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U.S. ECONOMIC GROWTH FROM 1976 TO 1986: PROSPECTS, PROBLEMS, AND PATTERNS

Volume 2—The Factors and Processes Shaping Long-Run Economic Growth

STUDIES

PREPARED FOR THE USE OF THE

JOINT ECONOMIC COMMITTEE
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NOVEMBER 10, 1976

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LETTERS OF TRANSMITTAL

NOVEMBER 5, 1976.

To the Members of the Joint Economic Committee:

Transmitted herewith is the second 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 2 comprises four studies which provide an overview on the forces and processes that are shaping economic growth rates and patterns over the next decade. The authors are Professor Richard Ruggles, Professor Mancur Olson, Dr. Willis W. Harman and Dr. Thomas C. Thomas and Dr. Peter House. 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,

HUBERT H. HUMPHREY,
Chairman, Joint Economic Committee.

NOVEMBER 1, 1976.

Hon. HUBERT H. HUMPHREY,
Chairman, Joint Economic Committee,
U.S. Congress, Washington, D.C.

DEAR MR. CHAIRMAN: Transmitted herewith are four studies entitled "Economic Growth in the Short Run: Its Behavior and Measurement," by Professor Richard Ruggles; "The Political Economy of Comparative Growth Rates," by Professor Mancur Olson; "The Challenges of Noneconomic Factors to Economic Growth," by Dr. Willis Harman and Dr. Thomas C. Thomas; and "Discussing A National Growth Policy: Organizational and Institutional Issues," by Dr. Peter House. These four studies comprise volume 2 of the Joint Economic Committee's study series "U.S. Economic Growth from 1976–1986: Prospects, Problems, and Patterns." This series forms a substantial part of the Joint Economic Committee's 30th anniversary study series.

These four studies provide a broad overview perspective on major forces and processes that have shaped, and will be shaping over the next decade, economic growth in the United States. The significant factors are presented from a variety of perspectives, a diversity which will characterize each of the volumes in this study series.

Richard Ruggles explores the process of change in the short run and its implications for economic growth. This method of analysis was chosen since he did not find "readily defendable" the assumption that economic growth is determined by long run forces independent of short run behavior. His examination of four basic questions related to the behavior and measurement of economic growth in the short run supports the following conclusions: (1) In the last three decades, the United States economy has not achieved full employment except under the pressure of war demand; recoveries abort before full employment can be achieved, and continuous growth is not sustainable; (2) households are not the source of the saving that finances enterprise expenditures on plant and equipment; (3) the inability of the economy to achieve full employment and continuous growth is the direct consequence of saving and investment behavior; recoveries generate more saving than can be absorbed by investment; (4) the thesis that recessions are necessary to avoid inflationary spirals is not borne out by the record of actual wage and price behavior.

Mancur Olson challenges the conventional wisdom on economic growth in setting forth reasons why growth rates differ among industrialized countries. His explanation centers around powerful common-interest organizations. These, he believes gradually accumulate monopoly power and/or political power which tends to lower economic growth as it is measured in national income statistics. The relative development of such organizations in various regions of the United States leads him to an explanation of the hypothesis that the South and West are the Germany and Japan of the United States, and that the older industrialized areas, and most notably New York City, are its England.

Harman and Thomas provide a broad framework for thinking about economic growth in the future. They examine three divergent pictures of economic and social reality: One in which continued economic growth is imperative, one in which it is considered improbable if not impossible, and a third in which economic growth becomes the wrong measure on which to focus attention in a changing societal context. Appropriate policy measures for each case are discussed. They conclude that although there are rational bases for choosing among these three, it is impossible at the present time to obtain concensus that any of the three is correct and that, as a consequence, it is probably desirable to adopt policy recommendations compatible with all three.

In considering a national growth policy, Peter House does not concentrate so much on the need for a growth policy per se as on the question of how it should be conducted. He recommends the establishment of an Office of National Growth Policy to rationalize the massive Federal data base for respectable policy analysis. It would also analyze, through large scale modeling, major policies in light of current practices and other proposed policies, ultimately suggesting potential improvements or at least avoiding problems, especially in the long run.

The committee is deeply appreciative of the excellent work of these authors in assisting the committee's examination of future U.S. economic growth. Professor Ruggles and Professor Olson are faculty members at Yale University and the University of Maryland respectively, Dr. Harman and Dr. Thomas are with the Stanford Research Institute, while Dr. House is currently with the Institute of Transportation Studies at the University of California at Berkeley.

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

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. The administrative assistance of Beverly Mitchell of the committee staff is also appreciated.

Sincerely,

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

CONTENTS

ECONOMIC GROWTH IN THE SHORT RUN: ITS BEHAVIOR AND MEASUREMENT

By RICHARD RUGGLES*

SUMMARY

This analysis of the behavior and measurement of economic growth in the short run supports the following conclusions.

1. *In the last three decades, the United States economy has not achieved full employment except under the pressure of war demand; recoveries abort before full employment can be achieved, and continuous growth is not sustainable.* The record shows that since World War II there have been 10 years of recession, 12 years of recovery, and 7 years under the influence of wartime pressures. Of the 6 recovery periods, 4 aborted into recessions before full employment was reached, and the other two merged into the Korean and Vietnam wars. Recoveries are so short-lived that a new recession is always just around the corner. Thus, in the short run, growth is frustrated in recovery and eroded by recession, and consequently, long term economic growth is reduced to a level considerably below its potential.

2. *Households are not the source of the saving that finances enterprise expenditures on plant and equipment.* Analysis of saving and investment patterns of the various sectors does not bear out the traditional view of personal saving as the source of financing for business capital formation. Pension contributions do account for 10 to 20 percent of gross saving, but most of these are withheld by business or unions at the source and do not enter into individuals' disposable saving. Until the residential housing industry declined in the late 1960s, gross disposable saving of households was in every year smaller than their net purchases of owner-occupied housing; thus for most of this period the household sector borrowed more than it lent.

The utility sector, which is responsible for 20 percent of gross capital formation, did borrow to finance about half of its capital expenditures. But on the average the gross saving of the other business sectors has exceeded their plant and equipment expenditures. The contribution of the Federal government to saving and borrowing is directly related to the level of economic activity; in recession the Federal government is always in deficit, but by the end of recoveries it does generally achieve surpluses.

3. *The inability of the economy to achieve full employment and continuous growth is the direct consequence of saving and investment behavior; recoveries generate more saving than can be absorbed by investment.* Examination of the six recoveries since 1948 shows that at first

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78-543—76——2

the inventory turnaround and revival of fixed investment absorb the rapid increase in gross saving which results from rising profits and government revenues. As the recovery phase continues, however, saving continues to increase—largely because of a much faster increase in government revenues than in its expenditures—but experience shows that the increases in inventory accumulation and fixed investment soon slacken. As a consequence, demand levels off, inventories become excessive, profits and government receipts drop, saving is reduced, and a new recession sets in. The automatic stabilizers, in the form of undistributed profits and government surpluses, work in the upward as well as the downward direction. They stabilize the money value of GNP, not prices or employment; thus they choke off the growth in GNP which is necessary to achieve full employment in an economy with a growing population. The government sector has always been in surplus during the later stages of the recoveries, thus contradicting the thesis that the slowdown in private capital formation occurs because private demands for savings are crowded out by government borrowing. Rather, it is the increasing government revenues, not matched by government expenditures, which drain off the purchasing power of the private sector so that it is unable to buy the increasing output. Thus it is the excess, rather than the shortage, of saving which causes recoveries to abort.

4. *The thesis that recessions are necessary to avoid inflationary spirals is not borne out by the record of actual wage and price behavior.* There is no evidence that recovery or economic growth has led to inflationary price increases; on the contrary, the low rate of productivity increases in recession has resulted in cost-push price increases, and the higher rate of productivity increases in recovery has resulted in substantial price stability. The rapid price increase due to scare-buying in the first few months of the Korean War quickly subsided as the economy expanded. In the recessions of the late 1950s, the secular rise of wages was not fully offset by increasing productivity, and there were moderate price increases. The period of the greatest price stability was the early 1960s; this was also the most extended period of economic recovery. The price increases of the Vietnam war period, triggered by war-inspired increases in agricultural prices in 1965 and 1966, accelerated in the recession of 1970 and 1971. The more recent price rises had their origin in rising world agricultural prices, the devaluation of the dollar, and the quantum jump in oil prices. The largest increases in prices that have occurred since World War II took place during the recession of 1974–75, and it is only with recovery that inflation appears to be subsiding. In light of past experience, there is strong reason to believe that a high rate of growth and its concomitant high rate of productivity increase may be a necessary condition for long run price stability.

Economists commonly consider economic growth to be a long run phenomenon, whose rate is determined by major underlying forces of technological change. In contrast, fluctuations in economic activity are considered to be short run, purely temporary departures of the economy from its long run growth pattern. It is customary to fit long

term trends to peak periods of economic activity when the economy is considered to be at full employment, and to measure the loss due to economic fluctuations by the area lying below this long run trend.

Such a view results quite naturally from looking at the record of economic performance in *ex post* terms. But the assumption that economic growth is determined solely by long run forces independent of short run behavior is not readily defensible. The great variability observed in the growth rates of different countries strongly suggests that factors other than long term technological change are important in determining the growth that actually takes place. Furthermore, since growth of an economy is affected both by the level of its capital formation and by the increase in productivity resulting from learning by doing, it seems reasonable that an economy enjoying a continuously high level of economic prosperity and continuous growth will have a higher average growth rate than an economy plagued by periods of recession or stagnation during which capital formation and productivity increase are relatively low.

This paper is designed to explore the process of change in the short run and its implications for economic growth. Four questions will be examined. (1) What has been the year-to-year record of economic growth since World War II? (2) What has been the relation of saving to capital formation for specific sectors of the economy in this period? (3) Can the saving and investment activities of the individual sectors explain the short run growth pattern of the economy? (4) How does the question of wage and price stability relate to economic growth in the short run?

The Record of Economic Growth Since World War II

Since World War II, the United States economy has not enjoyed long, steady period of economic growth. Rather, the record has been one of constant economic fluctuations, as is shown in Table 1. If we take as the measure of recession and recovery changes in the level of unemployment,[1] the U.S. economy has had six recessions and recoveries in the 28 years since the demobilization in 1947. These periods of decline and upswing have been quite short: with the exception of periods of war they have generally lasted one or two years. If quarterly data were used in Table 1, a more exact measure of the timing and length of the recessions and recoveries would be obtained. But for present purposes the annual data quite adequately show the frequency and length of the fluctuations.

[1] The change in the level of unemployment rather than the change in real GNP has been taken as a measure of recession and recovery since in some periods the increase in real GNP has not been sufficient to keep up with the increase in capacity and the growth of the labor force. This was true in 1949, 1957, 1961 and 1971, when real GNP increased but the level of unemployment also rose. It seems more appropriate in the present context, in view of the sluggish behavior of the economy, to classify these as recession years.

TABLE 1.— ANNUAL CHANGES IN FINAL EXPENDITURES FOR GROSS NATIONAL PRODUCT, REAL GROSS NATIONAL PRODUCT, AND THE IMPLICIT PRICE DEFLATOR, AND LEVEL OF UNEMPLOYMENT, 1947–75

[Dollar amounts in billions]

Year	Consumer expenditures (1)	Government expenditures (2)	Gross domestic investment (3)	Exports (4)	Imports (5)	Gross national product (6)	Real GNP (percent change) (7)	Implicit price deflator (percent change) (8)	Unemployment (percent of labor force) (9)	Type of period
1947	$18.0	−$2.2	$3.3	$5.0	$1.0	$23.2	−1.6	12.8	3.9	Demobilization.
1948	13.0	6.5	11.9	−2.9	2.2	26.3	4.1	6.9	3.8	Recovery.
1949	.3.4	6.5	−10.6	−1.0	−.8	−1.1	.6	−1.0	5.9	Recession.
1950	13.9	.2	18.5	−2.0	2.4	28.2	8.7	2.0	5.3	Recovery and Korean war.
1951	15.1	21.6	5.4	5.0	3.1	44.0	8.1	6.8	3.3	
1952	10.1	15.5	−7.1	−.7	.7	17.0	3.8	1.3	3.0	
1953	12.6	7.0	1.2	−1.1	.8	18.9	3.9	1.5	2.9	
1954	6.2	−6.8	−.6	.9	−.6	.2	−1.3	1,4	5.5	Recession.
1955	17.8	−.7	15.7	2.1	1.8	33.0	6.7	2.2	4.4	Recovery.
1956	12.3	4.4	2.6	3.8	1.8	21.5	2.1	3.1	4.1	
1957	14.4	7.7	−1.8	2.9	1.1	22.1	1.8	3.4	4.3	Recession.
1958	9.1	8.0	−7.4	−3.4	.1	6.1	−.2	1.6	6.8	
1959	21.3	2.5	15.7	.4	2.4	37.6	6.0	2.2	5.5	Recovery.
1960	14.2	2.7	−1.1	3.9	0	19.5	2.3	1.7	5.5	
1961	10.1	7.9	−2.1	1.3	−.1	17.3	2.5	.9	6.7	Recession.
1962	20.2	9.9	10.9	1.7	2.1	40.5	5.8	1.8	5.5	Recovery and Vietnam war.
1963	19.4	5.7	5.0	2.1	1.2	30.9	4.0	1.5	5.7	
1964	25.8	6.1	6.4	4.7	2.0	41.0	5.3	1.6	5.2	
1965	29.8	8.6	15.4	2.1	3.6	52.4	5.9	2.2	4.5	
1966	34.7	20.3	12.4	3.3	5.7	64.9	5.9	3.3	3.8	
1967	25.6	21.5	−3.6	2.8	2.9	43.3	2.7	2.9	3.8	
1968	45.6	18.5	10.7	4.4	7.0	72.2	4.4	4.5	3.6	
1969	43.8	9.1	14.7	4.8	5.3	67.1	2.6	5.0	3.5	
1970	39.1	11.0	−5.4	7.8	5.6	46.9	−.3	5.4	4.9	Recession.
1971	49.4	14.9	19.2	3.1	5.5	80.9	3.0	5.1	5.9	
1972	64.9	19.3	28.3	7.1	11.9	107.7	5.2	4.1	5.6	Recovery.
1973	76.9	16.4	31.7	28.9	18.2	135.2	5.3	5.9	4.9	
1974	77.6	33.8	−5.0	42.8	42.5	106.6	−1.7	10.0	5.6	Recession.
1975	85.7	35.7	−31.3	3.7	−9.3	103.1	−1.8	9.3	8.5	

Sources: Cols. 1 to 8, national income accounts, "Survey of Current Business," January 1976 and July 1976. Col. 9, table B22, "Economic Report of the President," January 1976.

The year-to-year variability in real GNP (column 7) has been quite high, ranging from +8.7 percent in 1950 to −1.8 percent in 1975. It is interesting to note that the periods of highest price increases (column 8) were for the most part those that were associated with the sharpest drops in real out. Conversely, many of the periods with high growth rates in real output were associated with relatively low increases in the implicit price deflator. The level of unemployment has also varied widely over the 30-year period, reaching a low of 2.9 percent of the labor force in 1953 and a high of 8.5 percent in 1975. The two periods of lowest unemployment were war periods; since the year 1948, the unemployment rate in recovery never fell as low as four percent. Thus recoveries dissolved into recession before full employment could be reached.

An examination of annual changes in final expenditures for gross national product (columns 1–5 in Table 1) shows that consumer expenditures rose in every year, reflecting the growth in population and the increase in real income over the period. The variation in the annual changes of consumer expenditures follows in large degree the variation in personal income. Government expenditures also rose in most years, but increased most sharply during the Korean war in 1951 and 1952 and the Vietnam war in 1966, 1967, and 1968. Gross domestic investment showed considerable year-to-year variability—declining in

every recession, exhibiting a sharp increase at the beginning of each recovery, and generally tapering off as the recovery proceeded. The annual changes in exports and imports are quite variable, but are small relative to the changes in the other components of final expenditures.

In order to analyze the mechanism by which the economy moves from a recovery period into recession before ever reaching full employment, it will be necessary to examine the saving and capital formation of the different sectors of the economy in greater detail.

Sectoral Saving and Capital Formation

In traditional models of economic analysis, gross capital formation is carried out by enterprises, and households provide the saving. The government sector is usually omitted from this part of discussion, except to the extent that one wishes to introduce policy variables. The national income accounts of the United States produced by the Bureau of Economic Analysis of the Department of Commerce are formally drawn up on this basis. Gross domestic investment is solely a business activity. Although businesses are also recognized as having gross saving in the form of capital consumption allowances and retained earnings, households are not considered to do capital formation on their own, but engage only in "personal saving," which is the difference between disposable income and consumer expenditures. A somewhat different view is provided by the flow of funds statistics of the Board of Governors of the Federal Reserve System, which recognize that households purchase consumer durables, automobiles and houses, and that these do in fact constitute capital formation by households. Even if the gross domestic investment concepts of the BEA is adhered to, however, it is still possible to reorganize their national income accounts to reflect more nearly the saving and capital formation which takes place within specific sectors.[2] For present purposes the following sectors will be examined: (1) Households; (2) Mining and manufacturing; (3) Transportation, communication and utilities; (4) Other industries: agriculture, construction, trade, real estate, and services; (5) The Federal government and State and local governments; and (6) Foreign investment.

Household Sector

Ideally the household sector should be defined so that it would show the activities of families and individuals in their role as consumers. As defined in the national income accounts, however, the household sector includes in addition both nonprofit institutions (universities, hospitals, foundations, etc.) and unincorporated enterprises (farms, shops, etc.). Although it is not practical at this juncture to redefine the sector to exclude these elements, one can attempt to adjust its personal saving and capital formation to take into account some of the more obvious departures from what is wanted. For example, it is apparent that households do engage in capital formation when they

[2] Research on extending and resectoring the national income accounts and constructing subsector balance sheets is being carried out at the National Bureau of Economic Research under a National Science Foundation supported project, "The Measurement of Economic and Social Performance," NSF Grant No. SOC74–21391.

purchase a house to be used as a residence, and that the allowance for capital consumption of owner-occupied housing should be part of their gross saving. In the BEA accounts, the purchases of residences are treated as capital formation by business, and the capital consumption of owner-occupied houses as part of business gross saving.[3]

Another anomaly is the role of pensions and insurance contributions, which are included as part of household income and of personal savings. While it is true that some individuals make discretionary purchases of pensions and life insurance out of their current income, a more customary situation is one in which the employer provides pensions or life insurance as a fringe benefit. These fringe benefits are costs to the employer, but like social security they are withheld by the employer and should not be included in the employee's current disposable income, since the employee has no direct control over them. The argument that they represent future income and therefore should be included, or that the employee can borrow against them, is not relevant. The whole stream of future earnings represents future income, and an individual can in theory borrow against this too, but no one would suggest including it in current income. In welfare terms it is undoubtedly correct that pension and life insurance contributions improve the well being of individuals, but as a source of saving it is far more reasonable to treat the pension and insurance contributions in the receipts of a separate financial sector. Such a sector plays a very important role in providing funds, but this role is independent of the short run decisions made by households about the disposition of their current disposable income.

TABLE 2.—SAVING AND INVESTMENT ACCOUNTS FOR THE HOUSEHOLD SECTOR, 1948–75

[In billions of dollars]

Year	Personal saving (1)	Capital consumption allowances of owner-occupied housing (2)	Pension and insurance contributions (3)	Gross disposable saving (4)	Net purchase of owner-occupied housing (5)	Net financial saving (+) or borrowing (−) (6)	Type of period
1948	10.6	2.6	5.3	7.9	12.6	−4.7	Recovery.
1949	6.7	2.8	5.6	3.9	11.5	−7.6	Recession.
1950	10.8	3.1	6.9	7.0	16.4	−9.4	Recovery and Korean war.
1951	14.8	3.6	6.3	12.1	14.9	−2.8	
1952	16.0	3.9	7.8	12.1	14.7	−2.6	
1953	17.0	4.1	8.0	13.1	15.3	−2.2	
1954	15.6	4.4	7.9	12.1	16.7	−4.6	Recession.
1955	14.9	4.8	8.5	11.2	20.0	−8.8	Recovery.
1956	19.7	5.1	9.5	15.3	18.5	−3.2	
1957	20.6	5.5	9.5	16.6	17.2	−.6	Recession.
1958	21.7	5.9	10.4	17.2	17.5	−.3	
1959	18.8	6.4	11.9	13.3	21.1	−7.8	Recovery.
1960	17.1	6.8	11.6	12.3	18.9	−6.6	
1961	20.2	7.1	12.2	15.1	18.2	−3.1	Recession.

[3] The United States national income accounts include an imputation for the space rental value of owner-occupied housing, which is treated as a consumer outlay and thus reduces personal saving, although much of it does not represent any actual outlay. After deducting from the imputed expenditure the actual costs of maintaining the house (repairs, taxes, etc.), the remaining amount is split between (1) imputed capital consumption allowances, which are treated as part of business gross saving, and (2) imputed income of the homeowner in the form of net interest and rental income. In actuality, of course, the capital consumption allowances of owner-occupied housing do not accrue to any business; rather this part of the imputed expenditure of homeowners for space rental is kept within the household, so that it is in fact part of household gross saving.

TABLE 2.—SAVING AND INVESTMENT ACCOUNTS FOR THE HOUSEHOLD SECTOR, 1948–75—Continued

[In billions of dollars]

Year	Personal saving (1)	Capital consumption allowances of owner-occupied housing (2)	Pension and insurance contributions (3)	Gross disposable saving (4)	Net purchase of owner-occupied housing (5)	Net financial saving (+) or borrowing (−) (6)	Type of period
1962	20.4	7.4	12.7	15.1	19.1	−4.0	Recovery and Vietnam war.
1963	18.8	7.7	14.1	12.4	20.8	−8.4	
1964	26.1	8.1	15.6	18.6	21.5	−2.9	
1965	30.3	8.5	17.0	21.8	21.9	−.1	
1966	33.0	8.8	19.4	22.4	20.6	1.8	
1967	40.9	9.2	19.6	30.5	21.1	9.4	
1968	38.1	10.5	20.1	28.5	24.5	4.0	
1969	35.1	12.1	21.3	25.9	25.4	.5	
1970	50.6	12.8	24.3	39.1	24.9	14.2	Recession.
1971	57.3	13.7	27.7	43.3	35.5	7.8	
1972	49.4	14.7	30.3	33.8	44.4	−10.6	Recovery.
1973	70.3	17.1	31.6	55.8	45.0	10.8	
1974	72.2	19.8	38.9	53.1	38.5	14.6	Recession.
1975	84.0	22.2	*41.0	65.2	37.5	27.7	

Sources: Cols. 1 and 3 "Economic Report of the President," February 1976, tables B–18 and B–19. Cols. 2 and 5, Department of Commerce, revised national income accounts, table 8.3.

These adjustments to personal saving have been made in Table 2. The capital consumption allowances of owner-occupied housing have been added to the total of personal saving available to households, and pension and insurance contributions have been treated as a deduction from personal income. The resulting gross disposable saving available to households is shown as column 4. Column 5 shows net purchases of owner-occupied housing by households, that is, their capital formation. This amount subtracted from gross disposable saving gives the net financial saving, or when negative, borrowing, by household sector, excluding their pension and insurance contributions. For the period from 1947 through 1965 the capital formation of households exceeded their gross disposable saving, and the sector as a whole was a net borrower, not a source of saving. Since 1965, the failure of residential housing to maintain its vigor has led to the household sector's having some net financial saving over and above its pension and insurance contributions. In the context of the economy as a whole, however, this net lending is relatively small, varying from about −7 percent to +20 percent of gross saving. It is interesting to note that households' net financial saving was at its highest level in 1975, the period of deepest recession since World War II.

This situation is in marked contrast to the usual view of the household sector as a major supplier of savings, which are employed for capital formation by other sectors of the economy. In normal periods, it is not the thrift of the individual householder that makes possible the capital formation of the other sectors of the economy. In effect all the household sector is managing to do is to provide almost enough saving to cover its own purchases of durables.

TABLE 3.—SAVING AND INVESTMENT ACCOUNTS FOR MINING AND MANUFACTURING, 1948–75

[In billions of dollars]

Year	Capital consumption allowances (1)	Undistributed profits [1] (2)	Gross saving (1+2) (3)	Plant and equipment expenditures (4)	Net change in inventories (5)	Net financial lending (+) or borrowing (−) (3−(4+5)) (6)	Type of period
1948	6.3	2.6	8.9	9.9	1.2	−2.2	Recovery.
1949	6.6	4.4	11.0	8.0	−1.6	4.6	Recession.
1950	7.3	1.9	9.2	8.2	2.2	−1.4	Recovery and Korean war
1951	8.1	3.3	11.4	11.8	8.0	−8.4	
1952	9.0	4.1	13.1	12.7	1.9	−1.5	
1953	9.9	3.5	13.4	13.1	1.2	−.9	
1954	10.5	4.5	15.0	12.5	−2.6	5.1	Recession.
1955	11.1	6.8	17.9	13.2	2.6	2.1	Recovery.
1956	12.4	5.4	17.8	17.0	3.8	−3.0	
1957	13.4	5.4	18.8	18.2	−.3	.9	Recession.
1958	14.1	4.0	18.1	13.8	−2.1	6.4	
1959	14.3	6.6	20.9	14.2	2.2	4.4	Recovery.
1960	14.7	5.8	20.5	16.4	1.2	2.9	
1961	15.0	5.1	20.1	15.6	1.4	3.1	Recession.
1962	15.5	6.6	22.1	16.5	3.4	2.2	Recovery and Vietnam war.
1963	16.0	7.7	23.7	17.5	1.9	4.3	
1964	16.6	9.5	26.1	20.7	3.1	2.3	
1965	17.5	12.1	29.6	24.9	3.7	1.0	
1966	19.0	13.9	32.9	29.8	8.5	−5.4	
1967	20.8	11.3	32.1	30.2	5.8	−3.9	
1968	22.9	9.5	32.4	30.0	4.3	−1.9	
1969	25.0	5.7	30.7	33.5	4.6	−7.4	
1970	27.4	1.1	28.5	33.9	1.2	−6.6	Recession.
1971	29.5	4.6	34.1	32.2	−1.1	3.0	
1972	30.6	10.1	40.7	33.8	2.1	4.8	Recovery.
1973	32.2	8.8	41.0	40.8	6.2	−6.0	
1974	35.6	−2.0	33.6	49.2	8.3	−23.9	Recession.
1975	38.5	12.3	50.8	52.1	−7.7	6.4	

[1] Includes capital consumption and inventory valuation adjustments.

