ch. 2.

the "planners" has been eroded, however. Into this vacuum will now have to come the planning activities of the Federal Government, built upon the theoretical constructs of a new political economy.

In the space remaining, I will limit myself to recommendations which address gaps in priority policy areas embodied in the twin questions of economic stability and accountable behavior. These recommendations outline specific planning activities for the implementation of needed policy tools. The five policytool areas include an incomes policy; targeting of monetary and fiscal policy for differential impacts; the incorporation into the policy process of the famous "Tinbergen Rule" and the General Theory of Second Best; minimum areas of necessary multilateral harmonization of national policy so as to govern such items as Eurobanking, MNC information requirements, and so forth; and finally, a set of priority topics for a much needed research agenda on behalf of new policymaking approaches.

Clearly, as I comment below, we are still in much need of research to bring about a more informed and intensive set of questions on the limits and forms of democratic-based planning in a mixed private enterprise economy. In the meantime, the inadequate current growth performance of the U.S. economy dictates that we commence the debate over whether to implement the following policy recommendations:

C. New Approaches to Stabilization Policy and Recommendations

1. An incomes policy governing price and wage guidelines has long been advocated by liberals in the United States based on largely equity considerations. Conservatives have argued against such a policy based on their belief in laissez faire principles. The conservatives' arguments are, as we have seen, antiquated. The liberals' argument is incomplete. Not only should an incomes policy be based on equity considerations, but it is now an essential need of a new policy approach for maintaining stable prices. The implementation when needed, of price guidelines and/or controls, however, should be based on "lessons of experience," if they are to be successfully planned. They should be targeted more at specific subsectors and/or at specific firms (i.e., conglomerates), than at industries since the concept of an industry is now outmoded in an economy, the structure of which is characterized by multi-industry conglomerate control. Also, the transnational character of our representative firms currently allows them to bypass pricing guidelines through the use of nonmarket export-import operations with overseas subsidiaries as was the case in the aborted attempt of the Nixon administration price controls in 1971.⁶³

2. As analyzed in the preceding section, there are significant structural differences, and therefore, behavioral responses among subsectors of the economy. To take account of these differences, there is an obvious need to reform the policy process by use of explicit and planned differential targeting of monetary and fiscal policy. The "dualism" as well as the global interdependence of the U.S. economy must be recognized. The international aspects will be outlined momentarily. As for the dualism of the domestic economy,

⁶³ See Ronald Müller "Global Corporations and National Stabilization Policy," op. cit.

it is characterized by a very few number of large MNC's accounting for roughly 70 percent of the private sector while more than a million individual, single-industry firms actively compete within the remaining 30 percent of the corporate sector.⁶⁴ The current use of single, across-the-board monetary and fiscal policies applicable to all firms, regardless of size and/or activity, will promote further aggregate concentration. This is unacceptable if for no other reason than as shown in the preceding section, that this increasing concentration makes monetary and fiscal policy less and less effective over time. Although unintentionally, monetary and fiscal policy are, in fact, a systemic "anti, antitrust, policy tool." In addition, if particularly monetary policy is to be an effective stabilization device without extracting politically unacceptable costs of overall high unemployment, then to be successful it will have to be applied in a differential fashion. For example, during periods of combating inflation, stiffer doses of policy may well have to be aimed at those sectors dominated by the largest financial and/or industrial conglomerates. Other parts of the economy, which are not as inflationary-inducing, may well require milder doses of credit tightness. This conclusion should not be surprising. Long ago mainstream economists here in the United States, learning from the studies of Third World economists, discovered that inflation has multiple causes.⁶⁵

One of these causes deals with structural bottlenecks. Excess demand in one sector of the economy can trigger an inflationary spiral in other sectors with which it is technologically interdependent. The case of "oil-petrochemicals-fertilizers-food" is an obvious case in point. The existence of such structural bottlenecks as these inflationary important sectoral imbalances, and the existence of such structural rigidities as conglomerate pricing behavior, can obviously not be controlled by only one nondifferentiated, across-the-board policy tool.