Sources: Cols. 1, 2, 5, from Department of Commerce, revised national income accounts, tables 6.24, 6.15, 6.23, 5.8; Col. 4, "Economic Report of the President," February 1976, table B38.

Mining and Manufacturing

The mining and manufacturing sector, which is shown in Table 3, accumulates its gross saving in the form of capital consumption allowances and retained earnings. In the recent revision of the national income accounts made by the BEA an adjustment was made to capital consumption allowances so that they would more correctly reflect economic depreciation rather than the book value depreciation charged by business firms. This adjustment has no net effect on the gross saving of a firm, however, since an equal and opposite adjustment is made to undistributed profits. The inventory valuation adjustment to corporate profits (and thus to undistributed profits) does affect the total, however. It is made to eliminate from profits gains attributable to the change in the prices at which inventories are valued. Gross saving (column 3) thus represents sources of funds available to producers aside from those arising from inventory profit or loss.

Capital formation by the manufacturing and mining sector is composed of their expenditures for plant and equipment and the net increase in the volume of their inventories. The difference between their gross saving and their capital formation (column 6) is the net lending or borrowing of manufacturing and mining enterprises. In some years this sector's gross saving exceeded its capital formation, and in other years its capital formation exceeded its gross saving. For

the period as a whole, however, mining and manufacturing just about covered its own needs. In fact, up through 1972 it covered more than 100 percent of its own needs. The major periods of borrowing occurred in years of either substantial inventory accumulation or low profits.

Transportation, Communications, and Utilities

This sector of the economy behaves quite differently from mining and manufacturing, as is apparent from Table 4. Gross saving in the form of capital consumption allowances and undistributed profits on average constituted little more than half of total expenditures on plant and equipment. Relative to capital consumption allowance, undistributed profits are small, and because capital consumption allowances increase continually over the years gross saving also reflects this increase. For the period from World War II to 1963, the rate of increase in plant and equipment expenditures in this sector approximately matched the rate of increase in gross savings, so that although there were fluctuations in net borrowing from year to year there was no substantial increase. Since 1963, however, expenditures on plant and equipment in this sector have increased substantially more than gross saving, causing the net financial borrowing to rise very substantially.

Other Industries

It would be desirable to examine other subsectors such as agriculture, real estate, and trade in somewhat great detail. Unfortunately at this time it is not feasible to separate these sectors statistically, so that they must be viewed as a consolidated group. In general these industries come fairly close to providing gross saving sufficient to cover their plant and equipment expenditures, but not the increase in their inventories, as is shown in Table 5. Thus for most of the period with the exception of the latter part of the Korean War this sector was a net borrower. Borrowing intensified when increases in inventories were substantial.

TABLE 4.—SAVING AND INVESTMENT ACCOUNTS FOR TRANSPORTATION, COMMUNICATION AND UTILITIES 1948–75

[Billions of dollars]

Year	Capital consumption allowances (1)	Undistributed profits [1] (2)	Gross saving (1+2) (3)	Plant and equipment expenditures (4)	Net change in inventories (5)	Net financial lending(+) or borrowing (−) (3−(4+5)) (6)	Type of period
1948	2.9	0.4	3.3	7.0	----------	−3.7	Recovery.
1949	3.0	.3	3.3	6.8	----------	−3.5	Recession.
1950	3.4	.5	3.2	6.8	----------	−2.9	Recovery and Korean war.
1951	4.2	.4	4.6	8.0	----------	−3.4	
1952	4.3	.4	4.7	8.3	----------	−3.6	
1953	4.6	.4	5.0	9.0	----------	−4.0	
1954	4.7	.2	4.9	8.2	----------	−3.3	Recession.
1955	5.1	.5	5.6	8.7	----------	−3.1	Recovery.
1956	5.6	.4	6.0	10.4	----------	−4.4	
1957	6.1	.2	6.3	12.1	----------	−5.8	Recession.
1958	6.5	.1	6.6	10.6	----------	−4.0	
1959	6.8	.4	7.2	11.0	----------	3.8	Recovery.
1960	6.9	.4	7.3	11.6	----------	−4.3	
1961	7.6	.4	8.0	11.2	----------	−3.2	Recession.

See footnote at end of table.

TABLE 4.—SAVING AND INVESTMENT ACCOUNTS FOR TRANSPORTATION, COMMUNICATION AND UTILITIES, 1948–75—Continued

[Billions of dollars]

Year	Capital consumption allowances (1)	Undistributed profits [1] (2)	Gross saving (1+2) (3)	Plant and equipment expenditures (4)	Net change in inventories (5)	Net financial lending(+) or borrowing (−) (3−(4+5)) (6)	Type of period
1962	7.4	.8	8.2	11.9		−3.7	
1963	7.7	1.3	9.0	12.3		−3.3	
1964	7.9	1.5	9.4	14.3		−4.9	
1965	8.5	2.2	10.7	16.3		−5.6	
1966	9.3	2.3	11.6	19.2		−7.6	Recovery and Vietnam war.
1967	10.1	1.2	11.3	20.7		−9.4	
1968	11.0	.2	11.2	22.7		−11.5	
1969	12.3	0	12.3	25.9		−13.6	
1970	13.7	−1.0	12.7	29.3		−16.6	
1971	15.8	−1.1	14.7	30.9		−16.2	Recession.
1972	17.3	−.9	16.4	34.6		−18.2	
1973	19.1	−2.8	16.3	37.6		−21.3	Recovery.
1974	21.2	−4.1	17.1	41.1		−24.0	
1975	23.4	−1.1	22.3	40.7		−18.4	Recession.

[1] Includes capital consumption and inventory valuation adjustments.

Sources: As on table 3.

TABLE 5.—SAVING AND INVESTMENT ACCOUNTS FOR AGRICULTURE, CONSTRUCTION, TRADE, REAL ESTATE, AND SERVICES, 1948–75

[In billions of dollars]

Year	Capital consumption allowances (1)	Undistributed profits [1] (2)	Gross savings (1+2) (3)	Plant and equipment expenditures (4)	Net change in inventories (5)	Net financial lending (+) or borrowing (−) (3−(4+5)) (6)	Type of period
1948	8.5	7.3	15.1	11.6	3.5	0	Recovery.
1949	9.6	4.2	14.5	12.1	−1.5	3.9	Recession.
1950	10.1	6.3	14.6	15.6	4.6	−5.6	
1951	11.8	3.9	15.1	14.2	2.3	−1.4	Recovery and Korean war.
1952	12.4	2.7	15.4	13.3	1.2	.9	
1953	13.0	2.8	15.5	15.5	−.8	.8	
1954	13.5	3.2	16.7	16.9	1.1	−1.3	Recession.
1955	14.3	5.3	19.3	20.5	3.3	−4.5	
1956	15.8	5.0	19.8	20.4	.9	−1.5	Recovery.
1957	17.0	4.1	20.6	20.4	1.6	−1.4	
1958	17.6	3.2	20.7	21.5	.6	−1.4	Recession.
1959	18.6	5.5	24.0	26.0	3.0	−5.0	
1960	19.3	4.7	24.1	25.8	2.6	−4.3	Recovery.
1961	19.4	5.4	24.6	27.1	.8	−3.3	Recession.
1962	20.2	9.1	29.2	31.2	3.1	−5.1	
1963	20.8	8.9	29.6	33.6	4.1	−8.1	
1964	21.9	10.9	32.6	34.3	2.7	−4.4	
1965	22.8	13.6	35.6	39.4	5.8	−9.6	Recovery and Vietnam war.
1966	24.6	14.3	37.9	40.6	5.8	−8.5	
1967	26.9	15.0	41.1	38.7	4.3	−1.9	
1968	29.3	16.4	44.1	46.6	3.4	−5.9	
1969	33.1	15.9	46.6	52.0	4.8	−10.2	
1970	36.9	10.4	47.3	48.9	2.6	−4.2	
1971	39.8	12.9	52.7	55.0	7.5	−9.8	Recession.
1972	42.8	16.7	59.5	66.1	7.3	−13.9	
1973	49.3	16.6	65.9	78.7	11.7	−24.5	Recovery.
1974	61.1	7.8	68.9	75.5	2.4	−9.0	
1975	77.3	−1.0	76.3	68.0	−6.9	15.2	Recession.

[1] Includes capital consumption and inventory valuation adjustments.

Sources: Same as table 3.

TABLE 6.—RECEIPTS, EXPENDITURES AND NET LENDING (+) OR NET BORROWING (−) OF THE GOVERNMENT SECTOR, 1948–75

[Billions of dollars]

Year	Federal			State and local			Total	Type of period
	Receipts	Expenditures	Net lending (+) or net borrowing (−)	Receipts	Expenditures	Net lending (+) or net borrowing (−)	Net lending (+) or net borrowing (−)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
1948	43.2	34.9	+8.3	17.7	17.5	+0.2	+8.5	Recovery.
1949	38.7	41.4	−2.6	19.4	20.1	−.7	−3.3	Recession.
1950	50.0	40.8	+9.3	21.3	22.5	−1.2	+8.1	
1951	64.3	57.8	+6.5	23.4	23.9	−.5	+6.0	Recovery and Korean war.
1952	67.4	71.0	−3.7	25.4	25.5	−.1	−3.7	
1953	70.0	77.1	−7.1	27.4	27.3	+.2	−7.0	
1954	63.7	69.8	−6.1	29.0	30.1	−1.1	−7.2	Recession.
1955	72.6	68.1	+4.5	31.7	32.9	−1.3	+3.2	Recovery.
1956	77.9	71.9	+6.0	35.0	35.8	−.9	+5.1	
1957	81.8	79.7	+2.2	38.5	39.8	−1.4	+.8	Recession.
1958	78.6	89.0	−10.4	41.9	44.3	−2.4	−12.7	
1959	89.8	90.9	−1.1	46.4	46.9	−.5	−1.6	Recovery.
1960	96.1	93.1	+3.1	49.9	49.8	+.1	+3.1	
1961	98.0	101.9	−3.9	54.0	54.3	−.4	−4.2	Recession.
1962	106.2	110.4	−4.2	58.5	58.0	+.5	−3.7	
1963	114.4	114.1	+.2	63.2	62.8	+.5	+.7	
1964	114.9	118.2	−3.2	69.5	68.5	+1.0	−2.2	
1965	124.3	123.8	+.5	75.1	75.1	0	+.5	Recovery and Vietnam war.
1966	141.8	143.6	−1.8	84.8	84.3	+.5	−1.3	
1967	150.5	163.7	−13.2	93.6	94.6	−1.1	−14.3	
1968	174.7	180.5	−5.8	107.2	106.9	+.3	−5.5	
1969	197.0	188.4	+8.5	119.7	117.5	+2.1	+10.7	
1970	192.0	204.2	−12.1	134.9	132.2	+2.8	−9.3	Recession.
1971	198.6	220.6	−22.0	152.6	148.9	+3.7	−18.3	
1972	227.5	244.7	−17.2	177.4	163.7	+13.8	−3.5	Recovery.
1973	285.3	265.0	−6.7	193.5	180.5	+13.0	+6.3	
1974	288.2	299.7	−11.5	210.2	203.0	+7.3	−4.2	Recession.
1975	286.5	357.7	−71.2	234.3	227.5	+6.9	−64.4	

Source: Revised national income tables 3.2 and 3.4, "Survey of Current Business," January 1976 and July 1976.

Government Sector

The government sector is shown in Table 6 divided into Federal on the one hand and State and local on the other. Federal government deficits generally reflect either wars or recessions. In the recovery of the early 1960s, there were deficits in 1962 and 1964 as a result of tax reductions and moderate increases in expenditures. In the recovery of 1972 and 1973 the deficit declined from its level during the 1971 recession, but it never went into surplus.

State and local governments present a somewhat different picture. During the first half of the period, i.e., through 1961, small deficits were quite common, reflecting the fact that during this period state and local governments were financing considerable real capital formation (though it is not treated so in the national accounts) due to the population and housing boom and the associated needs for expenditure on infrastructure at the local level. Since 1961, state and local governments have generally shown surpluses.

For a number of reasons, the surpluses and deficits of the Federal government and the State and local governments should not be considered separately. The Federal government through grants in aid and revenue sharing currently furnishes approximately $60 billion to State and local communities—an amount far larger than the surpluses of these governments. By this process funds are transferred

from the Federal government to State and local governments, adding to the deficit of the Federal government and making surpluses possible for State and local governments. Combining the surpluses of all levels of government, as is done in column 7, gives a more valid picture of the government sector's saving and borrowing activity. This consolidation emphasizes the importance of recessions and wars in determining the surplus or deficit of the government as a whole.

TABLE 7.—NET LENDING (+) AND BORROWING (−) BY SECTOR, 1948–75

[In billions of dollars]

Year	Households (1)	Insurance and pension contributions (2)	Mining and manufacturing (3)	Transportation, communications, and utilities (4)	Agriculture, construction, trade, and services (5)	Government (6)	Foreign investment (7)	Statistical discrepancy (8)	Type of period
1948	−4.7	5.3	−2.2	−3.7	0	8.5	−2.0	−1.2	Recovery.
1949	−7.6	5.6	4.6	−3.5	3.9	−3.3	−.6	1.0	Recession.
1950	−9.4	6.9	−1.2	−2.9	−5.6	8.1	2.1	2.0	Recovery and Korean war.
1951	−2.8	6.3	−8.4	−3.4	−1.4	6.0	−.3	4.0	
1952	−2.6	7.8	−1.5	−3.6	.9	−3.7	.2	2.7	
1953	−2.2	8.0	−.9	−4.0	.8	−7.0	1.9	3.3	
1954	−4.6	7.9	5.1	−3.3	−1.3	−7.2	.3	3.0	Recession.
1955	−8.8	8.5	2.1	−3.1	−4.5	3.2	.3	2.5	Recovery.
1956	−3.2	9.5	−3.0	−4.4	−1.5	5.1	−1.8	−.8	
1957	−.6	9.5	.9	−5.8	−1.4	.8	−3.6	.2	Recession.
1958	−.3	10.4	6.4	−4.0	−1.4	−12.7	−.1	1.7	
1959	−7.8	11.9	4.4	−3.8	−5.0	−1.6	2.0	−.2	Recovery.
1960	−6.6	11.6	2.9	−4.3	−4.3	3.1	−1.7	−.7	
1961	−3.1	12.2	3.1	−3.2	−3.3	−4.2	−3.0	1.6	Recession.
1962	−4.0	12.7	2.2	−3.7	−5.1	−3.7	−2.4	4.0	Recovery and Vietnam war.
1963	−8.4	14.1	4.3	−3.3	−8.1	.7	−3.2	3.7	
1964	−2.9	15.6	2.2	−4.9	−4.4	−2.2	−5.7	2.2	
1965	−.1	17.0	1.0	−5.6	−9.6	.5	−4.3	.9	
1966	1.8	19.4	−5.4	−7.6	−8.5	−1.3	−1.6	3.2	
1967	9.4	19.6	−3.9	−9.4	−1.9	−14.2	−1.2	1.7	
1968	4.0	20.1	−1.9	−11.5	−5.9	−5.5	1.4	−.6	
1969	.5	21.3	−7.4	−13.6	−10.2	10.7	2.0	−3.3	
1970	14.2	24.3	−6.6	−16.6	−4.2	−9.3	.3	−2.1	Recession.
1971	7.8	27.7	3.0	−16.2	−9.8	−18.3	3.9	1.3	
1972	−10.6	30.3	4.8	−18.2	−13.9	−3.5	9.8	1.4	Recovery.
1973	10.8	31.6	−6.0	−21.3	−24.5	6.3	.6	2.7	
1974	14.6	38.9	−23.9	−24.0	−9.0	−4.2	1.0	6.6	Recession.
1975	27.7	41.1	6.4	−18.4	15.5	−64.4	−11.9	4.4	

Sources: Cols. 1.6 from tables 1.6; cols. 7 and 8 from national income accounts, table 5.1, "Survey of Current Business," January 1976 and July 1976.

The Foreign Sector

Table 7 shows the net lending and borrowing activities of all of the sectors, including foreign investment (column 7) and the statistical discrepancy. When export markets are strong and exports exceed imports the United States will show positive net foreign investment; that is, the United States is lending funds for foreigners to purchase exports. Conversely when net foreign investment is negative this means that the United States is importing or providing net transfer payments to foreigners in an amount which exceeds what it receives for its exports, and thus is borrowing from the rest of the world. For most years, the net borrowing from abroad or lending to abroad is relatively small.

Summary of Sectoral Interrelations

In Table 7, the net lending and borrowing by all sectors including the statistical discrepancy adds up to zero, except for rounding errors and for some years a minor amount due to the excess of wage accruals over disbursements. Given the sectoring chosen for this analysis, it becomes apparent that insurance and pension contributions constitute a major source of intersectoral lending. Conversely, the capital formation of transportation, communication and utilities constitutes a major use of borrowing. The other sectors behave quite differently in prosperity and recession, and over time. The household sector, which was a net borrower up through 1965, became a net lender as residential housing declined, and in periods of recession it becomes a substantial lender due to the further decline in expenditures on purchases of new housing. The government shows substantial deficits in recessions and periods of war. Fewer generalizations can be made for the remaining sectors, although as was noted in the discussion of the individual sectors the role of inventory accumulation and the level of profits were important considerations.

Short-Run Economic Growth and Saving and Investment

It is widely recognized that many factors can affect the short run behavior of the economic system. Wars, changes in monetary and fiscal policy, and exogenous factors such as changes in world markets and variations in agricultural crops may all have a major impact. It is also true, however, that changes in the level of economic activity and normal economic growth will have feedback effects which in turn will alter the future performance of the economy. These feedback effects operate through a differential impact of growth on the saving and the investment which different sectors of the economy wish to do.

In the initial recovery from a recession, inventories, which had been declining during the previous recession, turn around and once again become a positive element in gross capital formation. With the upturn in the level of business activity profits are restored, so that undistributed profits become a major element of gross saving for enterprises. In this early phase capital formation in the form of fixed investment also turns around. Probably the most striking feature of this phase of the cycle, however, is the increase in government tax receipts which results from the higher income and profits which accompany the recovery period. In view of the sluggish nature of the government appropriation process, government outlays do not increase significantly during the recovery period; some outlays such as unemployment benefits and welfare costs may automatically drop off. As a result the government deficit declines sharply, reducing the amount of government dissaving. Thus in this early phase of recovery increased capital formation due primarily to the inventory turnaround is balanced by increased saving in the form of increased retained earnings and decreased government dissaving.

As the recovery proceeds, the rate of inventory accumulation dampens. Enterprises reach the point where they want no further increase in their stocks of raw materials and finished goods. The recovery to

this point will have resulted in some pickup in expenditures on fixed investment in anticipation of continued growth in demand and in light of increased profits. Government tax receipts continue to rise with the increase in incomes and profits, closing the gap between total revenues and outlays. Nevertheless, at this stage of the recovery the rate of increase is already slowing down, since the rate of increase in capital formation including inventory accumulation is advancing more slowly.

The point is soon reached when further expansion of the economy would generate more savings (due mainly to undistributed profits and tax revenues) than are needed to offset the expenditures on inventory accumulation and fixed investment which producers are willing to make. At this point unwanted inventories begin to accumulate, output is cut back to prevent further inventory accumulation, and the new recession begins. What has happened is that output is increasing at a faster rate than people are able to purchase it, given the substantial fraction of income that is siphoned off into profits and tax revenues. The contribution of the household sector to the entire process is relatively small in terms of fluctuations in either personal income or outlay. It is true that when unemployment rises a portion of the population is supported by unemployment benefits and welfare, and consumer spending on durables and housing fluctuates, and this does of course reinforce the short run fluctuation, but the magnitude of these fluctuations in the household sector is small relative to those in other sectors.

What is being described here is of course the classic inventory cycle, which has been well recognized in the theory of economic fluctuations and business cycles ever since work on these topics was initiated fifty years ago. In a modern economy, what makes the inventory cycle play such a dominant role is the fiscal drag generated by the automatic increase in government revenue, which drains off purchasing power during the later stages of recovery. This process aborts the recovery, usually before it reaches full employment. The mechanism does not depend in any way upon real capacity or availability of labor; it is a function entirely of the change in money GNP. If by chance due to war or some other exogenous circumstance the economy may be pushed to full employment, once the exogenous circumstance ceases this same mechanism will still operate to prevent the further expansion of money gross national product required to maintain real economic growth. Thus economic growth is frustrated and the average growth rate of the economy is restricted.

This explanation of the relation of short run economic growth to saving and investment behavior can best be related to the six periods of economic recovery in the last three decades in terms of the year-to-year changes in expenditures on inventories and fixed investment by the private sector and in the receipts and expenditures of the Federal government. Table 8 provides such data for the period since 1948.

In the first postwar recovery, there was during 1948 a substantial increase in inventory accumulation coupled with a strong increase in fixed investment and an increase in Federal expenditures. Federal revenues did not increase in this period because of tax reductions. In the next year, 1949, both inventory accumulation and fixed investment declined, bringing the recovery to a halt and causing Federal receipts also to decline.

TABLE 8.—ANNUAL CHANGES IN INVENTORIES AND FIXED INVESTMENT AND IN FEDERAL RECEIPTS AND EXPENDITURES, 1948–75

[Billions of dollars]

Year	Gross capital formation			Federal budget			Type of period
	Change in inventories	Fixed investment	Total	Federal receipts	Federal expenditures	Federal surplus	
1948	5.2	6.7	11.9	0	5.1	−5.1	Recovery.
1949	−7.8	−2.8	−10.6	−4.5	6.5	−10.9	Recession.
1950	9.9	8.7	18.6	11.3	−.6	11.9	Recovery and Korean war.
1951	3.5	1.8	5.3	14.3	17.0	−2.8	
1952	−7.1	.1	−7.1	3.1	13.3	−10.2	
1953	−2.7	4.0	1.2	2.7	6.1	−3.4	
1954	−2.0	1.4	−.6	−6.3	−7.3	1.0	Recession.
1955	7.5	8.2	15.6	8.9	−1.7	10.6	Recovery.
1956	−1.3	3.9	2.7	5.3	3.8	1.5	
1957	−3.3	1.5	−1.8	3.9	7.7	−3.8	Recession.
1958	−2.9	−4.5	−7.4	−3.3	9.3	−12.5	
1959	6.8	9.0	15.7	11.2	2.0	9.2	Recovery.
1960	−1.4	.4	−1.1	6.3	2.2	4.2	
1961	−1.6	−.6	−2.2	1.9	8.8	−6.9	Recession.
1962	4.3	6.6	10.9	8.2	8.5	−.4	Recovery and Vietnam war.
1963	−.5	5.5	5.0	8.2	3.7	4.5	
1964	−.2	6.6	6.4	.6	4.0	−3.5	
1965	3.7	11.7	15.4	9.4	5.6	3.8	
1966	4.8	7.7	12.4	17.5	19.8	−2.3	
1967	−4.2	.6	−3.6	8.7	20.1	−11.4	
1968	−2.4	13.1	10.7	24.2	16.9	7.4	
1969	1.7	13.0	14.7	22.3	7.9	14.4	
1970	−5.6	.2	−5.4	−4.9	15.7	−20.7	Recession.
1971	2.6	16.6	19.2	6.6	16.5	−9.8	
1972	3.1	25.2	28.2	28.8	24.1	4.7	Recovery.
1973	8.5	23.3	31.8	30.8	20.3	10.5	
1974	−7.2	2.2	−5.1	29.9	34.7	−4.8	Recession.
1975	−25.3	−6.0	−31.3	−1.7	58.1	−59.8	

Sources: Same as table 1.

The second recovery, starting in 1950, was again characterized by strong inventory accumulation and increased expenditures on fixed investment, a process that was already well under way when the Korean crisis occurred in the middle of the year. The increase in government revenues in response to the upswing was substantial, but government expenditures actually declined; gearing up for the war did not effectively get started until the following year. During the next two years, 1951 and 1952, however, it was the Korean war expenditures of the Federal government which kept the recovery going. Private fixed investment leveled off, and the rate of inventory accumulation declined. The Federal government during this period spent considerably more than it received. The recession of 1954 reflected primarily the sharp drop in Federal expenditures as the Korean war drew to a close. Private inventory accumulation and fixed investment did not take up the slack.

The third recovery, starting in 1955, repeated the pattern of 1950. Inventories, private fixed investment and Federal receipts all rose sharply, and Federal expenditures continued their decline. By the next year, 1956, however, the rate of fixed investment increase slowed, and the inventory increase declined. In the Federal sector, receipts increased faster than expenditures in both 1955 and 1956. By 1957 and 1958 gross capital formation was declining, and a recession set in—and once again Federal receipts fell below Federal expenditures.

The fourth recovery in 1959 again started out with precisely the same pattern as the previous recoveries, and again by the next year, 1960, the economy leveled off. Inventory accumulation declined and

fixed investment was essentially unchanged. The recession of 1961 again repeated the recession pattern, with government expenditures rising faster than government revenue.

The fifth recovery starting in 1962, however, differed significantly from the previous recoveries. In the initial year Federal expenditures increased substantially, matching the increase in Federal revenues. In 1963, private fixed capital formation continued to rise sharply, although inventory accumulation slowed. In 1964, the increase in Federal tax revenues dropped sharply as a consequence of a reduction in tax rates, and private fixed investment continued to increase. The recovery continued into 1965, with both fixed investment and inventory accumulation showing sizeable increases. By 1966 and 1967, the Vietnam war was causing Federal expenditures to increase more rapidly than Federal revenues, so that the slowing in private fixed investment and inventory accumulation was offset. In 1968 and 1969 the increase in private fixed investment once more resumed, as the rate of increase of spending on Vietnam tapered off, but at this stage the increase in government revenues substantially exceeded their increase in expenditures. By 1970, however, private fixed investment collapsed. The rate of inventory accumulation dropped, and the economy went into a recession. The year 1971 is more difficult to interpret. Although private fixed investment increased, Federal revenues rose less than expenditures, and as was noted in the discussion of Table 1, the economy did not rise fast enough to reduce unemployment.

The sixth recovery in 1972 again exhibited the typical pattern of the earlier recoveries. Private gross capital formation increased sharply, but Federal receipts rose faster than Federal expenditures and the recovery was short-lived. By 1974 private capital formation collapsed once more, and the economy went into its sharpest recession in three decades.

Thus five of the six recoveries and their subsequent recessions exhibited the same general pattern. The Korean and Vietnam wars obviously extended the recoveries underway in 1951 and 1965. With respect to the 1962 recovery, which was different from the others, it may well be that fiscal policy including increased Federal expenditures in 1962 and a tax reduction in 1964 had the result of stimulating investment over the period 1962–1964 and thus sustaining the longest recovery on record since World War II.

Although it is true that the automatic stabilizers reduced the severity of recessions by limiting the decline in money GNP, they also limited the increase in money GNP. Since the labor force was growing, the recoveries of 1956 and 1959 aborted at successively higher levels of unemployment; it is probable that the current economic recovery will abort at a still higher level of unemployment. The more economic growth is restricted, the higher the level of unemployment will be; unless the long run rate of growth of output is at least as high as the combined increase in the labor force and productivity, in the long run unemployment must increase.

Economic Growth and Wage and Price Stability

Many economists argue that continuous economic growth would result in price instability, and that the cumulative rise in gross na-

tional product must periodically be halted by recession in order to prevent runaway price inflation. According to this view, recessions represent periods of readjustment and realignment, in which structural readjustments take place and waste and inefficiency are eliminated. A variant of this analysis is the view that there is a trade-off between price stability and the level of unemployment and that as we approach full employment the shortage of labor will cause wages to be bid up, initiating a wage-price spiral; price stability can then only be restored by returning to a higher level of unemployment. More recently it has been suggested that the trade-off between prices and wages may grow less favorable during periods of recovery thus making the problem of trade-off even more serious.

In considering these views, it will be useful to examine the record since World War II. Unfortunately, there is no simple way to examine wages and prices. Many different types of price indexes exist. The wholesale price index, the consumer price index, and the implicit price deflator of the GNP each tell a somewhat different story in different periods, and the components of these indexes provide even more divergent information. Similarly, what is known about wages comes from imperfect wage measurements and even less satisfactory measurements of labor costs. Nevertheless, the main evidence that exists on price and wage behavior is given in Table 9. It is possible from this table to develop some meaningful generalizations.

If the wholesale price index is examined, one of the more striking sub-indexes is that relating to farm prices. It is generally agreed that prices of agricultural products are responsive to demand and supply conditions. Bumper crops tend to lower prices, and shortages cause prices to rise. Changes in the level of income in the economy also have a considerable impact on farm prices, a drop causing farm prices to fall, and a rise increasing farm prices. It is important to recognize that this fluctuation in farm prices will occur with changes in income whether or not the economy reaches full employment. The variability of farm prices has long been recognized, and there is a long history of agricultural price supports and other measures designed to introduce greater price stability for the farmer. Column 1 of Table 9 bears out this variability of farm prices, but it says nothing whatsoever about its relation to full employment.

TABLE 9.—ANNUAL PERCENTAGE CHANGES IN PRICES AND WAGES, 1948–75

Year	Wholesale prices		Consumer prices			Private nonfarm sector			Type of period
	Farm products	Industrial commodities	Food	Other commodities	Services	Compensation per hour	Unit labor cost	Implicit deflator	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
1948	7.6	8.6	8.5	7.7	6.3	8.9	5.6	6.6	Recovery.
1949	−11.7	−2.1	−4.0	−1.5	4.8	3.1	−.5	1.0	Recession.
1950	4.8	3.6	1.4	−.1	3.2	5.5	−.6	1.7	
1951	13.8	10.4	11.1	7.5	5.3	8.8	6.3	6.8	Recovery and Korean war.
1952	−3.9	−2.3	1.8	.9	4.4	5.5	3.2	1.7	
1953	−6.5	.8	−1.4	.2	4.3	5.7	3.6	2.2	
1954	−.3	.2	−.2	−1.1	3.3	3.2	1.3	1.6	Recession.
1955	−4.7	2.2	−1.5	−.7	2.0	3.5	.1	2.1	Recovery.
1956	−.7	4.5	.7	1.0	2.5	5.9	6.2	3.2	
1957	3.4	2.8	3.3	3.1	4.0	5.7	3.4	3.5	Recession.
1958	4.7	.3	4.2	1.1	3.8	3.7	.6	1.0	
1959	−4.7	1.8	−1.6	1.3	2.9	4.6	1.3	2.2	Recovery.
1960	.2	0	1.0	.4	3.3	3.9	3.2	1.6	
1961	0	−.5	1.3	.3	2.0	3.3	−.1	.8	Recession.

TABLE 9.—ANNUAL PERCENTAGE CHANGES IN PRICES AND WAGES, 1948–75—Continued

Year	Wholesale prices		Consumer prices			Private nonfarm sector			Type of period
	Farm products	Industrial commodities	Food	Other commodities	Services	Compensation per hour	Unit labor cost	Implicit deflator	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
1962	1.1	0	.9	.7	1.9	4.2	0	1.5	Recovery and Vietnam war.
1963	−1.0	−.1	1.4	.7	2.0	3.6	.5	1.3	
1964	−.6	.5	1.3	.8	1.9	4.8	1.2	1.3	
1965	4.2	1.3	2.2	.6	2.2	3.6	1.0	1.7	
1966	6.6	2.2	5.0	1.4	3.9	6.2	3.0	2.8	
1967	−3.4	1.5	.9	2.6	4.4	5.7	3.9	3.1	
1968	2.4	2.5	3.6	3.7	5.2	7.4	4.7	4.1	
1969	5.5	3.4	5.1	4.2	6.9	6.7	7.1	4.7	
1970	3.4	3.8	5.5	4.1	8.1	6.8	6.1	4.9	Recession.
1971	1.9	3.6	3.0	3.8	5.6	6.8	3.3	4.7	
1972	7.6	3.4	4.3	2.2	3.8	6.2	2.7	3.1	Recovery.
1973	30.0	6.8	14.5	3.4	4.4	7.8	5.7	4.2	
1974	11.5	22.2	14.4	10.6	9.3	9.5	12.2	10.1	Recession.
1975	3.8	11.5	8.5	9.2	9.5	8.9	8.0	9.9	

Source: "Economic Report of the President," January 1976. Cols. 1 and 2, table B50, p. 230; cols. 3, 4, and 5, table B46 p. 224; cols. 6, 7, and 8, table B31, p. 207.

The price index for industrial commodities is more complex. It is generally recognized that as the prices of raw materials increase these increases will be passed along through the stages of processing, but there is less agreement on whether or not producers increase their prices more than costs during economic recovery. Our ability to measure industrial costs and prices is not very good. The difference between list prices and transaction prices may be substantial. The specifications of products, change, and new products are substituted for old products. It is my own belief that over long periods the wholesale price index contains a substantial upward bias because it does not successfully capture the product innovation and improvement which results from economic growth. Because the bias in the long run must accumulate from bias in the short run, the year to year changes are also biased. It is generally argued that this bias is equally distributed over all years. Recently I have come to the view that product improvement is highly cyclical, and that the upward bias in industrial prices as reported in the wholesale price index is probably concentrated in the later part of the recovery. As column 2 shows, the changes in the wholesale price index for industrial commodities were not particularly significant for most years up to 1968. The effect of the Korean war in 1950 and 1951 was obvious, and the year 1956 showed a 4.5 percent increase in the price of industrial commodities, but there are reasons for suspecting that this increase in the price index may be exaggerated. For instance, in some industries such as electrical products, use of the wholesale price index to deflate the value of shipments data yields declining real output measures, at a time when direct measures of real output and employment in these industries were indicating substantial increases in output. Industrial price increases did not really become significant until after 1969. In 1974, a year of recession, they reached substantial proportions, but can be explained entirely in terms of passing along the increases in the prices of agricultural goods and oil.

Columns 3, 4, and 5 of Table 9 show consumer prices, divided into the three categories: food, other commodities, and services. They reflect quite well most of the forces making for changes in relative prices

in the economy. Food prices are obviously influenced by the price of farm products. They are modified, of course, by the fact that processing costs represent a large portion of the price of food, and these processing costs may alter farm product prices significantly. In a similar way other consumer commodities are closely related to the wholesale prices of industrial commodities, and again further processing tends to modify the fluctuations somewhat. Finally, services represent a wide variety of expenditures, such as rents, utilities, and personal services. Rents behave rather sluggishly and depend in considerable degree on the level of income in the economy and on rates of family formation relative to rates of residential housing construction. Utility rates are generally regulated and for many years they were stable or declining; more recently they have risen due to rising energy costs. The price index for personal services reflects the increase in wages quite closely. During this whole period it is apparent that there has been a continuous upward movement of the price index for services relative to those of food and other commodities. This is a result of the natural process of growth, and reflects relative price changes as wages move up faster than the prices of goods.

The measurement of wage behavior is even more complex than the measurement of commodity prices. The most widely used measure of wage behavior is average hourly earnings. It is this that most economists use to test the existence of a trade-off between the level of unemployment and wage change. However, because of the way the measure of average hourly earnings is computed it contains an inherent cyclical bias. Average hourly earnings are computed by dividing total wage bills for firms by manhours. In periods of expanding employment, new employees who are added by a firm tend to be less skilled and have less seniority, and so they are paid less than the average of existing employees.

This depresses the level of average hourly earnings, and understates the change. Thus the change in average hourly earnings contains the effect of this change in the mix of employees as well as the true change in wages. Conversely, in periods when firms are laying off employees those with lowest seniority and lowest skills go first, and the mix effect operates in the opposite way, raising the level of average hourly earnings. As a result, the increase in average hourly earnings during periods of decline is overstated. Some economists have treated the observed variability in average hourly earnings as an indication of lags in wage responsiveness, when it is merely the effect of the change in mix. This defect has been recognized by the Bureau of Labor Statistics, and they have undertaken to compile a new index called the Employment Cost Index, which will develop average hourly earnings for specific occupations. This new index would eliminate that part of the mix effect which arises from the shifting of employment among occupational groups, but the mix effect due to changes in the structure of seniority, age, sex, and races within occupation would still remain. What is really needed is a wage measure based upon observation of individual wage changes, placed in the perspective of lifetime patterns of earnings.

The compensation per hour shown in Table 9, column 6, is similar to average hourly earnings but includes the fringe benefits paid by the employer in addition to wages. These should be taken into account

since they are part of the cost to the employer. Although there is considerable variability in compensation per hour from year to year, no clear pattern emerges before 1968. Since then, increases in compensation per hour have been substantially larger than in earlier years. During this period unemployment has also been increasing, giving rise to a suspicion that changes in wages are more closely associated with changes in the cost of living than they are with the level of unemployment.

When unit labor cost (column 7) is examined, the situation becomes even more complex. Unit labor cost combines the effect of changes in compensation with that of changes in productivity. In certain periods the increase in labor cost is negligible, due to productivity increases that offset the increases in compensation per hour. In a few periods when recoveries were ending or recessions beginning, the change in labor cost actually exceeded the increase in compensation per hour, reflecting an overall fall in productivity.

Column 8 shows the implicit deflator of the GNP. The only periods of serious price inflation shown by this index are those of the recovery from World War II, the Korean war, and the period since 1968. There is no evidence at all that in earlier periods recessions were effective in reversing or offsetting incipient wage price spirals, and certainly since 1968 this has not been true.

Conclusion

The evidence supports the view that the failure of the economy to reach full employment and to enjoy substantial periods of continuous growth has resulted in a growth rate lower than that which could have been achieved. The mechanism that prevents the economy from reaching its growth potential lies in the behavior of sectoral savings and capital formation during the process of recovery. One the inventory turnaround has been completed, the increased saving due mainly to increasing government revenues is not matched by the capital formation that can be expected to take place in other sectors of the economy. As a result the economy levels off, inventories begin to accumulate, and a new recession sets in.

The evidence does not support the thesis that the slowdown in private capital formation occurs as a consequence of any real crowding out of private demands for funds by government borrowing; rather it is the funds that are siphoned off into increasing government revenues that reduce the purchasing power remaining in the rest of the economy so that it is unable to buy the increasing output. Government deficits in periods other than war have been entirely the result of the operation of the economy below full employment. Each peace-time recovery period, despite the failure of the economy to reach full employment, has resulted in a surplus for the government sector as a whole. Following the prescription that government expenditures should be cut or taxes increased in order to reduce government deficits would have resulted in longer and deeper recessions, more limited recoveries, even slower growth, less government revenue and—paradoxically—larger government deficits. The road to fiscal soundness is through the maintenance of prosperity, not through deeper and more extended recessions.

Nor does the evidence support the contention that recovery and economic growth lead to inflationary price increases. Although some increase in agricultural and raw material prices can be expected during a period of recovery and economic growth, this represents a normal relative adjustment of the price structure, reflecting changes in demand and supply. To prevent such price increases as these it would be necessary to prevent all economic growth. It does not appear that economic growth exacerbates the wage-price spiral. The existence of a trade-off between unemployment and wage changes is not supported by the data, and to the extent that economic growth results in productivity increases which dampen the increase in wage cost it may well be that growth is the only way to control the wage-price spiral. There undoubtedly is a wage-price spiral, since wages respond to increases in consumer prices. But if, as in recent experience, the government attempts to achieve price stability through restrictive measures the major effect will be to reduce real output and employment with little effect upon the price inflation.

Major Policy Recommendations

In order to reach full employment and maintain a high rate of growth, the Federal government must develop economic policies which will prevent economic recoveries from aborting. The first step in this direction is to reduce the fiscal drag which occurs during the recovery period and has the consequence of increasing saving faster than producers are willing to increase investment. Generally, producers are unwilling to invest large amounts to expand capacity at a time when both have substantial unused capacity and feel uncertain about the need for future capacity. When this point is reached in the recovery, stimulation of consumer and/or government expenditures is needed both to provide greater utilization of existing capacity and to encourage producers to increase their outlays for plant and equipment. Additional consumer or government expenditures at this juncture would have the effect of stimulating output and encouraging more investment, and thus permitting the recovery to continue.

While this suggests that in the recovery phase fiscal policy aimed at increasing consumer and/or government expenditures should be the main instrument for ensuring the continuation of the economic recovery, a monetary policiy which through low interest rates and credit availability would facilitate and encourage fixed investment and residential housing would also be important. The basic criterion of fiscal policy should not be whether the Federal budget is in surplus or deficit; rather it should focus on the purchasing power requirements of the economy. It is quite conceivable that even at full employment with low interest rates and easy credit availability the gross saving which the private sector would like to do in the form of capital consumption allowances, contributions to pension funds, retained earnings and disposable personal saving might exceed the gross capital formation it would like to carry out in the form of inventory accumulation, fixed investment, and owner-occupied housing. In such an instance the government sector would have to run a defiicit in order to keep the economy at full employment and maintain the normal rate of growth.

Part of the problem in considering the role of government surpluses and deficits is that the present government budgeting and national income accounting conventions do not provide the government sector with capital accounts as is done for producers in the private sector. Governments do, however, make substantial tangible investment in roads, buildings, and even plant and equipment. It is recognized that producers may legitimately borrow in order to finance their purchase of capital equipment, and that such borrowing can be repaid out of future earnings over the life of the capital equipment. The future earnings of government expenditures on similar capital goods are less identifiable, but there are some cases where it is possible. The highway system, for instance, produces revenue in the form of the gasoline tax, and buildings owned by the government provide space which would otherwise have to be paid for in the form of rent in future budgets.

If capital budgets were introduced for the government sector, it would become evident not only that the government sector produces a substantial current surplus, but that its gross saving, like that of most of the other sectors, was for the most part covering its gross capital formation. As in the case of the other sectors, it would not be logical to make a rule that the government sector should always exactly cover its own capital formation. If for a variety of reasons, the private sector is so constituted that at full employment its gross saving exceeds the gross capital formation that it can carry out, the Federal government should assume the responsibility of undertaking what is needed. Investments in the infra-structure of society not only are necessary, but may often be more important for future productivity increases than additional capital formation in the private sector.

Although the maintenance of the proper level of aggregate demand is a necessary condition for full employment and high economic growth, it is by itself no panacea. There can be structural unemployment which will persist even when there is sufficient aggregate demand. The private sector cannot be expected to absorb those unemployed who are not qualified to fill the available jobs. This is well recognized in developing countries, where the ability of the modern private sector to provide jobs falls far short of the available labor supply. The magnitude of this problem is, of course, very much less serious in the United States. The most popular approach has been to suggest training programs which would make those who were unqualified more qualified. The success of such programs to date has not been outstanding, but this may be in large part attributable to the general softness of the economy. When even those who are well qualified are unemployed it is not surprising that new trainees cannot be placed.

It has also been suggested that the government should be an employer of last resort, and that public service jobs should be found to employ those who cannot get jobs elsewhere. The argument against this proposal has been that it would build up an ever increasing government bureaucracy, a result which on the one hand would have to be paid for by the taxpayers and on the other hand would never get the unemployed back into useful productive jobs in the private sector. It is of course important not only that unemployed obtain jobs, but that the jobs which they perform contribute in an important way to

the output and productivity of the economy. If in a period of high employment some individuals cannot find jobs which will pay a living wage, it is then the responsibility of the government not only to employ such people, but to ensure that they are employed in a manner that contributes to the real output of society. They should be viewed as a resource which is available to be used to meet specific needs of society—not as a welfare responsibility which is only a cost. There are many tasks that need to be done which the private sector is not in a position to carry out, such as manning of day care centers, development of parks and recreation areas, support personnel in education and health areas, improving the quality of life of cities by better maintenance and beautification. All of these activities are highly labor intensive and if correctly structured can make use of individuals who have difficulty finding jobs in the private sector.

The operation of the economy at full employment levels may bring with it other problems of adjustment. It is frequently suggested that full employment would tend to accelerate into overfull employment, and thus to cause a wage-price spiral. Since we have not had full employment in the last three decades except in time of war, it is difficult to evaluate this argument. However, it is important to note that a condition of full employment and high growth is also a condition in which the rate of productivity increase is large and capital is being substituted for labor. This is borne out by the relatively small increase in manufacturing employment and the sharp decline in agricultural employment in the last three decades. What has grown in employment are the trade and service industries and the state and local governments. The increase in employment in these areas may reflect primarily institutional and budgetary conditions, rather than anything having to do with production functions or real demand. Thus the increase in doctors, lawyers, teachers, police, administrative and other support personnel hired by business and government may have occurred mainly because funds became available. A failure to fill some of these positions might not impose any barrier to further economic growth.

Nevertheless it is quite possible that economic prosperity and full employment might encourage wage-price spirals to develop. Employers with high profits would be in a weak bargaining position with unions, workers would not be afraid of unemployment, and job opportunities would be plentiful. The government would be in the awkward position of validating any wage-price increase that may occur in order to prevent it from eroding real purchasing power and thus bringing on a decline in real output. Under such circumstances it does seem reasonable that some national wage-price policies may have to be developed.

The reliance on recession as the control mechanism to prevent wage-price spirals is, however, not only much too costly, but quite ineffective as well. The last several years have demonstrated that wage-price spirals can occur despite considerable unemployment and recession. Recessions do not produce adjustments—rather they create major problems and delay needed adjustments. When profits are low, governments are in deficit, and people are unemployed, everyone is more interested in preserving the status quo than in taking the steps needed for basic changes. The changes which come about are usually the result

of bankruptcy and unemployment, which exact a very heavy social cost and are wasteful in even economic terms. It is only under the stimulus of growth, high profits and ready availability of jobs that people are willing to make the investments required to readjust to changed conditions. Future growth depends on healthy economic conditions in the present—not on recession and stagnation.

THE POLITICAL ECONOMY OF COMPARATIVE GROWTH RATES

By MANCUR OLSON* **

SUMMARY

Each of the major regions of the United States is larger than most of the countries of Western Europe and there are also some systematic differences in the policies of state and local governments in the different regions. Thus there is something to be said for looking at the growth of the different regions and states of this country in the context of a study of the growth rates of the major developed democratic countries. By treating the separate regions of the United States as though they were separate countries, and taking advantage of some insights that can be obtained only with an international perspective, it should be possible to get a better understanding of the single most important reason why the South has had a higher rate of growth in recent times than most other parts of the United States, and why the older industrialized sections of the United States, the East and Middle West, have been growing more slowly.

There have been two dramatic surprises in growth rates in the developed countries since World War II. One surprise was the extraordinarily rapid growth rates of Germany, Japan and (until recently) of Italy after their defeat and partial destruction in World War II. The other surprise was the slowness of the rate of growth of Great Britain, which in this period has fallen farther behind the other developed democracies.

The paper described here argues that these surprises were due mainly to the fact that democratic countries with freedom of organization gradually accumulate powerful common-interest organizations with monopoly power or political clout, and that these organizations (though they have some favorable effects, too) are likely to lower the rate of economic growth as it is measured in national income statistics. The paper develops a logical model based on the economists' theory of public goods which shows that this gradual accumulation of common-interest organizations is not an historical accident, but is rather inherent in the logic of the formation of organized groups.

The combination of totalitarian government and Allied occupation between them destroyed or discredited both labor and business organizations in the nations that were defeated in World War II. After their defeat brought free and stable conditions to Axis countries, they

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78-543—76——5

were able to grow at a very rapid rate, partly because there were very few organizations with special monopoly power or political strength.

Of all the nations of the world Great Britain has had the longest experience of industrialization and the longest record of political stability and freedom from invasion. As a result of this it has accumulated a denser network of common-interest organizations than any other country. This means that Britain suffers from an "institutional arthritis"—the "English Disease"—that greatly slows its rate of growth. The United States is second to Great Britain both in length of political stability (we had our Civil War) and in experience of industrialization, and has been second to Great Britain among the developed democracies in slowness of growth rate.

Within the United States there are of course great differences in the length of time regions have been industrialized and in their rates of growth. As the international perspective proposed here would suggest, the recently industrialized areas in the South and West are growing faster than older industrial areas in the East and Middle West. The development of common-interest organizations may also have gone farther in the Northeast, Middle Atlantic, and Middlewestern regions than in most of the West and the South. The paper being described here therefore tentatively explores the hypothesis that the South and West are the Germany and Japan of the United States, and that the older industrialized areas, and most notably New York City, are its England. The paper asks whether it is true that it was only with the emergence of the "New South" and the passage of civil rights legislation since World War II that the South acquired the legal order, stability, and institutions needed to end the outward migration of blacks and encourage the importation of capital from the North, and whether as a result of the Civil War, reconstruction, social divisions, and state policies, the South has not yet acquired as dense a network of growth-repressing organizations as some other parts of the United States. The paper also asks whether the Western parts of the United States, which were on the whole settled and urbanized after the East and the Middle West, have for this reason a tendency toward faster economic growth.

The modern economist can draw upon at least two hundreds years of cumulative theorizing and research and even on the ideas of a few men of undoubted genius. Whatever the limits of his own stature and vision, he can say with Isaac Newton that, if he should sometimes see farther ahead, it is because he stands on the shoulders of giants.[1] Nonetheless, when the economist is asked why some countries are growing faster than others, he must concede that he has not been able to see very much of the answer even from his lofty perch. Economic theory tells us much more about resource allocation and income fluctuations in the short and medium term than it does about long-run changes in technology, tastes, and economic organization; as others have said before, it is more nearly akin to Newton's mechanics than to Darwin's biology. Most economists agree that the study of economic development in the poor countries is not one of the more advanced specialties in

[1] Robert Merton has pointed out that, contrary to widespread scientific belief, this simile was not original with Newton.

economics. Though there are probably fewer comments about the limits of our understanding of the causes of the different growth rates in the developed nations—the ones to which this paper is addressed—these limits are almost as severe for developed as for the developing areas. This paper will attempt to enlarge our understanding by calling attention to one important influence on the rate of economic growth in the economically advanced democracies that has previously escaped notice. Economists have failed to see this important influence, not because the shoulders upon which we stand aren't tall enough, but rather because we have been loathe to turn our eyes away from our traditional line of vision and thereby failed to see a striking explanation of the most remarkable differences in growth rates just beside us.

The Sources and Causes of Growth

Some of the lacunae in the current understanding of the causes of the different growth rates in the developed areas are obscured by the frequent neglect of the distinction between the "sources" and "causes" of growth. The sources of growth are the increases in resources and other developments that are the immediate occasion of the increase in output: the additional capital that has been accumulated, the improvement in the quality of the labor force that can result from more education and training, the new technologies which increase the amount that can be produced with given resources, and so on. Obviously any increase in the quantity or quality of one or more factors of production, to advances in the state of technological or other knowledge which increase productivity, to improvements in the allocation of resources, and the like.

The sources of growth have the same relationship to the causes of growth as the small streams and lakes that the the "sources" for a river have to the meteorological and geological phenomena that explain why a given watershed has the location, shape, and flow of water that it has. The capital accumulation, for example, that is the source of some growth of income has in turn some more fundamental causes which also need to be explained. Why did the enterprises choose to make the number and type of investments they made? Why did those whose saving made the capital available choose to save rather than consume? Similarly, when there are technological advances, why did they take place? Why was the advance in knowledge sought? What were the conditions and incentives that led firms to put the advance in knowledge to use? Only when questions such as these can be answered do we know the causes of the growth in a given nation or period.

The sources of the growth of the major Western economies and of Japan since World War II are understood far better than the causes of growth, whether in these or other countries. This better understanding grows out of a number of pioneering studies, such as those of Moses Abramovitz, Soloman Fabricant, John Kendrick, Jacob Schmookler, Robert Solow, Dorothy Walters, and (above all) Edward Denison. Denison's classic study of *Why Growth Rates Differ* has more than once been called the most important empirical study to appear in economics since World War II. Econometric, index number, and social accounting tools needed for better estimates in the future, as well as provisional estimates, have been provided by Zvi Grilliches

and Dale Jorgenson (and collaborators). Because of these and other studies, the general order of magnitude of the more important sources of growth is becoming apparent. Though there have been great difficulties, for example, in distinguishing the effects of the advance of knowledge from measurement error and other manifestations of our ignorance, it is nonetheless becoming clear that such advances—increases in factor productivity—have been a very significant source of growth in the developed economies, at least in recent decades.[2] The natural satisfaction with the progress of these estimates of the sources of growth in the advanced economies may well have deflected attention from the inadequate state of our knowledge of the causes of economic growth, even in the most advanced and often-studied economies.