3. Thus not only the "General Theory of Second Best" but also the "Tinbergen Rule" must be formally adopted into the policymaking process of the U.S. Government for macroeconomic management of the economy. The "Tinbergen Rule", formulated by Nobel Laureate Jan Tinbergen, is based primarily on his experiences in LDC's, historically characterized by dualism and negated markets as well as high levels of global interdependence. The rule states that for each policy objective, the Government must implement a separate policy tool.⁶⁶ For example, if an additional objective of stabilization policy is to prevent an increase in aggregate concentration, then two policy tools are required: one policy for the stability objective and another for the objective of not increasing concentration.

Similarly, the fact that certain sectors respond to the anti-inflationary goal of a given dose of tighter monetary policy while other sectors do not, means there are two objectives. The objective of reduc-

⁶⁴ As documented in Nader, Ralph, Mark Green, Joel Seligman. "Constitutionalizing the Corporation: The Case for Federal Chartering of Giant Corporations," Washington, The Corporate Accountability Research Group, 1976, p. 2.

⁶⁵ Schultze, Charles "Recent Inflation in the United States," Joint Economic Committee, Congress of the United States, September 1959.

⁶⁶ The most refined statement of "Tinbergen Rule" applications for advanced nations is Mundell, Robert A. "The Appropriate Use of Monetary and Fiscal Policy for Internal and External Stability," I.M.F. Staff Papers, Washington, D.C., 1962. For the time period it was written, this was a seminal statement. Unfortunately, however, it is now too limited and outdated. As noted in the text, the structural differences and dualism of our domestic sectors no longer permit treatment through a single policy objective and tool as was once proposed by Mundell for internal stability. His and Tinbergen's "principles" must now be supplemented by an additional one: "the principle of effective structural classification."

ing inflationary pressures in a sector dominated by conglomerates and close to full employment, for example, will have to be achieved by a type or intensity of policy which is different than a policy to achieve the same objective, but for another levels sector characterized by different kinds of firms and/or at different levels of employment. The dualistic nature of the economy means the necessity to bifurcate and target our policy tools in order to achieve these multiple objectives. In addition, a heterodox theory of macroeconomic policy must recognize the microeconomic revolution witnessed in the "General Theory of Second Best." That is the methodological breakthrough which recognized that where multiple conditions of the perfectly competitive market world are in reality violated, then we can expect no general equilibrium solutions necessarily, but in fact must proceed on a case by case basis to control for a desired outcome (see also recommendation 5 below). Thus, the policymaking process, or better stated, the planning process behind macromanagement of the economy must incorporate the dictates of the "Tinbergen Rule." In addition the theory of political economy for macroeconomic policy must incorporate into its framework the methodological lesson that we live in a world of second best outcomes.

4. In addition to the policy requirements of "Second Best Theory" and the "Tinbergen Rule," we must formalize mechanisms for the multilateral harmonization of certain policy tools among advanced nations. We are referring here to the other basic post-World War II transformation characteristic of our economy, the global interdependence of national economies. The first priority area for multilateral harmonization agreements is to establish formal regulations, including reserve requirements, over Eurocurrency banking operations. Another priority is to accelerate the effort established by the recent OECD-MNC voluntary requirements concerning information and corporate disclosure.⁶⁷ Specifically, much more emphasis will have to be placed on generating information requirements for determining correct stabilization policies. For example, currently there is important stabilization information hidden within the errors and omissions ledger of the balance of payments: information such as the use of leads and lags. Finally, to implement effective checks and balances against the various forms of corporate abuse of economic power, such as international bribery, a multilateral agreement on the harmonization of disclosure and antibribery laws must be entered by all nations. We have noted earlier the chief dilemma of developing new national regulations governing transnational corporate activities: If other nations do not take actions while one nation does, then the latter's economy and its corporations can suffer undue hardships. The way out of this dilemma is not to create either international laws and/or international regulatory mechanisms. Such approaches are politically unfeasible for now and into the near future. Instead, however, modified and new national laws can be implemented if in fact they are harmonized with other nations through multilateral arrangements.⁶⁸ The efficacy of such policies is reemphasized and brought home to the

⁶⁷ See "Declaration by the Governments of O.E.C.D. Member Countries and Decisions of the O.E.C.D. Council on Guidelines for Multinational Enterprises, National Treatment, International Investment Incentives and Disincentives, Consultation Procedures, Paris, OECD, 1976.