Some Unexplained Cases

There is dramatic evidence of the incompleteness of the present understanding of the causes of growth, and perhaps even a clue to a better understanding of the matter, in two important sets of facts, neither of which has been adequately explained. The first is the unexpectedly high rates of growth of the nations which were especially ravaged in World War II and which in addition suffered control or occupation by totalitarian regimes. Germany and Japan are two countries whose growth after World War II has been especially notable, but the rate of recovery of most of the Continental countries that had been fought over or defeated and occupied by the Nazis, and the progress of the Italian economy during much of the first two decades after World War II, also surprised most observers. So have the rapid rates of growth of Korea and Taiwan, both of which were freed from complete and extended subjugation to the Japanese dictatorship only at the end of World War II.

The second puzzle is found in the experience of Great Britain. As is well known, economic growth in Great Britain has been decidedly slower than that of other developed countries since at least World War I, if not since the 1870's. Britain's growth rate has been so far behind that of most other developed democracies that it now has a level of per capita income well below that of most comparable nations.

Though the relatively slow growth of the British economy and the unexpectedly rapid growth of the societies that were defeated and occupied in World War II have often been studied, no consensus about the causes of either of these occurrences has emerged. Some explanations of one or the other of these anomalous growth rates have received

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[2] Dale Jorgenson and Zvi Grilliches argued in 1969 that improvements in the quantity, quality, and utilization of factors of production explained 96.7 percent of U.S. growth, so that only 3.3 percent could be due to the advance of knowledge (outward shifts in the production function). ("The Explanation of Productivity Change," *Review of Economic Studies* (May 1969), pp. 31–64.) But when responding to Edward Denison criticism ("Some Major Issues in Productivity Analysis" *Survey of Current Business* (May 1969), pp. 1–27) they apparently concluded, on the basis of revised estimates by Christensen and Jorgenson, that the true level of growth of factor productivity was probably closer to Denison's original and higher estimates than to their own original calculations. (See their "Issues in Growth Accounting: A Reply to Edward F. Denison" in *The Measurement of Productivity* (Washington: The Brookings Institution, 1972), pp. 65–94.) Note also that Dale Jorgenson and his collaborators in the preparation of "An International Comparison of Growth in Productivity, 1947–1973" (presented at the November, 1975 meetings of the Conference on Income and Wealth of the National Bureau of Economic Research) found substantial increases in factor productivity in the several nations for which they made estimates. It now seems overwhelmingly likely that advances in knowledge or outward shifts of production functions do in fact account for a large part of economic growth, at any event in the developed Western nations and in Japan.

fairly wide currency, but (as later parts of this paper will attempt to show) none of these has, even if it is correct, the potential to explain more than a fraction of the difference in growth rates between Great Britain and the defeated and occupied countries. All of those supposed explanations that focus on some abiding feature of a country to explain its growth rate are moreover inherently insufficient, because they do not take account of the different relative growth rates in different periods of history. This is particularly true for Great Britain—any adequate explanation of the relatively slow rate of growth in that country in the present century must take account of the fact that for nearly a hundred years Britain usually had the highest rate of growth of all nations. So far as it is possible to tell from the fragmentary information available, Great Britain usually had the highest rate of growth of per capita income of any country from onset of the industrial revolution in the middle of the eighteenth century until approximately the middle of the nineteenth century. Beyond doubt Britain had by the end of this period become the economically most advanced nation in the world. Any explanation of the relatively slow rate of growth in Britain in the Twentieth Century must therefore need replacement or revision if it rests on some characteristic of British society, or one of its social classes, that also prevailed when Britain had the relatively highest growth rates, or if it fails to explain how whatever is supposed to account for Britain's relatively slower growth rate emerged sometime in the Victorian or Edwardian periods.[3]

The Formation of Organized Interest Groups

To explain the anomalous growth rates that have just been discussed, we must, as it turns out, take account of the role of organized interest groups or associations as well as the variables customarily included in an economic analysis. To understand these groups—labor unions, professional associations, farmers' organizations, lobbying groups, trade associations, and cartels—we must in turn have an adequate model or conception of their formation and functioning.

Any such model must spell out the implications of a fundamental common feature of all of the kinds of organizations in the list: the fact that, whatever else they may do, each and every one provides some service to everyone in some group. If a union wins higher wages the higher wages go to every worker in each relevant category; if a cartel raises the prices of some good, every firm selling that good in the relevant market enjoys the higher price; if a farm organization or other lobbying group obtains legislation favorable to some group, everyone in that group can benefit from it. In other words, each of the types of associations provides what the economist must define as a "public good": a good which goes to everyone in some group if it goes to anyone in that group. Though the phrase "public good" is in

[3] The absolute rates of growth of per capita income are indeed higher now than in the eighteenth century, in Britain as well as in other developed nations, presumably in large part because of the increase in the rate of advance of science and technology; the relative rate of growth of the British economy is on the other hand decidedly slower than in other developed nations. It follows that explanations of Britain's relatively slow growth rate in recent times could without logical error give a large role to some stable feature of British society, provided that they were combined with hypotheses about changes in other developed societies that grow faster. The focus would then be on the changes in other developed nations and on why Britain did not experience these changes.

many discussions applied mainly to certain goods provided by governments, such as pollution control, national defense, and law and order, there can be no doubt that most of the outputs of organized interest groups in the private sector are analytically identical to most of those of governments: neither governments nor organizations of interest groups in the private sector are able to exclude those in the relevant group from some or all of their services.

Economists have known for a long time that this was the reason governments cannot sell their most basic services in a market: the individual citizen has no incentive voluntarily to "buy" any defense, because he knows that he will in any case get the benefit of whatever resistance to invasion is paid for by others, and that in a large society he will get only a miniscule share of the benefits that result from his contribution. Thus every national government has to use compulsion in the form of taxation to finance its most basic services.

In 1965 this writer pointed out [4] that organizations in the private sector designed to further the common interests of large groups of people also cannot normally sell their basic services in a market, that is, rely on purely voluntary dues or contributions for support. If such associations are to operate for any length of time at a significant scale, they must either use some overt or covert form of coercion or else somehow offer some benefit in addition to their public good, which other benefit has the property that it can be withheld from those who do not join and thereby provide an incentive for paying dues.

The single most important type of organized interest group in the private sector is the labor union and it is well known that most strong unions in the developed countries enjoy some form of union shop, closed shop, agency shop, or other formal or informal arrangement which makes it costly or hazardous or simply impossible to get employment in certain establishments or occupations without paying dues to the union. Picketing, moreover, is characteristic of most strikes everywhere, and though most picket lines against firms with long experience of collective bargining are relatively peaceful, this is largely because the union's capacity to close down an enterprise against which it has called a strike (or its inability to do so) is clear to all; the early phase of unionization in this country as well as in others involved a good deal of violence on the part of both unions and anti-union employers and scabs.

In the United States the next largest organizations working for the common interests of a group are the farm organizations, and they have financed themselves primarily by "checking off" the dues for the farm organizations from the patronage dividends or rebates of farm cooperatives and mutual insurance companies, by allowing members favored access to the services of agricultural extension services, or by providing social events attractive to farm families spread out over sparsely settled rural areas.

The third largest interest groups in the United States, the professional associations, have used both types of methods to get members: coercion (the "closed bar") and offers of "private good" benefits (pro-

[4] "The Logic of Collective Action" (Harvard Economic Studies, Harvard University Press, 1965, 1971; Schocken Books, 1968). For the classic statement of the principal earlier view, see David Truman, "The Governmental Process" (New York: Alfred Knopf, 1958).

fessional journals, mutual insurance, testimony in malpractice suits, cheap group air fares, etc.). Organizations that represent relatively small groups of prosperous firms or individuals, such as trade associations, may be able to get by with providing only the public good they offer their clients, because each firm may get so large a share of the common benefit provided by the organization that it pays some firm to contribute enough to make sure the organization can function.

The Ultimate Pattern of Organized Interest Groups

The argument outlined in the previous section has several implications for the pattern of organization of interest groups in democratic society. One implication is that the largest and most scattered interests will presumably never be able to organize on a mass basis. Such groups as consumers, taxpayers, the unemployed, and the poor certainly have important common interests and surely would benefit substantially if there were effective mass organizations working on their behalf. But it is hard to see how any organizer or political entrepreneur could (unless he had substantial assistance from the government) manage to coerce such groups as consumers or poor people; these groups do not assemble at any one spot, the way the workers at a mine or factory do, and this means that nothing resembling the picket line would be feasible even if most consumers wanted it and the government would tolerate it. Nor does it seem possible to think of a way of getting enough resources in the private sector to induce the great mass of consumers, taxpayers, or unemployed or poor people to participate substantially in collective action in their group interest. Thus it seems reasonable to conclude that it isn't just an accident that there aren't mass contributions to consumers or taxpayer or poverty organizations in any of the economically developed democracies: this reflects the underlying logic of the situation and isn't likely to change.

A second implication of the model in the previous section is that even those large groups that can be organized into effective voluntary associations aren't usually so organized until some time after the common interests emerge. The organization of a labor union, for example, may wait until there is a jump in the demand for the relevant type of labor (in the United States, World Wars I and II, and especially the latter, were leading periods of union growth) so that scabs will be hard to find and employers would lose a great deal from a strike. In some cases when the other conditions are right, organization may fail for lack of imaginative leadership. In the case of interest groups that must trade a private benefit of some kind for participation in efforts to obtain a public good, successful organization is likely to require exceptionally favorable conditions as well as good organizational entrepreneurship. It won't be sufficient simply to set up some kind of business whose profits can finance mass participation to obtain a public good; profits are more easily sought than obtained, and if they are obtained those who promoted the business may decide to keep them for themselves. The successful large scale lobbying organizations without coercive power normally have to obtain or exploit some tax advantage (like the exemption from income and profits taxes of farm cooperatives and of non-profit professional associations) or

some special complementarity between the organization that is needed and a support-generating activity (like exploiting any desire for social interaction among the group with the common interest, e.g., the Grange, the American Legion, and some ethnic organizations). They may also need to work out special arrangements to make sure that any income generating activities stay under the control of the interest group (like the complicated "Kirkpatrick Plan" which keeps many farm cooperatives under the control of various state Farm Bureaus).

Historical experience similarly suggests that it takes quite a bit of time for large groups with common interests to organize. It was not until 1851, or virtually a century after the start of the industrial revolution, that the first true labor union (The Amalgamated Society of Engineers in Britain) was formed. Though in the United States there are some unions that go back to the second half of the nineteenth century, the bulk of the growth of labor unions came in the period from 1937 to 1945. This was of course quite some time after the country had achieved the industrialized status that seems most favorable to unions. Some continental countries have developed really powerful unions only after World War II or are only now developing them. The timing of the emergence of farm organizations has yet to be researched, but in the United States at least (though there were episodic bursts of agricultural organization in the late nineteenth century) it was not until the organization of the Farm Bureau (in league with the federally financed agricultural extension service) just after World War I that there was any large and stable national farm organization. Yet farmers constituted a very large part of the population and had significant common interests even at the founding of the American Republic. Many similar examples of how long it takes large groups, at least, to organize common interest organizations could be cited. The argument of the previous paragraph would suggest, again, that this slow accumulation of common-interest organization is not an accident, but a reflection of the inherent difficulty of organizing large groups to obtain public goods.

The Effect of Organized Interest Groups on Economic Growth

The part of this intellectual structure that needs to be built next is the one which will encompass the effect of organized interest groups on economic growth, or more precisely, the effect of organized interest groups on the producer rather than the consumer side. This is happily a relatively easy part of the argument to construct, since the effect of most such groups on economic growth (as it is conventionally measured) is surely predominantly negative. In saying this there is no attempt to deny that these organized producer interest groups serve useful functions. They will, for example, make political life more pluralistic and this may help to protect democratic institutions. Labor unions, moreover, surely perform a valued function in making employees feel more secure and less subordinate to their foremen or supervisors. Other contributions of such organizations could be cited, but this wouldn't help us explain international and intertemporal differences in the rate of economic growth.

One reason why the effect of organized groups on the producer side on economic growth is overwhelmingly negative is that these

groups systematically have an incentive to keep out new entrants to their industry or occupation. If a group of manufacturers can (by cross licensing of patents, or by exercising de facto control over its regulator, or by uniting to destroy any new competitor) keep out new entrants, they can get away with producing less and charging more for it. If physicians through medical societies can, even if only under the banner of "higher standards," limit the number of people who enter the health field, their incomes will be far higher. If printers' unions can through apprenticeship regulations or racial discrimination keep down the number of printers these unions can demand higher wages. Since rapid economic growth requires reallocations of labor and other resources as technologies, tastes, and resource availabilities change, such barriers to entry will not only make the national income lower on a one-time basis when they are first imposed, but will also reduce the rate of economic growth over the longer run by limiting the flow of resources into whatever industries and occupations should be expanding most rapidly.

Organized interest groups on the producer side also often have an incentive to block or delay the innovations that are the single most important source of economic growth. If an employer has an incentive to adopt a new technology, its adoption will normally increase the rate of growth. But the union representing the workers who might then need to find some other line of work can have an incentive to block the innovation or to demand that it can be used only if featherbedding maintains the firm's use of labor. Similarly, if one of the firms in a cartel-like trade association discovers a better way of doing things, a majority of the other firms in the association may have an incentive to have the trade association bar the new practice, however much consumers might have gained from it.

When producer groups demand favorable legislation from government, this also will in most cases lower the rate of growth. The tariffs they obtain will usually discourage the resources in a country from working in the lines in which that country has a comparative advantage. Price supports will discourage the use or consumption of some commodity that is relatively abundant. Tax loopholes will encourage capital and other resources to move into the activities that benefit from the loophole rather into those where the value of their output to society would be the greatest. The organized interest groups of course also have an incentive to seek government support for the barriers to entry we have already discussed.

Though organized producer groups of the usual type and pattern inhibit economic growth, it is important to emphasize that it is not common-interest organization *per se* that inhibits growth. Suppose, contrary to fact, that some common-interest organization enrolled all producers, whatever their industry, or role, or region, in a given society. It normally could not be in the interest of the members of that organization to have policies that inhibit economic growth (at least if the growth is properly measured, so that measured growth equals growth of true income). Particular sub-groups of the membership might of course gain from a growth inhibiting policy, but the output that was lost because of the policy would entail a loss for some other members of the organization: others would have to pay higher prices for the goods on which they spent their incomes, or wages, profits,

78-543—76——6

or rents of other sub-groups would fall, or some combination of the foregoing would occur. True growth by definition brings a net gain, so a sufficiently encompassing group that attempted to maximize the combined real income of its membership would have to favor a growth-enhancing policy. The practical problem, if the foregoing pages are correct, is that all-inclusive groups, such as consumers, are for fundamental reasons not organized, and that it is only particular groups of producers, rather than all producers together, that are organized. This means that the members of a typical common-interest organization can often gain substantially from a policy that reduces output of the society as a whole, because they get most or all of the gains of the policy and bear little or none of the costs.

From this it follows that we should expect that organizations representing relatively specialized, narrow, or local interests would tend to be less inhibited about growth-repressing policies than broader organizations. The highly specialized craft union, for example, will find that, though its featherbedding will have the "external diseconomy" of reduced national output, and will even typically reduce the aggregate earnings of the factors of production in the industry in which its members are employed, its own members bear such a minute share of these costs that the featherbedding may still be attractive. An organization that represents all of the workers, or all of the firms, in an industry, will have reason to be somewhat less restrictive. A union that represented all manual workers in a country, or an organization that represented all major businesses, or a political party that represented all of some broad social group, such as the "working class," would "internalize" so much of the "external diseconomy" of a growth-reducing policy that it is likely to do almost as much to promote growth as to prevent it. The implication of this is that the size and pattern of common-interest organizations in a country must be determined before the extent of their adverse effect on growth can be known.

Institutional Arthritis

We can now summarize the argument. Associations that provide public goods are for the most fundamental reasons exceedingly difficult to establish, especially for larger groups; no such associations will attract a significant percentage of large and scattered groups like consumers, taxpayers, or the poor; those associations that promote the common interests of some producer groups will be able to establish themselves only in very favorable circumstances and thus often only quite some time after the common interest came to exist; as associations of producers do emerge they tend to delay innovations and reallocations of resources that bring economic growth, though this tendency is greatly diminished if the producers' association includes a large enough proportion of those who lose from slowing the growth rate.

It follows that countries whose common-interest organizations have been emasculated or abolished by foreign occupation, totalitarian government, or political instability would tend to grow relatively quickly after a free and stable legal order is established. Perhaps this helps to explain why the observers of the physical and institutional destruction after World War II so greatly underestimated the growth the war-torn economies would achieve. Though there are no doubt also other relevant

factors of great importance, it is probably also significant that the underestimates of the prospective rates of growth were especially striking for Germany and Japan, where totalitarian governments followed by allied occupiers who were determined to promote institutional change, insured that institutional life would start almost anew after World War II. In Germany, Hitler had done away with independent unions as well as all other dissenting groups, whereas the Allies, through measures such as the decartellization decrees of 1947 and denazification programs had emasculated cartels and organizations with right-wing backgrounds.[5] In Japan, the militaristic regime had kept down left-wing organizations, while the Supreme Commander of the Allied Powers imposed the antimonopoly law of 1947 and purged over 4,700 officers of Zaibatsu or other corporations for their wartime activities.[6]

It also follows that the longer the period in which a country has had a modern industrial pattern of common interests and at the same time democratic freedom of organization without upheaval or invasion, the greater the extent to which its growth rate will be slowed by organized interests. This explains why Great Britain, which has not only the longest experience of industrialization but has also long remained free from dictatorship and defeat, has in this century had a lower rate of growth than other developed countries. This explanation (unlike some others) is not contradicted by the fact that Britain had a higher growth rate than other countries during its Industrial Revolution. Britain has precisely the dense and powerful network of common-interest organizations that the argument developed here would lead us to expect in a country with such a record of military security and democratic stability. The number and power of its trade unions is too well known to need description. The venerability and power of its professional associations is less famous, but still striking; consider the institutionalized distinction between solicitors and barristers, which could not possibly have emerged, at least in any rigid form, in a free market innocent of professional associations or government regulations of the sort they often obbtain. Britain also has a strong Farmers' Union and a great many trade associations of one sort or another. It is also the land where the word "establishment" first came to have its broader modern meaning, and however often the word may be overused it does still suggest a substantial degree of informal if not explicit organization of a sort that usually would emerge only gradually in a stable society.

There are, as we argued earlier, some alternative explanations of these cases that have circulated fairly widely. Some economists have attributed the speed of the recoveries of the vanquished countries to the importance of human capital as compared with the physical capital destroyed by bombardment, but this cannot be a sufficient explanation, since the war killed off many of the youngest and best-trained adults and interrupted education and work experience for many others. Knowledge of productive techniques had not, however, been destroyed by the war, and to the extent that the defeated nations were

[5] Gustav Stolper et al., "The German Economy, 1870 to the Present" (New York: Harcourt Brace and World, 1967), pp. 258–261.
[6] Richard E. Caves and Masu Uekusa, "Industrial Organization in Japan" (Washington: Brookings, 1976).

at a lower than pre-war level of income and merely needed to replace buildings or equipment that had been destroyed, they would tend to have an above average growth rate. But this could not explain why these economies grew more rapidly than others after they had gone through this stage and even after they had surpassed the British level of per capita income.

Some have alleged that the slow growth of Great Britain is because the British don't work as hard as people in other developed countries. The unusually rapid growth of Germany and Japan is in the same way said to be due to the special industriousness of their peoples. This explanation if taken literally is unquestionably wrong, though it may be that a closely related argument that would have some value could be constructed. The rate of economic growth is the rate of increase of national income, and though this could logically be due to an increase in the industriousness of a people, it could not at least in any straightforward way [7] be explained by their normal level of effort—this would of course be relevant instead to their absolute level of income.

Even if the alleged differences in willingness to work are in some way an explanation, they would not be sufficient unless backed up with an explanation of why those in the fast-growing countries happen to be zealous and those in the slow-growing countries happen to be lazy. And since several countries, most notably Great Britain, have changed relative position in the race for higher growth rates, the timing of the waves of greater or lesser effort also needs to be accounted for. To an economist the most plausible possibility is that any differences in industriousness are due to the different degrees of incentive to work to which individuals in different countries have become accustomed. These incentives, in turn, are strikingly influenced, whether for manual workers, professionals, or entrepreneurs, by the extent to which common-interest organizations protect their members from the rigors of competition. Thus the search for the causes of differences in the willingness to work, and in particular the question of why shirking should be thought to be present during Britain's period of slower-than-average growth, but not when it had the fastest rate of growth, bring us back to the more fundamental explanation of differences in growth rates that is being offered in this paper.

The United States

If the argument that has been presented here is correct, another country that should reveal many of the same symptoms as Great Britain, albeit in less striking form, is the United States. Though its experience of industrialization is decidedly shorter than that of Britain, it still is longer than that of virtually every other country. The United States also, with the single exception of its gigantic civil war, has an exceptional record of democratic stability and immunity from invasion. It also is described as a land of "joiners" and powerful pressure groups. Furthermore, as the agrument here would predict, it has, in much of the period since World War II, been second only to Great Britain among the developed democracies in the slowness of its growth rate. As Christensen, Cummings, and Jorgenson put it, "The

[7] Though those who emphasize laziness or love of work as explanations of differences in growth rates do not go into this, it is possible that differences in the conscientiousness of those who develop or adapt new technologies, or whose work affects the price of capital goods and thus possibly the rate of capital accumulation, could help to explain differences in rates of growth.

ranking of the United States in international comparisons of growth in real output . . . is always near the bottom. Our study is no exception to this general rule. During the period 1960–1973, the United States ranked eight of nine countries in growth of real output." [8]

Though the preliminary evidence suggests that the United States has exactly the ranking in growth rates that the model offered here would predict, it is too early to be sure how well the model fits this country. The United States is such a large and diverse country that averages for the nation as a whole may obscure profound regional variations that may have no less significance for the argument.[9] Edward Denison pointed out long ago in a somewhat different context that differences in output per employed workers in the different regions of the United States in 1960 were greater than those among the countries of Northwestern Europe. Different states of the United States also have different tax policies, expenditure levels, and labor relations legislation, with certain regions having systematically different state and local government policies than other regions.

The major regions of the United States are larger in size and population than many of the individual nations of Western Europe. It would therefore be better to do some research into the question of how well the argument developed here fits the different regions of the United States before passing judgment on the applicability of the argument to this country.

One of the tasks of this research would be to relate differences in growth rates among the different regions of the United States to the length of time they have had to develop industrial and urban organizations, to the extent to which their organizational evolution was retarded by the Civil War and its aftermath, and to the density of the organizational networks that they contain. An associate, Mr. Kwang Choi, is undertaking an empirical study of these and other relationships in a complementary project. Though his study is in a very early stage and further work may lead to very different results, his preliminary findings are nonetheless suggestive. He asked whether the growth of private nonfarm income by state in the 48 contiguous states in the last five years for which data were readily available (1969–74) could be explained in terms of the extent to which the state has long had a high level of urbanization or industrialization and by whether or not it had been defeated in the Civil War. A long experience of urbanization suggests that a state has had a long period in which to build up common-interest organizations relevant to the existing pattern of interests, whereas defeat in the Civil War suggests that a state has had a shorter period of political stability and less of an opportunity to accumulate common-interest organizations than otherwise comparable states.

Choi's provisional measure of urbanization was the proportion of the state's population residing in urban areas in 1900 and a dummy variable was used to indicate defeat in the Civil War. Choi's regression results showed that a larger percentage of urbanization in 1900 was associated with a lower, and defeat in the Civil War was associated

[8] "An International Comparison of Growth in Productivity, 1947–1973," *op. cit.*

[9] Moreover, as the country with perhaps the highest level of economic development, the United States has had very little opportunity to augment its rate of growth through "catching up" with technological leaders. Thus we should make a reasonable honorary addition to the United States growth rate to take account of the country's limited opportunity to borrow foreign technologies superior to its own. With such an honorary addition, the United States growth rate might still be on the low side, but we cannot know for sure.

with a higher growth of private nonfarm income. Both relationships were statistically significant and together they explained 42 percent of the variation in growth of private nonfarm income by state.[10] It is probably the case that the states with long histories of urbanization and which escaped defeat in the Civil War also have the denser network of common-interest organizations that the theory implies they would have, but this has not yet been definitely established.

Though idiosyncratic factors and the shortcomings of individual leaders were very important, it is also worth asking whether the special problems of New York City, the American city that has been a large modern city longest, are in part due to the logic developed in this paper. It would be nice to know, for example, whether the fascinating parallels between Great Britain and New York City drawn by Norman Macrae of The Economist in "Little Britain in New York" [11] would stand up to a systematic examination. In particular, are newer large cities in the South and the West typically in better shape than the older industrial centers of the East and Midwest? And in ways related to the evolution and structure of the organizational life within them?

Encompassing Organizations

It might seem at first glance that the relatively respectable rate of growth in Sweden contradicts the idea outlined here, since Sweden has enjoyed democratic freedoms of organization and security against invasion for some time. Many of Sweden's common-interest organizations are, however, highly centralized. It has only three principal labor unions and the largest of these represents a substantial proportion of the labor force. And, as the previous section of this paper showed, it follows from the public good/external economy logic on which this paper is based that relatively encompassing organizations internalize part of the external diseconomy of any anti-growth policies they might adopt, and should accordingly be ambivalent about such policies. Students of Swedish labor such as Walter Galenson have suggested that Swedish labor unions are unusally anxious to promote economic growth and that their leaders point out how growth is advantageous to their membership as a whole. The reasons for the relatively centralized common-interest organizations in Sweden need to be studied. The relatively small size and the ethnic homogeneity of the country and diverse other factors may be important, but it would also be interesting to determine whether the timing of Sweden's industrialization was a factor. Britain and the United States as well as some other countries had already industrialized, and even started to form unions and other common interest organizations, by the time Sweden began its industrial revolution. Could the example of unions and other such groups in other countries, perhaps especially Great Britain, have encouraged labor organizations or other organizational entrepreneurs to create unions and other organizations? The relatively specialized craft unions that sprang up spontaneously in Great Britain and to some extent in the United States in the nineteenth century were naturally fairly small, whereas organi-

[10] Kwang Choi, Thesis Draft Materials, Department of Economics, University of Maryland, 1976.