⁶⁸ This is the approach, for example, being used in the drafting of an international code of conduct by the U.N. Center on Transnational Corporations.

United States by recent revelations of hospitality within the military-industrial complex and the use of commissions—paid by U.S. firms to the Government of South Korea—for funding extensive bribery of Members of the U.S. Congress by the South Korean Government.⁶⁹

5. It is clear that we need a new research agenda for policy requirements of a postmarket, globally interdependent economy. This agenda should sponsor both old and new approaches to the task of macroeconomic policy formulation. These approaches will have to capitalize on the theoretical breakthroughs provided by the "Tinbergen Rule" as well as the "General Theory of Second Best." Both have not yet been sufficiently introduced into a wide policymaking audience other than just the small circle of international and microeconomic theorists who formulated them. We can again mention the illustrative example of "Second Best Theory" and antitrust policy which constantly surprises government policymakers in the area of aggregate concentration. Current Department of Justice's large individual antitrust cases to bring about deconcentration in a single industry may in fact not solve anything. There is no necessary reason why efficiency will be raised and the laws of supply and demand be made to function better. Both of these standard traditional reasons for antitrust, namely, efficiency and stability, turn out no longer to be generally valid in our second-best world. Similar conclusions from the "General Theory of Second Best" can be shown for fiscal policy and balance of payments policy. It is but one example of the inadequacy of current orthodoxy, be that the orthodoxy of the right and its nonregulation, or that of the liberals with their more antitrust. Thus, more than ever, a research agenda incorporating both orthodox and heterodox approaches, and thereby transcending both, is needed to meet the planning tasks in which our Federal Government macroeconomic policymakers increasingly will be engaged. Some of the priority research needs for policymakers include the following:

(a) We have outlined earlier the convergence in national business cycles among advanced nations and the resulting decline in the importance of this automatic stabilizing mechanism. Because of the high degree of global interdependence of our own macroeconomic policy, investigation into the causes for this convergence in natural business cycles should have a high priority. In addition, we shall have to examine the implications for macroeconomic theory and policy of the NBER and the Forrester-MIT findings on the causes of and interactions between business, Kuznet, and Kondratieff cycles.⁷⁰

(b) The major parameter which has determined previous rates of growth and will determine the future growth rates of the U.S. economy is U.S. terms of trade with the rest of the world. Economic historians are quick to point out the critical role of the foreign sector, and therefore the terms of trade, in the early periods of U.S. economic growth (1790-1860).⁷¹ That the terms of trade are a major determining factor in the pattern of the United States (or for that matter, any nation's economic growth pattern) is also evident given recent experience. One need go no further back than the dark days of the energy crisis and recall the impact of four-fold increases in oil prices

⁶⁹ Cf. Baldwin, Frank, "The Korean Lobby," *Christianity and Crisis*, Vol. 36 No. 12, July 19, 1974.

⁷⁰ Forrester, J. W. "Business Structure, Economic Cycles, and National Policy," SDG Working Paper D-2245-2, Alfred P. Sloan School of Management, MIT, 1975.