[11] "America's Third Century" (New York: Harcourt Brace, 1976), pp. 72–74.

zations founded by ambitious organizers might perhaps be as big as their organizers could make them. Certainly the unions that were organized in later periods in the United States tended to be large, industrial unions rather than small craft unions. One wonders whether it is generally true that spontaneously created common-interest organizations are smaller, and thus more harmful to growth, than those that are stimulated by example and organized according to some conscious design.

It would also be interesting to look at the experience of the German Federal Republic from this perspective. Though German labor unions, at least, are less centralized than those in Sweden, they are still far more centralized than those in Britain and the United States. The relatively small number of separate unions in Germany must not only have reduced growth-inhibiting jurisdictional disputes, but perhaps also given the German unions more inhibition about policies that reduce growth rates. It would also be useful to pinpoint the extent to which this relatively rational labor union structure is due to the conscious designs in the post-war period when these unions were created.

Internal Contradictions

If the foregoing argument is correct, there is a most disturbing "internal contradiction" in the evolution of the developed democracies. This is by no means the contradictionwhich Marx claimed to have have found, helpful as this bit of his terminology may be in describing it tersely. The contradiction is rather between our desire for democratic stability and peace, on the one hand, and our desire for realizing our full economic potential, on the other.[12] Even for those who, like this writer, are so intensely devoted to the democratic freedoms that they would fight for retaining them even if the cost were foregoing all further growth, this is not a happy finding. To some at least slight degree, this contradiction is ineluctable in that there appears to be no panacea that can entirely eliminate the tension that has been described.

To a degree—let us optimistically say, to a far greater degree—the contradiction is inescapable, in that changes in policies, procedures, and attitudes can eliminate most of the problem. Some of the adverse effects of striking asymmetries in political power among groups can be eliminated by special agencies and assistance for groups, such as consumers, that are under-represented, and by legislation designed to countervail the harmful effects of groups with monopoly power or disproportionate political organization. "Constitutional" or procedural rules, and even ethical precepts, which rule out or limit certain types of government intervention or private coercion, would come close to solving the problem.[13]

[12] A helpful critic in a Continental country with a long tradition of Marxian scholarship suggested that the contradiction I have described should be called a "contradiction of capitalism," apparently partly on the grounds that it applies to the countries many prefer to call "capitalistic—the nations with democratic as opposed to Communist or other dictatorial governments. From the perspective of the history of economic thought, however, this represents an astonishing change in terminology: it is a *democratic political system* with freedom of organization that characterizes "capitalism" and gives rise to its contradictions, not the economic forces at work in markets upon which Marx focused. On this interpretation, a prototypical and defining feature of capitalistic systems would be their willingness to allow workers to form independent unions.

[13] I am indebted to Abba Lerner and to James Buchanan for helpful insights on this point.

The Need for Growth

Economic growth as it is conventionally measured in national income accounts is not anything like a perfect measure of welfare or true income. In principle, we should, of course, prefer to compare and explain changes in well being or welfare rather than in measured per capita net national product, so that changes in the quality of the environment, in the degree of social disruption, and in other social indicators would be taken fully into account along with changes in market output. As one who has been studying the shortcomings of the national income statistics, the need for social indicators, and debates about the desirability of economic growth [14] for some time, this writer is far more concerned with this issue than most other economists are. He would after long reflection conjecture that the countries with relatively low measured growth rates have not actually fallen as far behind the nations with higher measured growth rates as the available statistics would suggest.[15] If there were better and more comprehensive measures of income the gap in growth rates between Japan and Great Britain, the opposite extremes among the developed democracies, would probably be a lot less wide. But it would surely still be there. There are a great many rather technical reasons why this is probably so, which need not be discussed here because they have been dealt with at length elsewhere.[16] But even a casual examination of emigration and immigration rates and many other choices supports the conclusion that the higher levels of measured income are usually very much worth having and their causes very much worth studying.

On the Shoulders of Giants

Only a detailed study of the economic histories of most of the developed economies with democratic governments could show definitively whether the argument offered in this paper is really satisfactory. It is, however, clearly consistent with the more conspicuous features of the experience of the developed democracies and certainly fits this experience better than any obvious alternative explanation. And if the argument here is correct, then the most puzzling and striking variations in growth rates among developed countries have been accounted for, and we have taken a tiny but badly needed step toward an economics that can encompass evolutionary changes as well as short term developments. It therefore seems very likely that the inadequacy of the economists' understanding of the causes of growth in the developed countries has been due, not to any want of stature in our predecessors in the field, but to the narrowness of our own preoccupations. Perhaps there is a lesson in this for those who are inclined to rebel against modern economics; the need is not to spurn what the great economists of the last two centuries have learned about the workings of markets, but rather to develop the breadth of vision needed to see these markets in the context of the organizational, political, and social processes that surround and pervade them.

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[14] Mancur Olson and Hans Landsberg, eds., "The No-Growth Society" (New York: W. W. Norton, 1974; London, Woburn, 1975); U.S. Dept. of Health, Education and Welfare. "Toward A Social Report," (Washington: U.S. Government Printing Office, 1969).
[15] "Mancur Olson, "Beyond the Measuring Rod of Money" (forthcoming).
[16] *Ibid.*

THE CHALLENGES OF NONECONOMIC FACTORS TO ECONOMIC GROWTH

By WILLIS W. HARMAN *and* THOMAS C. THOMAS*

SUMMARY

Proponents and opponents of continued economic growth both invoke improved quality of life as the primary rationale supporting their view. Different persons see differing pictures of economic and social reality. The complication introduced by this fact is of extreme importance to democratic decision making.

Three divergent pictures of economic and social reality are examined here: one in which continued economic growth is imperative, one in which it is considered improbable if not impossible, and a third in which economic growth becomes the wrong measure on which to focus attention in a changing societal context.

In the first perception of continued economic growth as imperative, the two necessities of near full employment and a strong economy to accomplish societal goals constitute sufficient reason to make lowered growth an unacceptable course. Limitations of the physical capacity of the world to meet human needs, while important to bear in mind, will not actually be approached for many decades. Meanwhile patterns of consumption will undoubtedly change markedly—quite likely in ways that will reduce demands on scarce resources and ameliorate environmental difficulties.

One problem that stands out in this view is the shortcomings of GNP as a measure of national welfare. To eliminate objectionable features of the GNP (e.g., its tendency to include both making a mess and then cleaning it up as contributions to the overall product), various alternative measures of net national welfare have been proposed. In this view availability of empirical time series for some such measure of net welfare would greatly contribute to the fruitfulness of public policy debates on the growth issue.

The second perception, of continued economic growth as improbable if not impossible, stresses the fundamental limitations of environment and resources, and the problems of managing an increasingly ungovernable system. Aspects of the management problem include difficulties in attracting capital to major investment needs, difficulties in carrying out large scale technological advances, deteriorating labor quality, and problems of increasing governmental regulation. Policy recommendations favored in this view include stronger conservation measures, decentralization, and development of appropriate technology.

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The third picture, which includes a radical change in the societal context, is the one where noneconomic forces act on the economy most strongly and change most rapidly with time. In this view the basic trends of the industrial era (including the trend toward continued growth) have generated conditions that necessitate major systemic change. Society is approaching a governance crisis of major proportions. Legitimacy of the old order is challenged on the grounds of new power concentrations not being duly constituted, guiding moral principles being inadequate, and societal problem solving efforts being ineffective. In this view appropriate policy measures include keeping energy and growth policies flexible, preserving options, attempting to strengthen the voluntary sector and fostering open dialogue on growth policy issues.

There are rational bases for choosing among these three pictures. However, for the time being it is probably impossible to obtain consensus that one picture is correct and the others are in error. Thus, since all three views are held by significant factions of the polity, it is probably desirable to adapt policy recommendations compatible with all three.

It is important to distinguish between the varying interests of stakeholders and the differing perceptions of reality that exist which make collective examination of these issues so difficult. Society has well recognized and institutionalized ways of dealing with interest-group conflicts; it does not have similarly satisfying ways of dealing with conflicting views of reality. Yet these diverse reality perceptions will be centrally involved in society's crucial endeavor to identify, explore, and assess alternative paths to the future and to choose wisely among them.

1. Introduction

To be convincing, analysis of the kind and amount of economic growth needed by society must be broadly conceived. Complexity and interdependence characterize modern society; growth is inextricably intertwined with problems of energy and materials supply, salubrity of the environment, personal safety, distributional equity, wholesome employment, fit education, and effective democracy.

Because of this interconnectedness of everything with everything, politicians and their technical advisers who have developed considerable self-confidence in their ability to choose appropriate actions for specific problems, approach this complex of interrelated issues with far less assurance. This unsureness is partly because of the well-known perversity of complex social systems (e.g., the tendency of second-order effects of policies to negate the intended effects), and partly due to the difficulties of integrating such incommensurables as economic growth, ethical choice, and quality of life.

In addition, however, the perplexity may be more subtly but as importantly a result of the quite different realities perceived by various groups in the society. To some it seems apparent that the quality of life will be threatened by low economic growth which leads to high unemployment and widespread poverty. On the other hand, the desirability of continued economic growth has been disputed by others who also invoke the quality-of-life criterion. For example, a 1969 National

Academy of Sciences report [1] concluded that the quality of life, involving flexibility of choices and freedom of action, is threatened by the demands of an expanding economy "in three principal ways: (1) through the restrictive and harmful effects of pollution; (2) through the increasing frequency and complexity of unconstructive but unavoidable human contacts; and (3) through the necessary increase in regulatory measures—all in consequence of increasing use of and competition for resources, space, recreation, transportation, housing, and even educational facilities." We must conclude either that the relationship between economic growth and quality of life is anything but clear, or that "different types" of economic growth and quality of life are the subject of the two views.

That different persons see different patterns of facts and issues, different pictures of economic and social reality, is evident in the public debates over growth issues—disputants sometime appear to be talking about different realities. The complication introduced by this fact is of extreme importance to democratic decision making.

Everyone has seen the type of visual illusion in which the observer sees, alternatively, a particular pattern as "figure" against the remainder of the display as "ground," or else the reverse. One observer may see a particular pattern or Gestalt, while another may see a wholly different configuration. Something like this clearly happens in human affairs, where one observer will perceive in a situation a particular meaning while a second, with essentially the same data at his disposal, perceives the situation quite differently. (The paranoiac is the obvious, if exaggerated, example.) In the more complex human situation there is nothing so neat as the "figure-ground" relationship. Eventually it may turn out that one perception was indeed more accurate or appropriate than the other. However, for the moment it may not be at all possible to establish that one perception or Gestalt is "true" and the other "false."

Recognition of differing perceptual Gestalts may be a useful concept in interpreting the arguments that surround the growth issue. If such an idea appears to be a weak tool in comparison with the seemingly more precise methods of statistical analysis, trend projection, and computer-based modeling, it is well to recall that just such a concept is central to modern historical methodology. History is intelligible, as has been said, in the sense that historians make it so. That is to say, the incomplete data and fragmentary descriptions of events of the past are viewed through, and in turn contribute to, some pattern of interpretation, some overall picture of meaning, some historical Gestalt. Revisionist history typically amounts to offering a competing Gestalt. The same concept of an interpretive Gestalt is central to other disciplines as well, notably anthropology, archaeology, and strategic intelligence. Thus an attempt to use it in "making sense" out of the extremely complex growth issue is not without reassuring precedent.

We wish to examine briefly three such pictures of economic and social reality. In one the nation cannot afford not to grow. In the second it is unlikely that the economy could possibly avoid a serious decline. In the third a cultural transformation may make it a "whole new ball-

[1] National Academy of Sciences/National Research Council Committee on Resources and Man, "Resources and Man." San Francisco : W. H. Freeman ; 1969.

game." Each of the three divergent pictures is a reasonable one; it could be the self-evident future seen by a reasonable person.

For the time being it may be quite impossible to establish which of these pictures is correct, since the available data can be fitted into more than one pattern. (This is not to gloss over the fact that the consequences of being wrong, in the end, may be quite different for the three.) Thus contemporary decision making has to be carried out not only amid data-uncertainty, but also amid pattern-uncertainty of a most fundamental sort. This is a fundamental political fact of the times.

2. First Picture of Reality: Indispensability of Continued Economic Growth

The first of these three worldviews assumes the desirability of continued high economic growth. For several decades the standard long-term economic projection for the United States, and indeed for nearly all the developed nations of the world, has been for around 4 percent real growth. Daniel Bell [2] assumes such high growth as we move into a post-industrial age in which material want is forever banished. Herman Kahn [3] assumes another century or so of continued high growth and of other components of the "basic long-term multifold trend" of Western civilization, during which time society diverges still further from pre-industrial societies in its unprecedented affluence, extraordinary development of technology, and institutionalization of secular, humanistic, and manipulative rationality.

Under the present economic structure high growth is necessary for the society to meet the goal of full employment. The rate of growth will have to increase in the future if the percentage of the total population desiring employment, as well as the size of the labor force, continues to rise through the rest of the century. Assuming present labor participation patterns and trends, available labor supply will increase over 22 percent by 1990 (compared with an overall population increase estimated at 9 percent). This is the consequence of entrance of persons already born (the postwar "baby boom" moving into the work force), plus the still increasing participation rate of women. (Wives, and also others with alternative bases for support or income sources, have come to understand that societal respect and personal freedom tend to accompany not income alone, but a paying job.) Furthermore, this expanding labor force will have characteristics which in the past have contributed to growth and increased productivity. Despite some undertrained subgroups it will be more highly educated than any labor force in history.

The government can be expected to take the necessary steps to ensure near full employment because of the political consequences of having large numbers of unused, unwanted persons desiring unavailable work. Potential barriers to full employment can be pragmatically overcome. For example, energy and material shortages can be resolved with science and technological innovation, with conservation incentives, and with sectoral shifts in the economy, away from energy and materials sectors and toward services. These full employment meas-

[2] Bell, Daniel, "The Coming of Post-Industrial Society." New York: Basic Books; 1973.
[3] Kahn, Herman, "The Next 200 Years." New York: William Morrow; 1976.

ures to ensure effective utilization of the nation's talented and rapidly growing manpower, will be accompanied by high economic growth. Around 6 percent a year real GNP growth will be needed to satisfy the projected demand for jobs (which is increasing at almost a 2 percent annual rate).

This argument assumes—and a strong case can be made for the assumption—that no physical or technical shortage of any resource required for economic growth is likely to directly limit growth, given the necessary degree of sociopolitical foresight and the social will to act on it. While there undoubtedly are limits to the physical capacity of the natural world to meet human needs, they are not that close at hand. It may be also true that current patterns of consumption cannot persist indefinitely—but the nature of economic growth has always involved changing patterns. The street railway and the steamship were replaced, for personal transportation, by the automobile and the airplane—with, as has been well noted, dramatic increase in energy consumption. However, vacuum-tube and mechanical relay communications technologies were replaced with transistors and integrated circuits which use less energy. As Schumpeter claimed, economic growth is a process of creative destruction, in which a series of different technologies emerge and gradually disappear.

Thus both the political necessity of near full employment and the requisite of a strong economy to accomplish societal goals demand continued economic growth. The high educational level of the work force suggests that the growth should be in sectors that produce challenging work for highly trained minds if serious underutilization of talents is to be avoided. Environmental and resource depletion constraints further shape the kind of growth that national policy is likely to foster.

3. Critique of the GNP Goal

Looking more closely at the growth areas that are the most likely candidates to provide this needed employment, we observe a disquieting characteristic. Many of them represent activities whose function is to overcome problems that economic activities have created. Thus pollution abatement—reducing air and water pollution, and controlling hazardous substances—is touted as a growth industry, providing jobs associated both with manufacturing, selling and installing pollution control equipment, and with the government in regulation and enforcement. People-moving systems may represent a growth area for the future, as attempts are made to solve the traffic congestion problems which automobiles and freeways have bequeathed to our cities. Safety already shows signs of being a significant growth area of the future; the rapidly increasing demand for private protective services is indicative of the potential of crime, violence, and social dissension for creating jobs.

The health care industry may undergo significant expansion to handle the stress-related diseases and the impacts of health of pollutants and hazardous substances which are increasingly prevalent in modern industrialized society. Entertainment of those bored with leisure provided by modern society is another rich source of job opportunities. Finally, defense spending and arms supply to the world constitutes a tried and true job creation approach.

All of these have a common characteristic: While they provide employment and increase the GNP, their contribution to the national welfare is less clear; they mainly represent attempts to cancel out the consequences of other economic activities. Such defensive measures are clearly not what Bell had in mind in describing the swelling service economy of post-industrial society. Nor are they what Galbraith [4] means when he speaks of the need to provide more public goods.

The above observation indicates the necessity of being more specific about what is meant by "economic growth." Probably there would be general agreement that economic growth involves growth in the production of goods and services, which in turn results in more jobs and higher per capita real income. More specifically, economic growth might be asserted to be growth in the Gross National Product in either absolute or per capita terms. However, GNP is an accounting concept that is neither designed nor claimed to be a measure of welfare or well-being. It excludes a number of items that nearly everyone would agree contribute to well-being; for example, the value of leisure time and the value of volunteer work and unpaid work performed in the home. At the same time, GNP includes the market cost of the aforementioned defensive measures which are not a net addition to welfare but merely attempt to mitigate the negative benefits to pollution and environmental deterioration, urban congestion, loss of privacy, rising crime, and depletion of natural resources.

When Simon Kuznets and his colleagues were developing the national income accounts they originally sought to provide a measure of the national welfare. However, recognizing that not all dollars of income or expenditures contribute equally to welfare, it was necessary to make a practical and somewhat arbitrary set of decisions about what could and should not be included in these accounts, and how the various flows were to be valued. These decisions were conditioned by practical realities and by the prominence of the concept of effective market demand for goods and services in the influential neo-Keynesian theories.

As the "growth versus welfare" debate warmed up toward the end of the 1960s a number of economists suggested the development of a measure which would be a return to the original concept of a measure of national welfare. Three such proposals are the "measure of economic welfare" (MEW) proposed by Nordhaus and Tobin,[5] the "welfare GNP" of Sametz,[6] and the "net national welfare" (NNW) of the New Measurement Committee of the Economic Council of Japan.[7] All three of these measures have in common the attempt to eliminate from the GNP those "defensive expenditures" which do not improve the welfare of the citizen, and include values imputed to leisure, nonmarket work, and the capital services of consumer durables and government investments. In our present society the growth rate of both the MEW and the NNW is substantially less than that for

[4] Galbraith, John K., "Economics and the Quality of Life," in "Economics, Peace, and Laughter." Boston: Houghton Mifflin; 1971.
[5] Nordhaus, William, and James Tobin, "Is Growth Obsolete?", in "Economic Growth." National Bureau of Economic Research. New York: Columbia University Press. 1972.
[6] Sametz, A. W., "Production of Goods and Services: The Measurement of Economic Growth," in "Indicators of Social Change, Concepts and Measurements," ed. E. B. Sheldon and W. E. More. New York: Russell Sage Foundation, 1968.
[7] Economic Council of Japan, New Measurement Committee, "Measuring Net National Welfare of Japan." Tokyo, 1973.

the GNP. Furthermore, this difference will grow over time if, as expected, waste and pollution increase faster than output.

The distinction between these two types of measures, of aggregate demand and national welfare, is crucial to the growth debate. They focus attention on finding strategies to increase the national welfare without adding to waste, pollution, and resource depletion problems. Measures of national welfare could help shift the discussion from a "growth versus no growth" confrontation to a more profitable dialogue on what kinds of growth to what ends? At the present time empirical time series for net national welfare are not available to shed light on public policy debates. Moreover the effort being directed to creating such measures is minute compared to the effort used just to maintain the GNP system.

As long as GNP and related time series hold the center of the stage, their presence has a limiting effect on the quality of growth policy debate. Either GNP becomes the focus that sets the terms of the discussion, with more qualitative considerations tacked on as an appendage, or GNP is rejected and with it the opportunity to formulate the debate around an informative measure. Thus availability of a more relevant empirical time series such as the NNW would allow the growth debate to proceed on a new plane, illuminated by empirical measures appropriate to the questions being asked.

Gunnar Myrdal in his book "Critical Essays on Economics" [8] views the issue from the perspective of the social critic and proposes a major reformulation of the issues of growth itself. He urges recognition of a more basic distinction, one between economic growth and "development." By the latter he means to refer to "movement upward of the whole social system"—"not only production, distribution of the product, but also levels of living, institutions, attitudes, and policies." Development is seen as a multi-dimensional concept; the factors that make it up are to be recognized as incommensurable, interdependent, and in general not given a unique monetary value in the marketplace. He sees a fallacious precision in aggregating some factors in development which happen to be more easily expressible in monetary terms, and neglecting others that do not have that characteristic.

Unfortunately, as Myrdal recognizes, many of the issues he raises have long been known to those who construct the national accounts, but neither they nor Myrdal have effective suggestions for reaching the objectives proposed. Nevertheless, because the growth issue is so important we cannot wait for perfection. A wise course would seem to be to assign high priority to creation of the best measures of net national welfare that can be constructed in a relatively short time, and to begin computing and publishing those data by the end of the decade.

4. Second Picture of Reality: Inevitability of Declining Growth

In the second perception to be examined, low or declining growth is being forced upon us by various planetary limits and because the system has become so complex that its management is a nearly overwhelming task.

[8] Myrdal, Gunnar, "Against the Stream." New York: Random House, 1973.

Critics of this view speak of its "neo-Malthusian pessimism"; however, its adherents contend this is realism. Georgescu-Roegen [9] argues that it is no accident, but rather a fundamental characteristic of the economy, that material resource use, energy use, and pollution rates have all risen essentially proportionally with GNP or other similar measures of economic activity (including the economic activity of "pollution control" which, generally speaking, amounts to shifting waste from one form to another). Rappaport [10] discusses adaptability, the ability of societies to deal with both short-term fluctuations in their environment and, by transforming their own structures, nonreversing longer-term changes as well. He argues that highly industrialized society may have lower adaptability than more decentralized societies with nearly self-sufficient local economies. "As energy flux has increased, the disparity between the direction of cultural change and the goal of biological survival has widened."

Thus at one level the limits to growth appear to be pollution, resource depletion, environmental degradation, and effects of crowding. At another level they are the problems of managing an increasingly ungovernable system. To elucidate this latter argument, let us look briefly at examples of management problems in four areas—major capital investment, large-scale technological advances, labor quality, and governmental regulation.

Major Capital Investment.—Present technologies and living patterns are built around the availability of low-cost energy and essentially free waste exhaust to the environment. The fact that this availability can no longer be assumed requires moving toward a much more energy-conservative and nonpolluting economy and society. This in turn will require replacement of industrial capital, much existing household equipment, and a large portion of the capital stock in transportation. Large energy projects and environmental control measures alone are estimated to require capital in the amount of a trillion dollars in the next decade or so. To attract capital to these uses necessitates a stable business environment. Yet the business environment of the near-term future is very unpredictable for a host of reasons—uncertainties in energy price and allocation, federal regulatory actions, environmentalist and consumer actions, court decisions involving settlements and delays which increase construction costs. These uncertainties are not, it should be noted, the uncertainties of natural forces—those we have learned to deal with. These are the uncertainties of unmanageability, arising from the impinging on the economy of noneconomic factors.

Large-Scale Technological Advances.—Any change in the production function which might counter the neon-Malthusian postulate would be likely to depend upon technological innovation. Yet here too a number of developments conspire to limit progress. Both public and private R&D spending are down from what they would have been had the trends of a decade ago continued. Venture capital for small new technologically innovative corporations has dried up. Furthermore, all industrial nations are finding it increasingly difficult to carry out large-

[9] Georgescu-Roegen, Nicholas, "Energy and Economic Myths," "Southern Economic Journal," Vol. 41, No. 3, pp. 347–381.

[10] Rappaport, Roy A., "Energy and the Structure of Adaptation." The CoEvolution Quarterly, Spring 1974, pp. 20–28.

scale technological projects in critical fields such as transportation, energy supply, food production, housing, and urban rejuvenation.

The apparent and immediate reasons for this latter situation vary—from environmentalist opposition and delays that cause costs to skyrocket, to cost overruns due to labor demands, to increasing fuels prices and capital shortages, to fluctuating regulatory environment, to unexpected developmental costs. More generally there is evidence of a basic trend in post-World War II production technology toward diminishing capital productivity.[11] And more fundamentally still is a growing disenchantment with big technology that manifests itself both subtly and overtly in obstructionist actions. While the precise reasons for the difficulties may be obscure, contemporary failures contrast sharply with such earlier success stories as railroads, airlines, automobile production lines, large power plants, and agribusiness—and, of course, the Manhattan Project and the Apollo Program. The comparison contributes to the growing disbelief in promised benefits and discourages both private and public investment from taking bold innovative risks.

Labor Quality.—Labor quality, as measured by educational attainment, has certainly been increasing as previously noted. However, when persons are employed at tasks that do not use their trained skills nor challenge their basic competencies, morale and performance suffer. Thus, although it is difficult to obtain suitable measures, expressions of worker discontent, evidence of worker negligence and the decline of craftsmanship, and manifestations of anti-work attitudes (e.g., sabotage, pot smoking on the job, alcoholism) all suggest that the quality of workmanship is probably declining in spite of the increased educational levels.

Governmental Regulations.—Today's high technology growth economy appears intrinsically to require ever-increasing regulation, because of a number of developments, including:

Progressive degradation of the environment by the waste products of industrialized society;

High rate of introduction of new synthetic chemicals(upwards of 1000 per year) whose long-term effect on man and his environment may not be known for decades;

Need to take anticipatory actions regarding resource depletion (in advance of market-response price increases), especially in the areas of fuels, minerals, and arable land;

Possible long-term threats to natural ecological systems and planetary life-support systems;

Amenity, ecological, health and aesthetic impacts of large energy- and resource-related projects;

Aggravated distrust of business and increasing doubt that the economic criteria of business decision making are leading the society to good social choices.