⁷¹ North, Douglas C. *The Economic Growth of the United States, 1790-1860*, New York, 1955.

upon the U.S. rate of economic growth in 1973 and 1974 in order to see the direct significance of the U.S. terms of trade. It is no coincidence that West Germany, whose export sector was extremely healthy, was best able, of the more developed countries, to weather the sudden shift in the terms of trade in the petroleum area. It, therefore, suffered least vis à vis economic growth. Furthermore, even the most casual analysis of the present British dilemma further indicates the significance of the terms of trade, where questions of economic growth are concerned. Finally the entire postwar history of less developed countries again points to the importance of the terms of trade vis à vis the question of economic growth.⁷²

More particularly, given our natural resource (and increasingly, manufactured imports) dependence on Third World nations, it is our terms of trade with this group that must be analyzed. It should be remembered that the so-called "New International Economic Order" (NIEO) of LDC's is, if nothing else, an announcement that a new era of bargaining power between the rich and the poor is now upon us. This, of course, is the same message that we learned so well with the development of OPEC and the dramatic deterioration in our terms of trade in petroleum. As outlined in appendix B, there are many reasons to believe that both U.S.- and foreign-based MNC's will accommodate quickly as they did in oil, to the new bargaining power of Third World nations in mineral sectors and manufacturing. The balance of negotiating power is clearly shifting from the MNC's to national governments in the Third World, in turn, shifting the terms of trade between rich and poor nations in favor of the latter. Neither the MNC's nor the LDC's rely on market mechanisms to determine their interactions. Both corporations and host governments are recognizing that the age of markets is dead and the era of negotiations and bargaining power is upon us. Again as demonstrated in the case of oil, these rapid changes and new forms of accommodation do not necessarily imply unacceptably low profits for MNC's operating in the Third World. But there will definitely be an impact on the U.S. terms of trade as the momentum and mechanisms for realizing goals of the NIEO continue to develop. The implications this has for the United States include not only short-term growth rates and possible international redistribution of world income and political power, but equally important, domestic income distribution impacts within the national economy. Suffice it to say, this should be a priority research area and one in which the orthodox tools of free market, supply and demand will have only a limited role.

(c) Given the transformation process of our economy, there is also a glaring need to sponsor the study of modified and new institutional structures for the interface between public and private sectors. The major objective of this research should be to educate business, labor, and government policymakers that in a highly complex and interdependent economy, broad, inflexible rules for industry regulation and restructuring are as extreme and obsolete as calls for no regulation. Some industries, for instance, may lend themselves to deconcentration through disinvestment incentives thereby restoring equilibrating market mechanisms where that is possible. For other

industries this may not be the case. For example, it may be that for both efficiency and international competitiveness criteria, food production and distribution could be deconcentrated;⁷³ however, the same may not be true for the automotive conglomerates. How would a firm—an offshoot of a deconcentrated Ford or General Motors—compete internationally with an untouched Datsun, Volkswagen, or Toyota? Thus, while it may be true that the efficiency and accountability criteria dictate deconcentration in U.S. auto production, such a national restructuring may not meet the test of economic stability and competitive viability in an era of global interdependence. These questions are not meant to be indicative of what the final answer on these issues would be. They are used here as only examples to illustrate a need for the kinds of research they dictate.

(d) The energy and transport sectors provide another illustration of the need for new types of study on possible institutional structures for the U.S. economy. Although the congressional and executive agencies of the Government are presently devoting considerable funds to functional research on aggregate supply, demand, and financing needs in energy as well as on technological innovations, very little effort is being spent on structural questions of what the institutional requirements for the future energy and transport sectors should be. Restated, in order to bring about stable development of these inter-related areas what should be the structure of public and private institutions?⁷⁴

(e) This brings us to the final conclusion of this paper, the necessity to sponsor and develop a new theory of macroeconomic policy. As noted in the introduction, Keynes himself would have best understood this need. It is unfortunate that it has taken so long for his modern-day forebears to do likewise. Yet today, as we outlined earlier, there is an increasing recognition that the theory upon which policymakers rely can no longer meet its test. Hopefully, today's policymakers will learn from the experiences of their counterparts in the 1930's. During those unstable times it was the policymakers who forced upon an orthodox social science community the necessity to incorporate into its paradigm the nonorthodoxy of Keynes. The result, of course, was the Keynesian revolution—for its time, a new heterodox theory of macroeconomic policy. For contemporary circumstances, I have no doubt that a similar result will take place when policymakers finally succeed in overcoming the reluctance of their orthodox theoretical advisers.