The problems arise because regulations often fail to achieve the goals intended. Specific remedial actions (e.g., to reduce air pollution) interact with other regulatory actions (e.g., for occupational health and safety, for energy conservation) in ways difficult to predict; belated regulation can render long range planning nearly impossible.

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[11] Commoner, Barry, *The Poverty of Power*, pp. 223–227. New York: A. A. Knopf, 1976.

Few people argue that regulations should be abandoned. For better or worse they are necessary for our current society. However, they raise the basic problem of whether our economic system can continue to operate effectively, resilently, and flexibility in the face of a rising tide of restrictive regulations. The problem impinges not only on the rate of economic growth, but ultimately on the very "freeness" of the system.

The Management Problem.—Problems in all four of these areas are aspects of the central unmet challenge that could bring about a low-growth future, namely our ability to democratically manage an increasingly large, complex, interconnected, industrialized social system.

What has happened is that as the society has become more populous, complex and interrelated, it has aggregated what were comprehensible smaller systems into larger and oftentimes incomprehensible super-systems of such proportions that they seem increasingly beyond direct comprehension and control. Many of the behavioral properties of the large systems upon which we so rely seem to conflict with the purposes for which those systems were originally created; large systems seem to tend toward conditions of relatively low performance, they appear to become increasingly vulnerable, beyond a certain point they seem to increase the strain on social cohesion, they tend to diminish the significance of the individual and contribute to alienation, they seem to become increasingly difficult to control by democratic means, and so on. Possible attributes of large, complex national systems and the implications that they may have for the functioning of those systems appear to be:

Increasing *interdependence*, bringing (a) vulnerability to accidental or deliberate disruption; (b) rigidity, since a change in one element demands change in interrelated elements; and (c) an increasing need for regulation.

Increasing *scale*, implying (a) diminished access to leaders; (b) diminished significance of the individual vote; (c) more frequent disturbing events; and (d) qualitative change (e.g., more impersonal, more bureaucratic, more juggernaut-like).

Increasing *complexity*, involving (a) decline in the relative political understanding of citizens; (b) increasing reliance on elite expertise; and (c) increasing alienation as persons confront an incomprehensible totality.

Increasing need for *regulation and control*, involving (a) formal controls substituting for custom and internalized controls; and (b) increasingly forcible and increasingly broad scope regulatory modes.

Increasing *specialization*, and consequentially (a) the potential emergence of a technocratic elite outside normal political checks and balances; (b) more vulnerability to economic changes and dislocations; and (c) decline in the availability of broad generalists for overall management.

Tendency toward *low performance*, arising because (a) the actual complexity is not comprehended and simple solutions are proposed for complex problems; (b) subsystem crises command attention and overall goalsetting and planning for the overall system is neglected; and (c) system inertia tends toward con-

tinued functioning in an accustomed pattern long after changing conditions should indicate the need for change.

Development of *institutional boundaries* that make extremely difficult the kinds of planning and problem solving efforts that would require the transcendence of such boundaries (e.g., regional planning crossing over the boundaries of subregional systems).

These characteristics of large complex social systems cannot be enunciated with the confidence one might put behind a scientific theorem. Nevertheless, in sum they suggest that the limitations to continued economic growth may lie partially in the area of manageability, and may be very fundamental indeed.

5. Third Picture of Reality: Changing Societal Context

Both of the two preceding views of economic growth dealt primarily with technical issues. By omission of any contrary assumption they tacitly assume that the basic cultural and political context would remain relatively unchanged. However, there are numerous indications that that context may be changing rapidly and significantly.

Changes in values and attitudes show up in various ways. Daniel Yankelovich[12] gives survey evidence of what he terms a "New Naturalism" including emphasis on harmony and relationship with nature, on the search for sacredness, on the nonrational—the intuitive, aesthetic, and mystical—and on community. Another sign comes from the strength and actions of the environmentalist movement, the "human potential" movement, the "appropriate technology" movement (e.g., as attested by the rising popularity of E. F. Schumacher's Small is Beautiful),[13] and similar public interest groups. Daniel Bell[14] notes as an essential characteristic of post-industrial society a shift from an "economizing mode" to a "sociologizing mode":

> The "economizing mode" is oriented to functional efficiency and the management of things (and men treated as things). The "sociologizing mode" establishes broader social criteria, but it necessarily involves the loss of efficiency, the reduction of production, and other costs that follow the introduction of noneconomic values. (See p. 43.)

The significance to the economy of such a cultural change goes much deeper than simply changes in lifestyles and buying patterns. This becomes apparent upon reflection on the theory of the market economy, in which individuals and organizations make autonomous decisions about what to produce and to buy and sell in the marketplace, and these all somehow add up (with the aid of Adam Smith's "invisible hand") to satisfactory overall social choices. No one doubts the efficiency of the market as a superb mechanism for ordering this immensely complex process. But what often passes relatively unnoticed is the essential though subtle role of the culture in guiding this process.

It is not true that the pursuit of private gain alone, operating in the marketplace, results in wise social choices. The culture that guides the microdecisions is determinative of the kind of social macrodecisions that result. If, for example, the culture has negligible concern for

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[12] Yankelovich, Daniel, "The Changing Values on Campus." New York: Washington Square Press, 1972.

[13] Schumacher, E. F., "Small Is Beautiful: Economics as if People Mattered." New York: Harper and Row, 1973.

[14] Bell, Daniel, op. cit.

future generations, then the market will reflect this by dictating rapid depletion of renewable resources and spoilation of the environment, talk of "internalizing the externalities" not withstanding. Short-term gains to subdivision developers will take precedence over long-term needs for fertile land. The future will be discounted at rates that profit the present generation, which is another way of saying future generations be damned. If the culture contains no ethic of protecting the poor and the weak (whether persons or nations), then market decision making will make the powerful richer and the weak poorer.

The interaction between cultural values and the requirements of the economy is illuminated by the example of saving vs. consuming. In the early capitalist economy, saving was important to build up capital. However, during the last half century the ethic of frugality gave way before an emphasis on economic growth. The sin of extravagance became the virtue of consumption; a massive advertising industry built up to persuade the public to be less frugal and to consume more, and government economic policy to some extent conveyed the same advice. The society now faces a dilemma, in that there are a host of reasons that a new frugality—doing more with less—is in order. Frugal use of resources would ease both the problems of resource depletion and of environmental impacts associated with resource extraction and consumption; it would also reduce the gluttonous image of the U.S. in the international community. But any such cultural change opposes the powerful momentum of the growth-oriented economy.

Thus the cultural context and the behavior of the economy are inextricably interlinked. The pattern of cultural values and motivations, and both depend upon an underlying vision of reality.

Basic Characteristics of the Industrial Era.—Some of the basic trends characteristic of industrial society, which have accounted for its benefits and achievements but also lead toward its most basic problems, are the following:

Industrialization of production, i.e., subdividing work needed to produce goods and services into elemental increments, and organizing and managing those increments toward the goals of productivity and efficiency.

Automation, the further organizing of work so that it can be performed by energy-driven self-operating machines.

Rising influence of science, i.e., the search for knowledge guided by the principles of objectivity and causality, and embodying the prediction and control values of technological application.

New concentrations of power—especially economic power in the expanding industrial corporations and associated financial institutions, and intellectual power in the scientific and technological elite.

Rising levels of education with strong emphasis on preparation for entering the industrialized economy.

Pragmatic and economic values predominating, with the individual free to seek his own self-interest, as he defines it, in the marketplace.

Material progress, both as an observable trend and a declared goal, implying man's expanding control over nature and his unlimited ability to understand the universe from the data provided by his physical senses.

In the first and second worldviews, the rightness of these characteristics and the continuation of these trends tends to be unquestioned. In the third view being explored there is more emphasis on the dilemmas to which they have brought us:

1. Industrialization and automation trends lead to less and less intrinsically rewarding work being available for a populace with ever increasing technical training (called education). Furthermore, environmental degradation and resource scarcities place limits on expanding production, and hence on expanding employment. The net result is chronic unemployment and underemployment (e.g., work which falls short of employing abilities and fostering individual growth).

2. The industrialization trend and the goal of material progress, in the absence of more eternal values, lead ineluctably to conditions of the "new scarcity." The problems of resource depletion, environmental deterioration, hazardous substances, and threats to the planet's life-support ecosystems are not accidental but fundamental and intrinsic to the industrial pattern. They arise partly because the pressure to keep productivity increasing necessitates increasing consumption, increasing energy use, and increasing automation (so that it takes ever faster expansion of the economy to create the same number of jobs—hence intensification of environmental and resource depletion impacts).

3. Energy (so far large fossil) is increasingly vital to an industrializing world society; it is the high energy mode of modern industrialized society that brings the most basic international confrontation. But the paradigm of industrial society contains no rationale or incentive for more equitable distribution of the earth's resources, or of the power and wealth which has come from the exploitation of those resources. The goal of stability of world society demands that some effective counteracting force be found to the natural tendency for the economically and technologically powerful nations to further increase their advantage.

4. The dominance of material and economic values (e.g., efficiency, standardization, organization) tend to obscure humane values and to diminish man, leading to problems of anomie and alienation, distrust of big business and government, and individuals feeling loss of liberty and meaning.

5. Predominance of the goal of material progress leads to the failure to foster socially responsible management of the development and application of technology. The technology assessment movement is an indication of recognition that the Faustian powers of modern technology require increasing societal control. This is difficult to achieve, however, without threatening basic principles of free enterprise and democratic government.

6. The rising prestige of positivistic science led to an eroding of traditional values, and an inability of the society to provide goals that will enlist the deepest loyalties and commitments of its citizens. Technological growth and material progress alone are not enough, but they tend to overpower and push aside other goals, leading to social alienation and estrangement of man from Nature. Thus a reaction has arisen against further industrialization of organic and human activities (e.g., agriculture, health care, use of leisure time). The industrial system has

immense drive but lacks the clear and satisfying guiding images and goals to insure sound and human further development.

Looking at this another way, we see the industrial-era trends of a few centuries duration superimposed on a much longer trend of civilization itself—characterized by:

Increasing understanding of the total environment and man's relationship to it, of oneness with fellow man and with Nature;

Concern with and communication about the "great questions," the inner world, man's spiritual being;

Increasing self-awareness and self-realization, valuing of individuality;

Societal development toward, and high value placed on, political liberty;

Movement toward democracy, equity, justice under law.

It is where the industrial-era trends conflict with these long-term trends of human civilization that the challenge arises for cultural change.

A Goverance Crisis.—Thus the focus is raised from management of an economy (as in the second view) to goverance of a social system. The fundamental challenge of our time is to the adequacy of goverance.

From the perspective of history, the mightiest force for social change is the unproclaimed power of the society's citizens to challenge and withdraw legitimacy from any or all of the society's governing institutions. Familiar examples in the brief history of the United States include the challenge to the legitimacy of monarchical government in the Declaration of Independence, the withdrawal of legitimacy from the institution of slavery, the labor unions' successful challenge to the legitimacy of business treating workers as its property and, perhaps most remarkable of all, the complete withdrawal of legitimacy from the institution of political colonialism since World War II. Over the past ten or fifteen years we have witnessed a growing challenge to the legitimacy of the present social system of the industrialized world—particularly to its economic, political, technological, industrial, corporate, and scientific aspects. This challenge may mark one of the most important events in the history of human civilization. More than by any other thing, the future will be shaped by how that legitimacy challenge is resolved and new goverance structures evolve.

Although its nature is not even clear to many of those people participating in it, this challenge is identifiable by a number of signs:

Third world insistence of a new international economic order.

Environmentalist, consumer, minority rights, women's liberation, and youth protest movements.

Criticisms of industrial products, business practices, and manipulative advertising.

Survey data showing values and attitudes that imply need for change in the old order.

Growing sense that old answers no longer work.

Indications of disenchantment with the assumption that all scientific and technological advance is unqualifiedly good.

Decreased trust in institutions of business and government.

New labor demands for meaningful work and participation in management decisions.

Increasing signs of alienation from work and from the non-communities called cities and suburbs.

Evidence of widespread search for transcendental meanings to provide a sense of "what is worth doing."

Each factor in its way is part of the challenge to the current goverance systems which increasingly is perceived to fall short of achieving the humane goals it espouses.

Legitimacy of a goverance system and its power concentrations is fundamentally based on (1) its being duly constituted, (2) its perceived adherence to adequate guiding moral principles, and (3) its effectiveness in achieving agreed-upon goals. The contemporary challenge to our social order involves all three bases.

The governments of the industrialized democracies are duly constituted. However, there exist other concentrations of power that are not so constituted, the main example being the tremendous power inherent in the world network of multinational corporations and financial institutions. Because of their widespread influence, these gigantic organizations are quasi-public. As the largest corporations have grown to wield influences over human lives that are comparable to those governments, similar demands are being made of them that have historically been made of governments—demands that they assume responsibility for the welfare of those over whom they wield power. Among those who feel themselves to be disfranchised by their lack of representation in institutions of power are members of non-industrialized nations, minorities, consumers, youth, the elderly, and women. On a separate front, the intellectual power of the scientific-technological establishment is being contested. Science's position as the ultimate arbiter of truth is challenged on the grounds that it is guided and dominated by prediction-and-control values that serve industrialism rather than by humanistic goals that enhance man.

Second, the challenge is made that the industrial system is not guided by adequate moral principles, particularly in the matter of equitable distribution of the earth's resources. Especially with regard to food, energy, ad economic resources, the poor continue to get poorer relative to the rich nations. The industrial system possesses no effective ethic or mechanism of redistribution; economic incentives predominate over all. The system provides no effective ecological ethic; consumers often feel manipulated and defrauded. The sense of pride in striving toward noble goals seems clearly to be dwindling; the system does not foster goals that enlist the deepest loyalties and commitments of citizens.

And, thirdly, the charge is made that the system is proving ineffective in achieving even its own declared goals. The successes of technology and industrialization themselves appear to be primary causes of contemporary problems. The labor of the poor and unskilled is rendered of little value, and there is a lack of sufficient satisfying work roles. The system does not foster preservation of the planet's habitability or enhancement of the environment's capacity to promote the total health of individuals. Incentive structures of the industrial system fail to ensure that future generations will have fossil and mineral resources and clean air, land, and water.

The strength of this three-pronged challenge is difficult to assess. Conceivably the problems might be alleviated to such an extent that the challenge would weaken and disappear. If the challenge continues to grow, several outcomes could occur. It could become sufficiently alarming that a highly authoritarian regime would arise and put it down by strong governmental action. Or the confrontation could become much stronger and result in a major whole-system transformation.

Closely related to this challenge to the legitimacy of industrial-era institutions is the appearance in the culture of a "new transcendentalism" (manifested in numerous cultural indicators such as book purchases and interest-group affiliations, in survey data, and in new areas of scientific exploration such as biofeedback and consciousness research), and with this a renewed concern with the fundamental moral and value premises that shape any society. In the emerging view there exists a spiritual order, discoverable and explorable and in some sense testable, against which human value choices can be assessed; there are evident supraconscious evolutionary tendencies toward development of man's spiritual potentialities beyond the realm of his mundane experiences. The view of man which became dominant in the industrial era is perceived to have over-emphasized materialistic and economic motivations and neglected aesthetic, human, and spiritual motivations. In the emerging view the primary emphasis is on "to be" rather than "to have" or "to control."

The governance structure which might emerge from this confrontation would undoubtedly be decentralized and participatory to considerable extent. Already the citizenry has declared in many ways that critical technical decisions are too important to be left to the experts (e.g., the nuclear power decision). On the other hand, some sort of centralized regulation—at a national or even international level—will be required for such unremitting and global problem areas as energy utilization, material shortages, and pollution control. To the extent that the culture contains a strong ecological ethic and promotes sound behavior with regard to these problems, the amount of governmental control can be reduced.

Of course, there is no assurance that the cultural change will favor resolution of the major dilemmas facing the society. That might seem a fortunate accident—however, the "forerunner" values of the "New Naturalism" do seem to be in the right direction. It is as though Arnold Toynbee's [15] pattern of a "universal state" coming to a "time of troubles" and then encountering alien ways of life and values that provide new sources of spiritual vigor—a pattern hypothesized years before anyone had heard of the contemporary counterculture—were playing itself out. If this third perception turns out to be correct, the various aspects of the legitimacy challenge will be the dominating noneconomic factors impacting the economy. The challenge will probably increase in intensity fairly rapidly, and the societal context will alter dramatically within the next decade or two.

6. Summary and Commentary

Three views of economic and social reality have been presented.

[15] Toynbee, Arnold, "An Outline of History."

The first assumed continued economic growth to be desirable; the second considers it unlikely. The third suggests the possibility of a fundamental change in societal context. As the growth debate grows more strident each of the three will be defended more vigorously.

Since the uncertainty is so great about how to interpret the non-economic factors operating on the economy, the best decisions will keep as many options open as possible. Thus it would be equally unwise to make no preparations at all for a reduced growth economy, or to take drastic and sudden measures to curb growth.

But is there no way to choose among these interpretations? We earlier argued that each view of economic and social reality, each Gestalt, fits the observable facts reasonably well. Furthermore, it is well known in social science that we tend to act and to perceive so as to substantiate the view of reality we have. Thus the sociologist W. I. Thomas advances the theorem, "If men define situations as real, they are real in their consequences." And anthropologist Gregory Bateson asserts "Man lives by propositions whose validity is a function of his belief in them." In a sense no one of these three views can be disproven by "facts" drawn from another, and whichever view society comes to accept it will tend to make "real."

Yet there are criteria that can be applied to this fateful choice. Perhaps the three most important are:

1. Does the view in the long term lead toward system adaptability, and hence toward survivability? (After all, the laws of thermodynamics and of ecosystem behavior do obtain, regardless of the opinions of men. Some conditions for adaptability, for preservation of options, are ineluctable. One of the arguments often put forth in favor of the "continued growth" view is that, like the skater on thin ice, we can't risk stopping. But this is equivalent to admitting that we have dangerously reduced adaptability.)

2. Does the view lead toward fruition of the aforementioned long-term trend of human civilization? (Proponents of the third view, the transforming societal context, see in it the reassertion of such traditional values as man's spiritual development, reverence for Nature, democratic liberation from oppression by institutions, and the brotherhood of man.)

3. Is the view compatible with whatever can be discovered to be man's most fundamental nature? (Proponents of the third view are particularly insistent that *homo economicus* is not man's most fundamental nature.)

In the public dialogue about the desirability of growth, which is likely to get more acrimonious before it is finally resolved, there is an important distinction to be made. That is between the varying *interests* of stakeholder groups and the differing *perceptions of reality* which may exist among the citizenry. Of course, the two often overlap, as when a group's perceived interests are part of its picture of reality; on the other hand, groups with essentially the same Gestalt perception of the basic social and economic reality may have quite divergent interests. The essential point is that society has recognized and legitimated ways of dealing with interest-group conflicts (e.g., compromise, arbitration, the adversary process in the courts); it does *not* have, in general, satisfactory ways of dealing with alternative perceptions of reality. One of the most constructive steps to be taken in arriving at a

long-term growth policy for the nation may be to legitimate alternative perceptions of reality, as a way of shifting the political process from an adversary mode to an exploratory mode. The adversary mode is a time-honored way of settling a dispute; it is not a satisfactory way of arriving at truth, nor at a wise policy.

Policy Recommendations

Of the three perceptions earlier identified, one will eventually emerge as having been more accurate than the others. For the time being, however, it may be more useful to think of them not so much in conflict, but like the different blind men's perceptions of the elephant. The first picture guards against a romanticized view of how nice it would be for everyone if we would simply stop economic growth. The second perception is useful for the bounds it puts on expectations, and for emphasizing that our management problems are serious ones. The third view is useful in understanding better the trauma this society is passing through.

Each of the three perceptions would lead to its own policy recommendations. The fact that each is the view of a sizable group in the polity suggests the desirability of identifying a set of policy recommendations that are more or less compatible with all three. For example, the following recommendations are numbered according to which one of the three perceptions leads to it most directly:

(1) Give high priority to creation of the best measure of net national welfare that can be devised within the next few years, and begin computing and publishing these time series.

(2) Institute strong incentives for conservation of energy and materials, and for development of "appropriate technology" that is no more demanding of resources and the environment than necessary, and that tends to promote cooperation, community, and individual craftsmanship and creativity. Promote decentralization of technology, institutions, and government. Foster effective citizen participation in major policy decisions, especially those that will be influential in shaping the future.

(3) Keep energy and growth policies somewhat flexible—if the societal context changes rapidly, policies that are appropriate now may not be suitable a few years from now. Encourage legitimating alternative perceptions of social and economic reality. Challenging views tend to appear first in the voluntary sector (e.g., environmentalist groups, women's lib, consumer organizations, "voluntary simplicity" and "appropriate technology" movements). Thus, a strong voluntary sector is very important to society's ability to be adpative. A most constructive step would be allowing a limited amount of an individual's contributions to voluntary organizations to be deducted directly from his income tax. (The recipient organizations should not be restricted with regard to taking stands on public issues. The rationale for the special tax provision is that the activities of voluntary organizations are an essential component of democracy.)

A challenge before this nation, indeed before the world, is to identify, explore, and assess alternative paths to the future and to choose among them. As suggested in this paper, while the debate may appear to be an economic one, most of the fundamental, noneconomic, age-old questions about the nature of man and of the good society will be involved in the process.

DISCUSSING A NATIONAL GROWTH POLICY: ORGANIZATIONAL AND INSTITUTIONAL ISSUES

By PETER HOUSE *

SUMMARY

Implementing a National Growth Policy is a broadly controversial issue, and one which would be overwhelming to cover inclusively. In this paper, the exposition attempts to mitigate against the strong temptation to treat everything in great detail. For clarity and simplicity, this discussion at times approaches an outline format and sacrifices analysis for completeness. However, for the sake of debate, it is imperative that the full picture be at least sketched.

Further, in an attempt to overcome the legitimate allegation that a summary approach does not give the reader an opportunity to judge the work on the bases of its results, a series of statements is presented below, focusing on a feasible way to carry out a National Growth Policy. Much of the detail required to back up the study conclusions is presented in the text, but the following few pages will at least initiate the reader to form his own opinion. First, the five sections of the paper—desirability, content, implementation, location, feasibility, and impact—can be briefly summarized as follows:

Desirability—Although it is possible for one to make a case for no controls or goals, there is a respectable large body of opinion that holds that we cannot continue to run our private or public sectors as we had in the past and that some long range analysis and goal creation is necessary.

Content—Even agreement on the need for some capability in the area of goal setting or comprehensive analysis does not mean a consensus exists on how it should be done. Various alternatives are possible for the structure and responsibility of the organization. A similarly large list of possibilities exist for the goal potentials. In all cases, some early research will have to be undertaken to specify the boundaries.

Implementation—The principal question of this paper is not whether growth policy is important or should be researched, but how it should be done. Little can be said positively about this as many of the specifics will depend on the scope and form of the institution; however, some attempt is made to specify implementation criteria.

Location—In all of the discussions that come about on growth policy, the one that seems to stump the professional bureaucrat

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or politician is where the function of such a group should be carried out. The federal, state, and local governments are all possibilities but so are several locations in the private sectors. Directions of priorities, resources, and power are interwined in the discussion, and the final resting place will clearly be the result of significant bargaining and analyses.

Feasibility and Impact—The final question is one of whether any institution of this kind would really make a difference in how we conduct our affairs. Definitive statements are not possible, though reference to past attempts would lead one to believe that its effectiveness would be small.

From the information presented in these sections, the paper argues that:

The basic structure of the American economy has changed noticeably over the past several years with indications that there may be real shortages in basic raw materials, such as energy, to be contended with. In addition, part of our citizenry appears to take note of and desire to preserve things that are not necessarily costed out in the marketplace. Both of these indications, in addition to several other institutional and political factors covered throughout this paper, suggest that there may be a legitimate need for the development of a National Growth Policy and the regulation controls that would be required to make it operable.

To cut down on the turf fights among agencies and to give some real power to the function, the Office of National Growth Policy's (ONGP) duties should be spelled out clearly in the enabling legislation. It should have the ability to request the information it needs to do its job. It should have equally real influence to monitor its recommendations when its analysis is complete.

Although there is great desire to specifically include "everyone" in such an undertaking, it does not seem feasible to do so outside the normal checks and balances already set in place. For example, there is no possible way to develop an independent research group outside the public sector that will have the policy impact that one inside would have. In this same vein, setting up a system for the state and local governments appears duplicative, because there are already adequate ways for these bodies to lobby their interests. What is often forgotten is that numerous studies will be done by groups, regions, and agencies who do not fully agree with a federal policy. These studies will help to shape future direction and, because they are products of highly motivated groups, will have potentially greater impacts than a report published by a group with an essentially watchdog function, outside the mainstream.

Even though the enabling legislation for an Office of National Growth Policy could be quite broad, it is suggested that the office's early functions be curtailed to a "System Evaluator" or monitor. In this role, it would function in data collection and analysis to evaluate major policies. Just the potential for rationalizing the massive federal data base for respectable policy analysis would be a significant achievement.

The role would then be one of analyzing these major policies in light of current practices and other proposed policies, toward ultimately suggesting potential improvements or avoiding problems, especially in the long run.

The question of exactly what power the group should have—sign-off, information, or formally integrating policies—must be closely considered. This latter is interesting because it brings up the question of how one agency's plans will affect another. An operable national growth policy should foster closer interagency coordination of budget preparation as time goes on. If the group is formally tied to OMB and CBO, then a sign-off appears sufficient because it is already buttressed by the power of the budget. If it is placed elsewhere, then more powerful instruments might be called for.

The largest area of concern for implementation of the ONGP is the question of exactly how to carry out the task. It is fairly clear that some preliminary investigation will have to be made before the most useful approach is realized. Likely the most promising methodology will make use of a form of large-scale modeling.

There will have to be a significant commitment in terms of manpower and funds, in the range of approximately 20 professionals and $10 million.