For those who have been studying the interdependent structural changes arising out of the multinationalization and conglomeratization of that primary social institution, the large corporations, the current economic instability was predictable. For orthodox economists (and, unfortunately, the managers and government policymakers they advise), due to their preoccupation with functional studies of changes in aggregate data and their use of models which assume that primary

⁷³ Detailed statements on the different kinds of policy proposals needed for different sectors of the economy are found in Müller, Ronald "Towards a Political Economy of Multination Corporations and Nation States" *Wettbewerb, Konzentration und wirtschaftliche Macht*, Berlin: Duncker and Humblot 1976; a more limited version is in Ronald Müller, testimony before the Economic Committee, Mar. 5, 1976.

⁷⁴ For a detailed proposal on energy and transportation, see Ronald Müller, Joint Economic Committee, *ibid.*

institutions are static, the events of the day have been surprising! The structuralist heterodox model incorporates the functional approach. The functionalist model sees as unnecessary, and thereby assumes away, the study of structural changes. Surrounding a period of structural transformation the current functional model breaks down as does the efficacy of its policy prescriptions. At this point the model needs updating to bring it closer to the structural reality which it seeks to predict. So it was with Keynes, who, in the midst of the crisis in economics of the 1930's, built upon the work of the Swedish structuralism-functionalism school of Wicksell and Myrdal to derive a new model for policymaking purposes, operative until the next, and in this case our current, period of structural transformation. The present crisis in economics was well summarized by former Secretary of the Treasury, George Schultz:

We have come into a very unusual period, where we more or less cast loose from beliefs that we once held to be unarguable. We have cast off from a large number of these old moorings and we have not yet found new ones.

APPENDIX A. MNC'S AND U.S. PRODUCTIVITY

There are a number of arguments relating the rate of technical innovation to the structure of the modern firm. One, which will not concern us here, is whether smaller or larger firms contribute more to technical innovation: this controversy continues with points being made on both sides. The second type of argument is different. It is a more pragmatic policy approach because it starts from the fact that more and more of our private sector is dominated by large firms. Of greatest importance to the long-run trend of future U.S. technical progress is, therefore, whether productivity is affected by recent changes in the structure of large firms, *per se*.

This line of questioning is most important in light of Edward Renshaw's findings in his paper for this volume.⁷⁵ Renshaw argues that the decline in U.S. rates of productivity increase may well be due to the drying up of such areas of process innovation as increased speed, scale economies, and the conversion of energy into useful work. Renshaw's diagnostic indicates that technical innovation in these areas is approaching the limit in terms of their contribution to unambiguous productivity increases. To this we can now add the modern firm's recent discovery of other forms of process innovation that may be acting as a disincentive and be inimical to fostering basic scientific and technical innovation. For example, firms multinationalize by transferring manufacturing production to LDC's, taking advantage of wage differentials, pollution cost differentials, off-share tax advantages, et cetera. They then export the goods back into the United States. This option, although understandable from the view of the firm because it provides a way to compete with Japanese and European firms expanding into the United States, is not conducive to forcing systemically new R. & D. expenditures as a means to overcome the competition.

We have here an old story in new robes. Technical innovation, although certainly profitable when successful, presents the MNC with the specter of uncertainty. Even when only small firms exist in a market (atomistic competition in the economist's jargon) the firm's need to protect its profitability may be realized by options other than basic technical innovation. In the context of oligopolistic market structure (a few large companies), the MNC has a need to protect its profitability. Yet, the options, other than technical innovation, open to the firm to realize its goal are growing in number; for example, heavy advertising expenditures, offshore transfers of production, conglomeratization, et cetera. These may enhance or maintain profitability as much as innovation. The dynamic of