The ONGP should have the power to set standards for data collection for the federal agencies and for all contractors. This set of standards will not only enable the Office to carry out its analyses, but to improve the technical basis for cross-agency comparison in normal budget analyses as well.

These summary statements are a reasonable beginning for the Office. It gives the ONGP enough responsibility and power to test its usefulness of the concept. Such a beginning allows sufficient flexibility to readjust the Office, its budget and its manpower as a function of its utility. It is certain, however, that only trying will tell.

The Question of a National Growth Policy

Once again the nation sees a portion of its leaders, thinkers, and citizens concerned with the question of whether the government should plan the economy's growth and direction. For historical reasons, largely based on our Western heritage and nurtured by our frontier spirit, many people consider this idea to be antithetical to our basic creed of freedom. Others do not agree that this is so. It is fitting, then, that the Joint Economic Committee of the Congress of the United States should begin a round of hearings to debate the efficacy or legitimacy of a National Growth Policy the very year the nation is engaged in its bicentennial celebration.

Those who have studied the question of economic planning, examining not simply the textbook "isms", but also the actual operational systems will find more in common between these ideologies (from the economic point of view) than they do differences. In our own country, where the term planning is heretical in some quarters, the question of the need for national economic policy or national planning has surfaced numerous times. We will take specific note of one of the more

recent plans, the National Planning Association (set up under Roosevelt), and see if there is anything for us to learn from its experience and eventual demise. One thing is clear however. The question of planning or economic growth policy seems only to come to the fore when the nation is in some form of economic trouble, when some fear that the gods of unfettered capitalism are suspected to have feet of clay.

Recently, the nation has been beset by a staccato of crises—environmental, economic, energy, water and raw materials. It has found social ills in our health and welfare programs and in our cities among our poor and minorities. And now, our greatest city has recently come to the brink of bankruptcy. These traumas appear to have several things in common: (1) their use, planned expansion, or preservation has engendered massive government intervention; (2) the specific remedies normally take years to effectuate and; (3) the ramifications of these policies will permeate throughout the economic system.

Although this paper will briefly discuss the questions of need for a national goals strategy and will investigate what has actually been done by the government in these areas, its principal thrust will be in the direction of the implementation possibilities and real feasibility of an effective program. To this end, the paper is divided into five sections: desirability, content, location, implementation, and feasibility and impact. We shall now turn to the first of these.

Desirability

The charter of this paper is sufficiently broad for the question of desirability to accommodate numerous interpretations. The study will attempt to refrain from the polemics surrounding the future of our planet and focus instead on the question of whether there is perceived need for a growth policy and the degree of public planning that such a policy demands. How such a policy would be pragmatically implemented within the existing system naturally follows.

Growth Policy as Technocracy

Before proceeding, the underlying reason for a growth policy should be articulated. The need for the most recent form of such a policy has grown out of the era of systems analyses. In general, this process could be described in four parts:

A description of the system under study at the present moment in time.

A statement of the goals and objectives of the system at some future point in time.

A series of strategies that will guide the system toward these goals.

A monitoring network that continually measures where the system is and forecasts whether the strategies selected will bring it to the requisite goals.

In operation, such a system supposedly provides continual feedback to the policy level allowing it to make "mid-course" corrections in terms of strategies to guide the system toward its end point. Using this paradigm, the policy level is cast on the role of the driver of

a vehicle and, so it is argued, with adequate techniques can successfully guide the system. Without goal statements, however, this methodology is impossible. Consequently, from one perspective, goal statements are therefore not necessary for the citizens or policymakers but for the technicians who must devise the guidance system. It is this requirement that is behind much of the desire for articulating the desires and goals of when the nation was to be in the future, the performance criteria, and the quality of life measurment attempts of the Sixties and early Seventies.

The revival of the planning desire, as articulated by the technocrats, we shall see later in this report, was met with significant resistance—so much so that the more radical desires never came to pass.

In the face of so much potential opposition, what has happened recently that might lend some credence to those who proffer a national growth policy? In 1955, John von Neumann wrote an article in Fortune, entitled "Can We Survive Technology?"

> In the first half of this century the accelerating industrial revolution encountered an absolute limitation—not on technological progress as such but on an essential safety factor. This safety factor, which had permitted the industrial revolution to roll on from the mid-eighteenth to the early twentieth century, was essentially a matter of geographical and political Lebensraum: an ever broader geographical scope for technological activities, combined with an ever broader political integration of the world. Within this expanding framework it was possible to accommodate the major tensions created by technological progress.
>
> Now this safety mechanism is being sharply inhibited; literally and figuratively, we are running out of room. At long last, we begin to feel the effects of the finite, actual size of the earth in a critical way.
>
> Thus the crisis does not arise from accidental events or human errors. It is inherent in technology's relation to geography on the one hand and to political organization on the other. The crisis was developing visibly in the 1940's, and some phases can be traced back to 1914. In the years between now and 1980 the crisis will probably develop far beyond all earlier patterns. When or how it will end—or to what state of affairs it will yield—nobody can say. [18]

This merely represents one of the seemingly endless warnings from the intellectual and scientific community predicting that we were about to reach the limits of our growth potential. Some of the warnings of the previous years were realized in the last decade or the present one. Crisis in urban sprawl, the environment, energy, water, welfare and minorities, the inner city, and scarce materials are common news features today. Either we have abused the term crisis or indeed, something is amiss.

More ominous than the impending directional change in our society, and the rapid succession of crises that appear to go along with it, is the ill-prepared public sector which never seems to be ready for a crisis when it appears. A recent study conducted by the GAO on material shortages is instructive in elucidating this problem. The survey agrees that the very data used by the agencies who monitor the various portions of our system are inadequate and faulty and consequently the agencies have real trouble even accurately identifying problems—no less providing olutions for them.

In a 1971 report, the President's Commission on Federal Statistics stated:

> The typical difficulty faced by policy-makers in defining problems is that a problem usually exists only in a political context. The political system is convulsive; it acts when the electorate perceives that a crisis exists.

* * * * * * *

But the public perception of a crisis often antedates the presentation of statistical evidence that there is indeed a crisis. Hence, when the legislature or the executive is faced with an aroused public, time is not available to design a survey or experiment, gather the requisite data, and perform a careful analysis pointing toward an optimal policy recommendation. In addition, when the public perceives a crisis there may be no general agreement on the nature of the problem, the important variables to be measured, or the way to relate the variables in a study.

Given the confusion about what constitutes the problem, a lack of statistics with which to understand and respond rationally to crisis is probably inevitable. A crisis is a crisis precisely because the problem has not been defined, it was not foreseen, and timely data-gathering efforts were not undertaken. When a crisis arises, some data are used to support action decisions. The data used are often a combination of existing benchmark data produced by census-type agencies, management data produced by agencies with related responsibilities, data presented by lobbyists who support a particular position and, particularly important, data on public opinion gathered ad hoc by specialized private polling organizations. [5]

Finally, the GAO report notes that not all of the problems are a direct result of poor data. Some problems stem from a reluctance to face the potential supply shortages and plan against them as a forethought rather than an afterthought.

By relying almost solely on market forces in the resource area, the report holds, the Government has tended to neglect emerging short-supply situations, thereby limiting the ability to develop solutions to the problems that evolve into crisis. The present decision making processes do not provide for identifying, defining, and analyzing overall short-supply problems. Because the emergence of resource shortages over the past 20 years has been perceived as an anomaly, the decision making process designed to control such situations has remained essentially ad hoc and crisis-oriented. The executive branch has no firm, coordinated structure to deal with short-supply resource and commodity problems on a continual basis. In essence, it appears that short-supply decisions made thus far have been hastily implemented rather than structured and analyzed. It is posible that such haphazard activity could be lessened by attempting to clearly state where we are going or want to go.

A recitation of some of the major findings of this study makes the point of the need for a growth policy neatly. The study first alleges that we are in a period of shortage in agricultural, mineral, industrial, and raw material commodities; that federal officials are concerned and; finally, that the ability to cope with the problem is limited by deficiencies throughout the whole federal structure.

Although this study is limited to commodities as noted above, the findings could be generalized readily.

The Government's decision making process for commodities that are in short supply is essentially ad hoc and crisis-oriented. There is no clear, coordinated decision making mechanism for formulating policies to alleviate commodity shortages.

Commodity policy formulation involves more than 20 Government departments, agencies, offices, administrations, and policy councils as well as additional international program agencies, energy agencies, advisory councils and regulatory agencies.

The market supply and demand information needed for decision making from multiple private and Government sources has, in a number of cases, been unavailable, incomplete, or disputed.

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Long-range commodity policy planning

To establish effective policies for dealing with potential and actual commodity shortages, the Government must have the ability to project future trends and a willingness to guide these trends in directions compatible with long-term national objectives. Despite recent studies, and institutional changes intended to improve long-term planning capabilities, the present decision making is still crisis-oriented. [5]

The public sector's reluctance to either collect the data to adequately monitor the system or to face up to the fact that it is possible to have dislocations in the system's operation will almost assure that we shall face a succession of crises. With this as a backdrop, it seems almost certain that we shall require some form of national growth policy.

A second major study was conducted by the National Goals Research Staff. The staff was set up by President Nixon in 1969 to look at future trends leading to our third century (the National Goals Research Staff is discussed in more detail in the last section). In one of the Appendices (A), it addresses the question, Why a national growth policy? The first topic is laissez-faire vs. problem control. Making obeisance to the role of laissez-faire, the study continues.

Even with all these precautions a growth policy of this kind does involve a deviation from pure laissez-faire. But this can be justified on two grounds: First, it should be remembered that in this essay the problem of growth and stability is being discussed in the framework of the present Western economies with their large public sectors, numerous government activities and growing government budgets. All this makes it virtually impossible for the government to remain neutral with respect to growth. For better or worse, government activities do have a strong impact on economic stability and growth.

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Second, it may be almost impossible to decide objectively whether conscious growth policy pushes the total government impact on growth beyond the point of neutrality.

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When it comes to decisions involving investment, in other words, decisions that imply choices between consumption and economic welfare in the present and in the future, possibly in the distant future, the individualistic postulate that all decisions should be left to individual choices and market forces must be more severely qualified than in the case where only choices between different types of present consumption are involved. The main reason is that in the case of intertemporal choices generations as yet unborn are involved. They cannot speak for themselves. [12]

The study argues that the question of present vs. future desires is critical and becomes even more important to us if we are in an era that questions the potential of unlimited resources or even limited resources.

Growth Issues

It is clear that the focus of the questions to be addressed by a national growth policy will have a broad and longer range perspective. The following is some thinking on a sample of problems that might be addressed.

The specific types of problems have several things in common:

(1) They involve actions which, although taken now, will bear results both after and for a substantial period of time, or actions which, although taken now, limit the range of actions which can be taken in the future. The time focus will normally be in the five to twenty-five year range.

(2) They are multi-faceted and interrelated national issues of consequential domestic importance, requiring an integrated (e.g., interagency) approach for their analysis and solution to be distinct from those issues amenable to narrow disciplinary or departmental analysis and action.

(3) They often involve a wide array of domestic and international issues of significance to broad segments of the American society. They are not confined to narrow sectoral or local questions.

(4) Although they are primarily domestic issues, they may ultimately be created or at least exaggerated by international events or trends, and their resolution may have important international implications.

Some Examples

(*a*) *Water Resources.*—There is need for strategic assessment of the long-term water resource problem. Water resource policy is directly related to growth, environmental, and energy policies and, to a lesser degree, urban land use (e.g., use of flood plains), agriculture (e.g., irrigation), transportation (e.g., waterways), recreation, etc. There is even an international dimension to the water issue in terms of American relations with Canada and Mexico.

(*b*) *Forests.*—A comprehensive assessment of forests would examine long-term needs for wilderness and recreation compared to the commercial need for lumber used for domestic and export purposes. It would also examine the potential productivity of private and public land, opportunities for increased productivity on the best lands, technology changes (e.g., use of hardwoods to replace soft-wood uses), increased costs if supply lags behind demand, substitution potentials, foreign trade, and environmental implications of various choices.

(*c*) *Agriculture.*—The issues here, as in other examples, are complex in character and long-term implication. Environmental considerations, overall growth policy, demographic trends, research and development with respect to production as well as distribution and consumption, energy use, population distribution, water availability, metropolitan growth policy (and thus transpotration), foreign trade, international monetary issues, foreign aid and overall foreign policy issues must be addressed.

(*d*) *Energy.*—Perhaps the most dramatic current example of a long-range issue calling for the kind of analysis and evaluation to be carried out in the assessment of a growth policy is the energy problem. The energy issue involves not only technological, research and development policies, but also a mix of environmental, economic, social and foreign policy considerations.

(*e*) *Economic Growth Development.*—This would involve a "strategic assessment: of the mix of probable future demands for energy and selected raw materials, population growth, private and public services, foreign and domestic, fiscal and economic policy, full employment, and other factors affecting and affected by changing patterns and rates of economic growth.

(*f*) *Growth and Change of Metropolitan Areas.*—A policy for planned growth of metropolitan areas should examine the carrying capacity of various environments across the country in an effort to determine whether a more optimum population distribution is desirable and feasible. If it were determined that a metropolitan growth

strategy is desirable, then an assessment might be made of tools such as federal contracts, water resource projects, and transportation facilities.

(*g*) *Housing.*—An analysis of long-range housing policy choices would involve an examination of the relationships among urban and interurban transportation programs, forest policy, new technologies, labor issues, demographic trends, recreational facilities, and social programs. It would also include close dovetailing with policies related to economic growth and growth of metropolitan areas.

(*h*) *Transportation.*—The development of a large-range strategic transportation policy obviously entails an examination of the appropriate mix of various urban, interurban, and long-distance approaches to the movement of passengers and freight. In addition, long-range pollution and energy issues must be factored in as well as considerations of national economic growth, long-term development of new communities, and problems of existing metropolitan areas.

(*i*) *Social Programs.*—Clearly there is a need here for strategic assessment. Crime prevention, recreation, health services, education, housing, demographic trends, growth issues, and the challenge of more leisure time affect the choice evaluations.

The list could go on endlessly and include environment, welfare programs, and health delivery, to name a few. It becomes clear, however, that the relations of these policies to each other at the interstices is clearly necessary, and yet they are not presently formally carried out in the normal day to day operations.

Summarizing the Need

It could be said that the areas that are referred to above give one a smorgasbord view of the eminent need for a growth and planning policy with the most popular dish being as much a function of politics as of real need.

The GAO report noted earlier has also suggested that the world situation is such that we have a greater degree of dependence on more parts of it than we had in the past (larger populations and greater per capita consumption of goods and services requiring an ever increasing resource base to draw from) means that we have to be increasingly aware of the impact of our major policies on the other nations and theirs on us.

> The recent incidence of global and domestic shortages in agricultural and mineral resources has concentrated widespread attention on the need and potential for long-term Government planning in natural resource development and allocation. Awareness that these shortages could have major impact on the U.S. economy has focused concern on the prospects for avoiding potential crisis through long-term planning. [5]

Consequently, even though it is true that we have grown to be a great nation without an explicit goals policy, it is not clear that we shall thereby be able to continue to prosper using the same approaches. If we are to stay as a world leader, we must face up to the fact that we may have to do so while husbanding our flagging internal resources. If setting goals is not deemed the best way to achieve this end, then, other forms of monitoring and policy support will have to be devised and supported. Because it is certain that the picture of America as the land of plenty is becoming somewhat blurred.

The next sections will proceed with the assumption that there is a clear desire on the part of a majority to insure a fruitful future and a recognition that guidance is needed, not for punitive control, but to mitigate against disasters of our creation. Toward this latter end, we now turn to a discussion of what items ought to be considered in a National Growth Policy.

Content

The issue of exactly what should be contained in a National Growth Policy is by no means straightforward. In general, some of the overall requirements, regardless of the specific content, appear clear:

The Constitution, and successive actions thereafter, have set up a system of government that has provided for a tiered form of policy setting. It is clear that any national growth policy should not be seen as merely another means for a higher level of government to control a lower one. Rather, a continuation of specialties between layers should be fostered.

At the very least, development of a growth policy should make clear that the interrelatedness of the individual policies being made by the various layers of government and their consequent impact on one another are significant. No single agency is presently charged with looking at these linkages.

The development of a growth policy should add a time dimension to present day actions. Specifically, it is not useful to argue whether policies ought to aim at symptoms or at root causes of perceived problems. The fact is that any decision, regardless of the reasons for its making, is likely to bind and constrict future decisions. These future impacts of present decisions should begin to be factored into and become factors in the current policy process.

A growth policy should not be merely a political instrument with its content set by the current platform of the group in power. If its purpose is for long-run guidance, then the policy should not be buffeted by short term patches. On the other hand, it should be structured so that it is responsive to any changes in direction desired by our citizenry.

Some guidelines and problems that bring the need for a growth policy about have been with us for some time. Consequently, it is certain that the federal government must have developed earlier strategies to deal with the issues of growth. Before going on, it is profitable to do a cursory review of some selected programs to see how we have related to these issues in the recent past.

Past and Present of the Government Regarding Growth Issues

Although the direct involvement of the federal government in the growth of this nation has been historically significant (land grants, railroad development, immigration policy, etc.), it was not until the Thirties that involvement could be clearly related to today's type of growth problems:

The development of the National Resources Board to attempt to do national planning. Terminated in 1943.

Resettlement Administration to initiate housing and resettlement projects across the country.

The TVA to foster development of an entire region.

The Full Employment Act of 1946 and the Housing Act of 1949 set goals and legislative authority to provide worker and living security for the nation as a whole. In this same vein, highways and the rest of the transportation system were also pegged.

Numerous councils and other administrative measures were initiated to deal with specific challenges including urban affairs, rural affairs, the Domestic Council, OMB, CBO, OST. These aimed at recasting the federal government to make it more responsive to changing times and to strengthening the capacity of State and local governments to handle growth.

The specific areas that have received attention in recent years include:

Rural development, where both HUD and USDA have increased funding and programs to strengthen the rural portion of our nation.

Transportation, where current interest in energy and the environment has strengthened mass transit policies and caused the highway program to look at balanced transportation.

Environment, the passage of the National Environmental Policy Act to insure that the environment would be factored into present growth plans.

A whole series of specific policies relating to federal lands, housing, new communities, planning requirements, insurance programs, property tax reform, and A–95 reviews which add significant direction on the federal government's part toward growth planning as an individual issue.

In the main, the thrust of recent administrations has been an attempt to facilitate delivery of Federal service and to improve communications among State, local and Federal officials. These include:

Decentralization of decision making authority in numerous Federal grant programs to bring administration of these programs closer to the people they serve.

Reduction of red tape and processing time within the federal categorical grant system through a rationalization of consistency procedures, joint funding simplification, intergovernmental cooperation, grant consolidation, and generally improved coordination.

Establishment of uniform regional boundaries for federal domestic agencies and increasing emphasis on Federal Regional Councils.

A National Urban Growth Policy

Although difficult to summarize, it would be derelict in a discussion of national growth policy not to mention the one recent act that is written specifically for this purpose. In 1970, Congress declared a National Urban Growth Policy:

(*a*) The Congress finds that the rapid growth of urban population and uneven expansion of urban development in the United States, together with a decline in farm population, slower growth in rural areas, and migration to the cities, has created an imbalance between the Nation's needs and resources and seriously threatens our physical environment, and that the economic and social development of the Nation, the proper conservation of our natural resources, and the achievement of satisfactory living standards depend upon the sound, orderly, and more balanced development of all areas of the Nation.

(*b*) The Congress further finds that Federal programs affect the location of population, economic growth, and the character of urban development; that such programs frequently conflict and result in undesirable and costly patterns of

urban development which adversely affect the environment and wastefully use our natural resources; and that existing and future programs must be interrelated and coordinated within a system of orderly development and established priorities consistent with a National Urban Growth Policy.

(c) To promote the general welfare and properly apply the resources of the Federal government in strengthening the economic and social health of all areas of the Nation and more adequately protect the physical environment and conserve natural resources, the Congress declares that the Federal Government, consistent with the responsibilities of state and local government and the private sector, must assume responsibility for the development of a national urban growth policy which shall incorporate social, economic, and other appropriate factors. [16]

In the next section of the Act, the Housing and Urban Development Department is required to produce a biannual report on the state of the nation's urban areas and the plans and forecast of the future. Two reports have been produced to this time.

The Elements of An Office of National Growth Policy

If there were to be a National Growth Policy for the nation as a whole, distinct from an urban policy, and if a group were constituted to pay attention to this area, what would it do? Because there are several potential roles for such a group, we shall characterize its activities into a number of stereotypical forms for discussion purposes.

Operating Mode 1.—An Information Source—In this mode, the Office of National Growth Policy (ONGP) is viewed as a recipient of available information about ongoing and future growth plans and policies. The formulation of these plans and their actual implementation constitute activities that would be carried out by other agencies and organizations as well. This office would have no authority to comment on the information received. Its most stringent act would be to specify what information it would like to receive; however, it would not be able to specify form.

Problems associated with this limited scope are obvious. The available data sources may or may not be useful for preparing and analyzing growth policy. Various agencies would tend to withhold information they felt would be detrimental to their case of the moment. The data itself would not be standardized and therefore would not permit comparison of information or policies between agencies. The data would not be complete and would hamper any serious analyses effort.

Finally, because of an inability to specify timing, this mode would likely be of questionable value in actual operation.

Operating Mode 2.—Information Collector—In this mode, the ONGP is chartered to acquire information from whatever agency it desires. It has the right to expect this information, in a standardized fashion, on the subject matter it chooses, at a specified time. It still does not formulate or carry out policy.

In this operating mode, the ONGP would be able to draw conclusions about the form of a growth policy (given the information it has received) but would have no authority to monitor or direct operations. Conflict between this form of the group and the specific agencies is highly possible due to misinterpretations and agency midcourse corrections that would not factor into the original growth policy.

Operating Mode 3.—Program Monitor—In this mode, the ONGP would have the powers of Mode 2, but also would have the additional

provision given to enable the execution of its own evaluative research on any or all growth related policies. As with the earlier modes, the policy formulation and implementation is carried out by the individual agencies.

The evaluation potential increases the power of the group. However, reality suggests that it could not wield such power effectively. Even if funded adequately, sufficient manpower would not likely be allocated to do the job in-house. This means that the task would float to the government project manager rather than analysts.

Operating Mode 4.— A Component Evaluator—Added to the information role and the monitoring of ongoing programs as they relate to growth issues, the ONGP would be able to evaluate specific programs or policies one at a time as they are formulated. Again, the formulation and implementation would be outside its purview. Project by project evaluation by the ONGP would not obviate the possibility that such evaluations could also be carried out by the parent agency. The evaluations of ONGP would have to be taken into account before the program were put forward.

This mode would have the problems noted above, plus the added problem of ONGP becoming a strong political force, one to be reckoned with by all agencies. Consequently, it would have the potential power to collect a large number of enemies that would launch a campaign to lessen its influences. Another danger would be that the evaluations would tend to favor safe projects and not those of a more risky nature. In such an eventuality, the ONGP would act as a drag on innovation.

Operating Mode 5.—The System Evaluator—In this mode, the ability to evaluate separate policies is expanded to include the evaluating the policy effects in terms of other policies. This involves coordination of all policies with regard to their mutual compatibility, joint feasibility, aggregate cost, and joint effects on specific groups and segments of the nation's populace. This would tend to prioritize the programs. The implementation and formulation is still carried out elsewhere.

An obvious difficulty is that all agencies would be required to plan in detail and in advance so that these would all arrive at the ONGP at the same time for review. Further, it is not clear what techniques are available for staffing (with all the personnel problems noted above) to carry out the comprehensive analysis envisioned.

At a minimum, the ONGP would be required to set up a systematic framework to include: (1) a comprehensive data base; (2) the capability to aggregate, manipulate, and analyze this data; (3) coordination of the data with relevant policy inputs. (Included in the last step might be the relation of budget goals and fiscal resources to the specific policy as it relates to other policies and the ability to carry out cost-benefit and trade-off analysis of various forms.); (4) establishment of policy issues so that they include questions of feasibility, noting the effect of the policy on state and local activities as well as those on the private sector and noting the requirement for involvement and coordination with other government agencies; (5) the evaluative role should carry on to chart a history of past achievements and performance on the part of individual agencies and the nation as a whole; finally, (6) these analyses should not be done under the

assumption of a future that is either well known or understood, but through the presentation of alternative scenarios or futures which would take as given a mix of major policies and relate new ones to these possibilities.

Operating Mode 7.—Planner—In this mode, the ONGP would be responsible for the formulation of all growth related policies. This does not necessarily mean that it would be the sole policy setting organization, but that it would coordinate all policy (as System Evaluator) and would have the ability to institute some policies of its own. It would not implement the policies however.

This operating mode is fraught with danger. It would have the responsibility for formulating growth policy, but no ability to control the actual implementation process. It is not difficult to guess where the blame for failures in goal realization would be placed. Consequently, the political pressures against such a centralized planning agency would be intense.

Operating Mode 8.—The Implementor—This mode suggests that ONGP would have the authority to set up implementation procedures, new organizations, or portions of agencies to carry out the plans or delegate the authority to existing agencies. This Mode would be an evaluator, data center, planner, and implementor. Such a role is unlikely to be received favorably anywhere in the nation.

Specific Goals or Policies

What specific goals ought to be addressed in a National Growth Policy? The answer is somewhat problematical because the need for such specificity is a function of one of the eight operating modes chosen. A mere listing of topic headings such as population, transportation, housing, and health, does not appear useful. On the other hand, some criteria should be developed to determine what policies are to be given attention and how they are to be evaluated.

A study by Perkowski and Picardi, entitled "Evaluating Goals for a Sustainable Society" in *Growth and Its Implications for the Future, Part 3*, provides one approach toward this end. They list a series of goals (13 overall) and suggest criteria against which the goals could be evaluated. The specific goals are not necessarily those that would be of interest to the ONGP, but they are general enough to provide at least a starting position. The goals (or growth issues) are:

1. Equality of Freedom and Welfare.
2. Adequacy of Basic Human Necessities.
3. Self Actualization.
4. Population.
5. Nonrenewable Resources.
6. Renewable Resources.
7. Irreplaceable Amenities.
8. Pollution.
9. Decisionmaking Authority.
10. Minimize Strategic Conflict.
11. Stability.
12. Wealth and Income.
13. Energy and Materials Efficiency.