⁷⁵ For discussion of productivity and future technical change, see Edward Renshaw "Productivity," in vol. 1 of the JEC study series; and, by the same author, "The End of Progress," North Scituate, Mass.: Duxbury Press, 1976. For discussion of the structure of the firm and its impact on technical innovation, see p. 444 of Richard Barnett and Ronald E. Müller, "Global Reach," New York, Simon & Schuster, 1975; Edwin Mansfield, "Industrial Research and Technological Innovation," New York, Norton 1974, and Frederick T. Knickerbocker, "Oligopolistic Reaction and Multinational Enterprise," Boston, Basic Books, 1973. For further evidence of the decline of secular growth of productivity, see Christensen, L. R., et al. "An International Comparison of Growth in Productivity, 1947-1973," Madison, Wis.: SSRI-University of Wisconsin, 1975.

competition still remains; but its power to generate new, basic technical innovation may have decreased. The structure of the typical modern firm described in this paper, multinational and multi-industry in character, further increases the non-innovative (in the basic technological sense) options open to the firm.

This is indeed a tentative and a priori based hypothesis. However, it certainly needs to be examined to assist in the determination of whether there has occurred a secular slowdown in productivity increases. The argument should raise important research questions about the relations between technical innovation, national productivity, and the changing structure of our economy's representative firms.

APPENDIX B. U.S. TERMS OF TRADE AND THE THIRD WORLD: A NEW ERA OF BARGAINING POWER

An important factor in determining the future of U.S. economic growth rates will be the country's terms of trade with the rest of the world. In this regard, U.S. terms of trade with the Third World are of special interests. During the first 25 years after World War II the United States experienced an increasingly positive terms of trade with the Third World countries. The example of oil dramatized just how much our past economic growth has profited from inexpensive sources of key types of raw materials. For most of the post-World War II period the increasingly positive terms of trade the United States had with the Third World were indicated by the fact that it took a progressively smaller proportion of U.S. manufacturing exports to purchase raw material imports. For the future, faced with increasing resource depletion at home, our terms of trade with LDC's will take on heightened importance. This importance is not limited only to raw materials, however. An increasing amount of our purchases from the poor countries are in fact of manufactured exports, the vast majority of which are produced by the overseas subsidiaries of U.S. MNC's. There is strong evidence now that LDC's and MNC's are accommodating to each others needs in ways dramatically different than even 10 years ago. The upshot of these new interactions is the beginning of a reversal of the negative impacts⁷⁶ of MNC operations experienced by LDC's during the 1950's and 1960's. While these new interactions are conducive for both LDC's economic growth and the profitability of the involved MNC's, it also portends a significant deterioration in the U.S. terms of trade with negative consequences for U.S. economic growth. What follows is a highly abbreviated summary of the causes and dimensions of this trend.

To those initiated in the economic development theory of the Third World, it is no surprise that the author's methodological framework for investigating the structural impacts of MNC's in their home nations, was in fact adopted from the works of political economists in LDC's. Systemic negation of the market as a social institution is a primary example of structural transformation throughout all parts of the non-Socialist world economy. However, market negation's policy implications for economic growth were first analyzed by social scientists of all political persuasions in LDC's.

Such bargaining power scenarios are signalling the commencement of an explicit era of international negotiating power to overcome problems due to systemic erosion of competitive conditions necessary to maintain the market's social functions of stability and accountability.

Since the 1930's, LDC's began to formulate national economic policy which deviated from neoclassical theorems of international trade and welfare: while initially soliciting unrestricted investment by MNC's, later LDC's began to alter investment conditions, even for existing foreign-owned production, so as to purposely maximize host country welfare. At first, MNC's attempted to resist these initiatives, particularly, by eliciting the assistance of home governments. Starting in the late 1960's, certain LDC hosts began to react by formulating internationally asymmetrical conditions. These conditions protect MNC's profitability while providing for an increased share of the product's value-added to be internalized to the LDC host. The MNC's are learning that this new business environment is viable. OPEC and the major oil companies are a notable example to learn how dramatically terms of trade can be shifted and the consequence of such a shift on U.S. growth rates.

⁷⁶ The negative impacts are fully explained in Ronald Müller, "MNC's and the Third World," in C. K. Wilber (ed.) "The Political Economy of Development and Underdevelopment," N.Y. Random House, 1974, and reprinted in "Foreign Policy," summer, 1974.

Jack Behrman has put it this way:

The international economy has been organized over the past 100 years as though the market would distribute the gains of industrial growth among nations in an acceptable way. This procedure clearly is no longer acceptable in an oligopolistic world—that is, where both the location of industrial activity and trade are largely determined by decision criteria of international companies operating on the basis of “company efficiency” rather than classical free-market efficiency or national interests.⁷⁷

“U.S. Power and the Multinational Corporation” by Princeton’s Prof. Robert Gilpin, is another example about how the international economy is evolving “from one where free international enterprise plays a major function toward one where international negotiation establishes the system . . . The balance of power has clearly shifted from MNC’s to national governments.” In my own work, for the World Congress of Sociology 2½ years ago, I forecasted that the wake of new knowledge, the glare of publicity, instability in home nations, and the resulting increases in political sophistication of LDC’s, the balance of power in these regions would clearly shift from the MNC’s to national governments.⁷⁸ It was LDC’s which first made policy adaptations in the wake of new knowledge about not only the oligopolistic, but the too often nonmarket nature of MNC’s. This policy realization meant that market forces could no longer be relied upon for making the MNC operate in the best interests of the nation-state. In the LDC view, negotiations had to replace market forces, and this would be feasible only if they were able to raise their bargaining power. The LDC’s success in this regard has been made possible both by new knowledge about microeconomic behavior of MNC’s and by recent shifts in the geopolitical, macrodeterminants of bargaining power.

As for these changing geopolitical determinants, they include first the success of MNC’s as an engine of growth for advanced nations. This brought about the rapid convergence in developed countries’ per capita consumption and wage levels during the mid-1960’s and the early 1970’s. With this convergence came an historic increase in demand for raw materials. Second, MNC’s finally “discovered” how to use what LDC’s have the most to offer—cheap labor for the production of manufactured products for export, that is, the newest function of MNC—Third World investments is the “Export Platform.” Anti-pollution costs were also cheaper there than in the home nations. By 1970, the “new microeconomics of the firm,” combined with this historic increase in the dependency of advanced nations, and in the competition among them and their MNC’s, for natural and human resources, had provided the geopolitical conditions for LDC’s to raise their bargaining power. Concomitantly, the accelerating divergence in per capita income levels between rich and poor nations, and particularly for the lower 70 percent of the latter’s populations, during the 1950–69 period of MNC’s supergrowth meant a “new” necessity to increase bargaining power by national politicians in LDC’s, be they of leftist or rightist leanings. The results of the new bargaining power took various forms, and, on the whole, MNC’s have demonstrated a remarkable ability to adapt:

(1) LDC’s first placed emphasis on natural resources, finance, communications and transportation; these were called strategic social sectors because they affected almost all aspects of a society’s development, and therefore, required priority types of “checks and balances.” In one form or another, the new interface mechanisms involved either public ownership with private MNC management, or, taking a lesson from Japan and Germany, cartelizing national firms and specific industries to fight bigness with bigness. Another emphasis has been to develop new sources of data, to replace the now negated-competitive markets. For example, heightened international competition between MNC’s of all home nations, in contrast to the 1950’s, permitted the writen of new disclosure requirements at contract negotiation stages. New information is also being generated through such mechanisms as regional and/or national information-gathering devices or through modification of such laws as patents.

⁷⁷ Jack N. Behrman, “Conflicting Constraints on the Multinational Enterprise: Potential for Resolution,” New York: Council of the Americas and Fund for Multinational Management Education, 1974, p. xiii.

⁷⁸ Ronald Müller, “The Underdeveloped and the Developed: Power and the Potential for Change,” World Congress of Sociology; papers and proceedings, Toronto, 1974.