Each of these generalized goals are then defined, and a suggested methodology is put forth to measure the impact or success of special policies as they are implemented. Because the article is exploratory, it does not consider such measures in detail, but lists possible methods for defining criteria. An example of the population goal will help to explain the methodology.

POPULATION: GOAL 4

A sustainable society should seek and maintain a population level which enhances and is consistent with its other goals. The "optimum" population level, and hence the growth rate, either negative or positive, required at any one time, depends upon society's perception of its overall progress toward all its goals.

CRITERIA

In order to determine an "optimum" level of population, various social values must be determined as clearly as possible. For instance, the amount of per capita open space desired in terms of wilderness, forest land, lakes, rivers, and seashore should be estimated as accurately as possible. The amount of tolerable social congestion in terms of noise and residential crowding should be similarly assessed. Then social concerns such as these can be balanced with pressures to continue unchecked population growth. Three principal tradeoffs come to mind, along with relevant measurement criteria:

(*a*) The tradeoff between population level and the quality of life, as measured by indices such as per capita energy use;

(*b*) The tradeoff between population and physical diversity, as measured by landscape diversity on a county-to-county basis;

(*c*) The tradeoff between population level and the efficiency of renewable and non-renewable physical resource utilization, as measured by the energetic efficiency of such use.

Only by examining these complex tradeoffs is it possible to form a reasoned and reasonable consensus about what should be the "optimum" population level. Account must be taken of the social costs (or benefits) of that optimum as measured in terms such as those above.

The gross population level, spatial distribution, migratory patterns, immigration, emigration, and vital rates must be regularly and frequently monitored to check the society's movement toward its pre-defined "optimal" population goal. [14]

Finally, the methodology is shown in action. Again a sample from the population area:

POLICY EVALUATION TABLE

Suggested sample policy	Primary goal to which policy is compared	Criteria used to evaluate policy	Secondary goals related to policy, if any	Relationship of present societal structure to the problem which the policy addresses
Imposition of fiscal penalties (e.g., removal of deductions, etc.) for individuals bearing children in numbers greater than the replacement number of children surviving to age 10.	No. 4	Incentives to increase or reduce population are questionable until a better determination of optimal population range can be made.	Nos. 2, 5, 8, 11.	Current incentives still exis and are unlikely to be removed despite the position of the President's Commission on Population Growth regarding population levels.
Provide adequate child care services and information, including birth control and abortion information, realistic sex education programs in schools, etc.	No. 4	Incentives to develop adequate family planning facilities will raise quality of life for many population groups.	Nos. 2, 3, 5, 8, 11.	Some efforts being made in this direction on Federal, State and local levels.
Encourage comprehensive land-use planning programs in all localities, and formulate fiscal policies to encourage land-use ideas which maximize diversity of living experience (e.g., promote cluster zoning concepts).	No. 4	Increase quality of life, increase diversity, raises efficiency of mass transit systems, lowers pollution, location of agricultural areas nearby to urban areas encourages waste recycling.	Nos. 5, 6, 8, 11, 13.	Proposed National Land Use Policy Act is a positive step toward this policy.

The National Goals Research Staff also set up a format for relating a goal statement to a group of standards. Although there is no directly comparable goal of "Population", the goal of "Urban Development" does have a few of the same desires.

URBAN DEVELOPMENT

Includes projections of expenditures for physical facilities, generally derived from other goals, to provide metropolitan areas with adequate housing, public utilities, mass transportation, schools, hospitals, cultural and recreational facilities, and industrial, commercial and government buildings in the next decade. Facility needs based on anticipated population growth in metropolitan areas, demographic changes and shifts in the location of economic activity within metropolitan areas, replacement needs, and past distribution of facilities. Projected capital outlays include expenditures to provide all metropolitan areas with a million or more population with a rapid rail mass transit system by the end of the next decade. [12]

Unfortunately, the latter scheme lends itself less well to questions of a comprehensive analysis of a series of policy statements or growth. The former one is better in this regard.

The use of these kinds of taxonomies and methodologies to define growth policies and their impacts need considerable work and, depending upon the option chosen, may not really be necessary. However, we have stated that it will require a crisis type situation to bring forth the effective demand for and support of a National Growth Policy that goes so far as to require such effort. It is possible that if such circumstances are strong enough they could make such a growth policy viable. Otherwise, it is unlikely that such a complex effort would be undertaken.

IMPLEMENTATION

Considering the objectives and functions of the ONGP, it is vital that organizational arrangements for such a group meet the following criteria:

The ONGP should be isolated from political pressures, but should be sensitive to differing political views in arriving at proposals for alternative policies and actions.

ONGP should not be identified solely with one particular branch of government or segment of the public (i.e., executive and legislative branch, industry, universities, state and local governments, etc.).

The ONGP should be housed in a parent organization which has continuity beyond the term of the incumbent President or Congress.

Through its parent organization, the ONGP must have positional authority whereby its proposals for alternative policies and actions will be seriously weighed in the executive and legislative branch of Government. Such clout is enhanced if the organization is strong and is directed by prestigious individuals.

The ONGP must have access to information on strategic choices being developed in the various Federal departments and agencies outside the Government.

Whether ONGP is located within the Executive or takes the form of a separate new entity, and whether the growth policy's function is

performed in Congress or by a special committee, rigorous efforts must be made to avoid an iconoclastic, elitist mode of operation. Although there is no substitute for policymakers and bureaucrats to share expert information, certain arrangements might help to stimulate and institutionalize this kind of communication.

The establishment of a Federal Advisory Board, consisting of senior representatives from relevant Departments and Agencies, would help to prevent the ONGP from becoming isolated from the rest of the government and would provide a high-level, two-day channel for the flow of guidance and information. In addition, a Public Advisory Board would assure communication with the world outside Washington. Such a Board should include representatives from universities, foundations, industry, environmental groups, labor, and other relevant groups.

Aside from the more formal contacts with advisory groups, it is essential that the staff be aware of interests, aspirations, activities and writings of representative groups in the world outside the bureaucracy and Capitol Hill. For this reason, the ONGP and its Congressional counterpart should maintain close links with state and local governments and with non-government sectors such as industry, labor, consumer, and environmental groups.

Finally, both the ONGP and the Congressional staff, but especially the former, should keep abreast of comprehensive long-range assessment functions performed in other industrially-advanced countries. Aside from the usefulness of exchanges with respect to methodology and substance, it will be prudent to exchange advance warnings of major new shifts in long-range national economic and social policies.

Having discussed the general questions of desirability and content, we now progress to the very optimistic question of where such a group should be located within the economy. A number of federal officials and others met several times at the Woodrow Wilson Center for Scholars and discussed the problems of a National Growth Policy and issued minutes of the meetings. A part of the following discussion is based on one of the papers from these meetings.

Location

The question of where such a function should be placed is crucial to the final acceptance of its output. The choices of its location range from putting it in the federal establishment to placing it in state and local or private (including university) domiciles. The difficulties displayed will give some indication of the complexity of setting up such an institution.

Option I—In the Executive Branch

There are two alternative organizational arrangements within the Executive Office which seem to hold promise: (1) placing the group within the Office of Management and Budget; or (2) creating a new independent agency within the Executive Office of the President.

WITHIN OMB

The rationale for placing the ONGP within OMB is that OMB already has responsibilities for resource allocation, legislative clear-

ance and departmental coordination. The close organizational tie between these functions and the function of a growth policy might be used to increase the effectiveness of OMB in its decision making role. Certain changes within OMB, of course, would be necessary if such a function was assigned there. For example, since Congressional and public interest groups would and should play an important role in the setting and monitoring of goals, part of OMB might have to be reorganized to facilitate this communication.

Putting the group into OMB would provide it with direct access to both the budget and policymaking processes, and such access could provide it with the means to make its directives effective. On the other hand, the growth policy function might become a residual claimant for the time and attention of the Director and his principal subordinates thus reducing its potential impact.

AN INDEPENDENT AGENCY WITHIN THE EXECUTIVE OFFICE

The organizational structure for such a group could be the same whether it was placed within OMB or functioned as an independent agency. Aside from more potential flexibility, the principal argument for organizing a separate entity is that the identification of emerging problems and the formulation of policy options might best be conducted by a staff removed from day-to-day decision making pressures and by an official with direct access to the President.

The creation of a new separate agency has the potential of certain obvious disadvantages, including turf definition, staff hiring and duplication, budget questions, and the like. Moreover, there is a danger that the group might become isolated from the mainstream of decision making and from the decision makers themselves. On the other hand, there would be significant merit in having this function become the sole responsibility of a prestigious Council whose head reported directly to the President.

Option II—In Congress

The very nature of a National Growth Policy implies a close partnership between the Executive and the Legislative Branches. However, if the growth policy function is organized within the Executive Branch, then a companion organization could be established to serve the requirements of Congress.

Since Congress is normally more fragmented than the Executive Branch, and since the professional capabilities of some Congressional Committees need substantial upgrading, this function should not be grafted onto any of the existing Congressional Committees. A possible exception here would be the Joint Economic Committee whose charter could be broadened and staff strengthened for this purpose.

A new Committee along the lines of Senator Humphrey's proposal, a "Joint Committee on Balanced National Growth and Development," might be the answer. The number of new organizations that would have to be formulated and institutional changes carried out to implement the full bill appears awesome. Such change is necessary to carry out the full ramification of this policy, the author maintains. On balance, however, it would seem preferable to assign the assessment function to an existing Joint Committee such as the Joint Economic

Committee (JEC), or to the new Office of Technology Assessment (OTA), or the Congressional Budget Office (CBO). For a variety of historical and other reasons, the Congressional Research Service, General Accounting Office, and the other central staffs of Congress do not seem a suitable base.

It is likely that either group will employ a combination of direct staffing and contract operations which could give it access to a broad range of analyses bearing on long-term strategic choice.

The establishment of a growth policy assessment staff as a distinct entity within OTA or CBO and operating, preferably, under its own Deputy Director could provide a logical focus for overseeing and filtering the output of a parallel group in the Executive Branch. Such a group could disseminate its assessments and its evaluations of other agencies' policies and assessments to Congress at large.

The effectiveness of the Office on the Executive Office of the President and of a counterpart staff on Capitol Hill would depend, in large part, on close and frequent consultation between the two. One important link might take the form of an annual Presidential Message on Growth and Development along the lines suggested in Senator Humphrey's Bill. Such a Message would contain specific legislative proposals discussed in advance between the ONGP staffs of both Branches of government. Care would have to be taken that sufficient technical and policy support be given to such a group however. Much criticism is levied at the HUD sponsored annual urban growth report for lack of its technical-empirical content, for example. One a more routine, day-to-day basis, there might be a joint early warning system to identify emerging problems. A joint approach to contracting outside research might be another device to insure close cooperation between the growth policy staffs.

Further, within the federal establishment, the group might not be formally placed under either Branch, but organized as a Commission.

Option III—A Permanent Commission on National Policy Choices

The group could be placed under an independent commission whose membership would reflect broad representation from various sectors. The members might be comprised of some membership such as the following:

EXECUTIVE BRANCH

Chairman, Council of Economic Advisers
Director, Office of Management and Budget
Executive Director, Domestic Council
Chairman, Council on Environmental Quality
Director, Federal Energy Agency

LEGISLATIVE BRANCH

Chairman, Joint Economic Committee
Ranking Minority Member, Joint Economic Committee
Comptroller General of the United States
Chairman, Congressional Budget Committee
Committee heads of subject areas such as energy, the environment, defense, transportation, etc.

OTHER GROUPS

Representatives from:
- Industry
- Universities
- Labor
- Consumer groups
- State and local governments

The President would appoint members from outside the Federal Government for a term of say six years.

The Commission would prescribe broad policies to be followed by the staff and provide guidance and advice to it. The Commission would publish staff reports on policy and action choices that are periodically developed by the group. An annual report would be expected of the Commission to both the President and the Congress.

Legislation establishing the Commission would authorize and direct Federal departments and agencies to assist the Commission thus augmenting its staff. The President would be required to report annually to the Congress on actions taken with respect to the group's proposals for alternative policies and actions thus helping to ensure that the top policy levels are at least aware of the Commission's activities (though not guaranteeing that their policy guidance will truly be effected). Congress also could direct legislation on the basis of Commission reports and such activity documented in the annual report.

The above three organizational suggestions are attempts to work within structures traditional to the federal level. Numerous other alternatives could be envisioned. One of these was outlined in a paper by William L. Hooper, "The 'Evaluative Function' in Government". Rather than paraphrase, we shall quote liberally from this document. The paper argues strenuously for a "fourth branch" of government.

Option IV—A Fourth Branch

Hooper argued first for a new political mechanism to state the situation of where the nation was presently in regard to its own stated goals or objectives, a kind of judge or objective observer. Such a mechanism, he maintained, should be free of political pressure and be set up outside existing institutions outside and inside the government.

He goes on to discuss other possible options. Finding them infeasible, he continues with the argument that:

> The one remaining alternative is a restructuring of the existing three-branch government, by creating a "fourth branch" to assume the several governmental functions not envisioned or considered important at the time the Constitution was adopted.
>
> The new entity, the "evaluative branch", should have its independence protected by appropriate constitutional and procedural guarantees. It would also be essential to specify its composition, its authority, operating procedures, and its interfaces with the other branches and with the public. Specific constraints would need to be established in law to assure the business community, and the electorate generally, that the new branch's principal function would be to assist in the preservation and strengthening of constitutional democracy and of the free enterprise system by undertaking, under close public surveillance, those important information, analysis, planning and evaluative functions which it has not been hitherto feasible for other branches to assume. It would also be important to insure that the new branch would not dilute any of the essential

responsibilities of the existing branches. *Its activities would be non-executive, non-legislative and non-judicial, and its concern would be primarily with the longer-range, inter-branch, inter-agency, and inter-disciplinary issues which the existing organization structure finds its difficult to face, to understand, and to resolve,* [8]

The responsibilities of the new branch would be to (1) collect data, analyze its implications, develop alternatives, and evaluate performance of the analytic arms of the rest of the government; (2) develop and coordinate national, state, and local data systems; and (3) do long-range planning and interagency analysis of programs.

Although the rhetoric that surrounds the argument for such an institution is heavy, the basic content called for is similar to that of the more traditional approaches. Admittedly, the establishment of such a "fourth branch" would have little chance of realistically being implemented. A move in the direction of attempting to create such an entity might engender the political support necessary to get the called for services produced in other parts of the nation. To this point, we have only discussed placing such an organization at the federal level. There would be some sentiment for establishing such an activity at the state, local, or private levels also or instead of at the federal one.

Option V—Regional Involvement

An unpublished paper by a University of Pittsburgh task force that was interested in preparing an unsolicited argument addressed the question of Regional Development Centers for local political purposes. Although the Centers are directed more toward urban development, it is possible to use this plan to discuss questions of growth policy. The first stage cited by the Task Force is the creation of a group at the Executive or Legislative level to coordinate the inputs from the Regional Centers and to be responsive to the rest of the federal establishment. The next step is to create the Centers. Such Centers would link local programs to national policy and would assure that each area had the knowledge required for its own development. They would:

(*a*) Identify regional resources, opportunities, and problems.

(*b*) Assist the regions in forming necessary public and private development organizations.

(*c*) Provide knowledge to the regions so that each regional organization—public and private—would have the information necessary to the fullest development of its region; and

(*d*) Provide viable regional plans coordinated with national plans.

Regional Development Centers would be responsible both to national planning and goals and to the regions that they serve. They should be formed by the regions—and not imposed by the federal level. While federal funding should be used to assist their early development, they should eventually be funded by and responsible to their respective regions.

But actual development would be the responsibility of regional and local public and private organizations, community groups, and individuals. The Regional Development Centers would provide key knowledge and organizational assistance.

Where many regions have problems in common—water pollution, e.g.—a single center might serve all of the regions of the nation. The nation now has a number of such problem-oriented centers. These should be coordinated by a central office and given new responsibilities so that they are responsive to regional development.

In other instances, centers would be created to serve large, multi-state regions, with due regard to the fine fabric of regional structure. The resources represented by each of these centers would serve the many interrelated needs of its region in a coordinated manner.

POLICIES AND GOALS FOR REGIONAL DEVELOPMENT

Programs of the Central Office and of the Regional Development Centers must be structured in terms of our regional fabric.

(*a*) All regions should be provided with close and ready access to centers of employment opportunity and to cultural facilities. Within regions, there must be creation and maintenance of a more dense network of needed small-scale amenities.

(*b*) All centers of employment and cultural facilities that show reasonable prospects for maintaining continued economic growth and cultural development must be provided with the necessary public investments—especially investment in people—to ensure that this is accomplished.

(*c*) New regional centers might be created in potential growth areas now beyond reasonable daily access to the advantages and facilities of our urban society, to bring the benefits of this society to areas that have not enjoyed them.

(*d*) Economic growth and cultural facilities are best concentrated in urban growth centers, yet the rural areas can still remain superior living environments for those who dislike the crowding and complexities of urban areas. This requires that close and ready access between the two be maintained, and that all the facilities necessary for satisfactory residential areas be guaranteed in the countryside.

(*e*) In turn, the countryside should also become an important part of the citydweller's life. Recreational areas need to be developed in zones of natural beauty with ready access to urban centers. These can also provide important new sources of employment to rural residents. Thought needs to be given to a variety of recreational needs (daily, weekend, and longer vacation) and to a spectrum of land and water, summer and winter recreational needs.

(*f*) In those instances where continued growth and development are not practicable, assistance should be given to those who desire to move to growth regions. Assistance should include training for new jobs, partial payment of moving costs, and assistance in finding new and suitable employment.

Such a proposal is more ambitious than that of a data gathering, forecasting and early warning institution as was envisioned at the federal level. However, it is likely that the creation of a growth-oriented organization at the non-federal level would have a tendency to be both action oriented and more attuned to an ombudsman-type role. Technically, there are numerous questions of integrating the various regional goal statements into a national policy and, at the same time, relating federal growth policies to each of the regional centers.

Of course, it could be argued that such problems are not insurmountable and, indeed, the structure envisioned is part of the very fabric of our democratic society.

Finally, there are those who might argue that a growth policy that has an early-warning or watchdog role should be placed outside the public sector altogether. Such proposals crop up often and relate to numerous topic areas. The formation of the Urban Institute in Washington, D.C. originally was envisioned to carry out a large portion of the research criteria in the urban area for HUD. Recently, with the interest in the environment, a similar organization was proposed for its study. Although aimed specifically at this purpose, proposal for an Institute for Environmental Studies covers the basic requirements for a growth policy group in the private sector.

Option VI—The Private Sector

Finally, there are several possible models for the private sector. Recently, a systems analysis group was suggested for the Congress, for example. An earlier example can be found in the plan for the establishment of an Institute for Environmental Studies (IES). The IES was seen as having a staff of some 200 interdisciplinary professionals and an annual budget of $10–15 million. The funding was to be from both the public and private sectors.

The Institute was seen as having several rationales but only three were given serious weight.

> Of the three functions defined in the previous section—the development of long-range strategies, the early warning, and the quick-reaction analytical functions—it is unlikely that the first two will receive within the existing governmental structure the kind of continuing attention that is necessary. These requirements will best be met if study and evaluation are carried out by an independent group with no commitment to the operating policies of a particular government agency, and whose findings should also be available to the Congress and the public. [16]

Finally, it was argued that the Institute to do its best had to be independent.

> An effective analytical institution must be not only creative but also objective and independent. Without these qualities the institution would not be able to attract and retain the professional talent that is required to deal with difficult environmental issues. [16]

It is apparent that such a group could be resident in a University or set up independently. There could be only one of several such centers. The differences between their charters could be formalized or allowed to develop depending upon the chemistry of the parent institution and the staff members.

The heading of these six areas as *Options* does not mean that all of them or some combination could not be organized. In any case, regardless of the decision, the general discussion of the individual structures would still remain relevant although it is clear that the specifics would change depending upon the circumstances surrounding the plan for institutional development. It is difficult to array these different alternatives in terms of their pros and cons. The relative strengths and weaknesses differ depending upon which of the various tasks is chosen for the ONGP. For example, a simple coordinating role puts the weight in favor of placing the group in the Executive or Legislative

Branches. A performance measurement role, it might be argued, should be carried out in the private sector away from potential political manipulation. A role to ensure that local participation be made a part of goal setting processes might suggest regional centers, and so forth. The actual analysis of alternatives will then have to await an orderly process of deciding more basic desires first.

Feasibility and Impact

The question of the utility of all of the points made to now is a direct function of whether the group carrying out the mandate of National Growth Policy has any chance of being listened to. Its potential influence can be gauged by the formal authority the group has, where it is situated, the times, the issues, and the circumstances surrounding its inception or the topics it investigates, and finally, what the rest of the community believes the group is supposed to do. As we have done with other portions of this paper, we will look to the past to see whether our economy has ever attempted to establish such a group and the results of such an attempt. First, let us summarize some of the major resistances to planning as they have either been traditionally vocalized or as they are formulated by various sectors of the economy.

The question of goal seeking and government planning are value laden terms and suggest to many people an erosion of personal freedom. People in this camp come from all walks of life and are concerned with such policies in general or specifically related issues. Those in this group are opposed to any public planning almost regardless of the details.

A potential subset of these people are those who believe that the public bureaucracy is large enough or too large already. Any action that would appear to swell the ranks of the public servants would be opposed.

Others, who may or may not be opposed to the mere size of the public bureaucracy, might object to such planning on political administrative grounds. The position of these antagonists would be that there are already enough (or too many) policymakers in the public sector. An added layer which would make and manage a national growth policy would be unwelcome.

Some economists believe that the market mechanism developed in the United States is quite able to function without public interference. In fact, an argument which appears to point out a deficiency in the economic sector or its workings is often met by a suggestion to deregulate a private activity even more or to place still more reliance on the price mechanism.

There is considerable concern over the growing power of the federal government, not only at the apparent expense of the private sector, but at the expense of the state and local governments as well. A plan for a national growth policy brings suspicion to those who fear further eroding of the governmental and fiscal sovereignty of other public sectors.

Finally, there is a bias against holistic planning policies by those who feel that they represent a "pragmatic" viewpoint. These people will oppose any policy which: (1) fosters strategic (rather

than tactical) analysis; (2) promotes global analysis (especially modelling) and; (3) favors a comprehensive rather than incremental approach to decision making.

Previous Experience

A search of the literature has yielded a considerable history of potentially related exercises. The number of private organizations and commissions is large, and the utility of trying to generalize from their experience of question. The proliferation of individual study task forces and goal statements produced both inside and outside the public sector is monumental. Their impact on policy depends on so many unique features and happenings that they can almost be treated as discrete events. One organization appears to relate directly to the paper at hand—the National Resources Planning Board (NRPB).

Given the belief held by some that democracy and planning are antithetical to each other, early studies of the NRPB all seemed to address this question first. Because an Office of National Growth would also appear to smack of the same overtones of regimentation and guidance, it is useful to note this background before investigating the institution of the NRPB itself.

American planning, if it is to be consistent with American ideal, must be democratic in method, following democratic processes and seeking social objectives determined by majority rule. These processes involve freedom of citizens through representative institutions in government and industry to propose, discuss, and decide on policies and measures, and continuously to reexamine and appraise their results. Despite many conflicting interests in American life, there is a wide sphere of undebatable common interest in national defense, economic prosperity, individual freedom, minimum standards of education, housing, and health, and peaceful social change. In this sphere the plans of men must be guided by the principle of the general welfare and must be evolved and executed by democratic procedures. [7]

Clearly, the issue of planning, as described above, is intertwined with others concerning a country just recovering from the Great Depression and entering a World War, and even concerned with postwar development. On the other hand, many of the topics discussed are of interest even today and the rhetoric used would still be generally applicable. One group looked to for planning guidance was the NRPB. Its functions were as follows:

The National Resources Planning Board makes plans and recommendations to the President and Congress for the wise use and fullest development of national resources, watches trends of employment and business activity and warns of approaching periods of depression, and recommends measures calculated to improve and stabilize economic conditions. It is preparing a six-year advance program of public works, it also receives and records all proposed federal projects involving the acquisition of land, and acts as a clearing house and means of coordination for planning activities in all fields and at all the levels of American government. It has three part-time members, a director and three assistant directors, and a large staff. Potentially, it would seem to be the logical place in the federal structure for the overall, long-run planning of general economic and social policy in all its essential aspects for the economy as a whole. But it has not yet achieved this stature due in part to Congressional opposition, in part to the lack of full-time service on the part of its members, and in part to the failure to develop as yet a general framework of policy of overall national plan. In the absence of such a framework, the Board has been unable to provide the state and regional planning agencies with all the guidance and counsel they need in order to articulate their plans and programs into a national setting. [6]

A reading of this charter might lead me to suggest that many of these functions would be over the purview of the ONGP. However, the NRPB is no longer with us today. Viewing the Board historically might give some indication of pitfalls to be avoided by a similar organization:

> Is not to be a substitute for the many other research activities within the Federal Government; rather, it is intended to help us make better use of the research now being done by bringing together, at one central point, those portions of it that relate directly to future trends and possibilities. It will make accessible what has too often been fragmented.
>
> Is not to be a "data bank." It might more accurately be referred to as a key element in a management information system. For the first time, it creates within the White House a unit specifically charged with the long perspective; it promises to provide the research tools with which we at last can deal with the future in an informative way. [12]

The reasons given for having such a staff were based on the premises (1) that it is technically feasible to look at long-range problems; (2) that the present situation demanded one did so; (3) that such techniques should be melded into the decision process; and finally, (4) that we need to sharpen our trade-off capability.

The final report of this group was issued as a goal statement for the nation. The staff is no longer in place.

Before we get to our own set of summary statements and suggestions, we shall review the summary of the first Report on National Growth. The report stated that it was extremely difficult to develop a single comprehensive strategy for a growth policy. It cited the following reasons:

> (1) The definition of the objectives of a national growth policy requires a searching consideration of our national objectives and priorities. This fact becomes more difficult as we move closer to specific goals and in practice, the universal support for the general concept turns aside when the discussion is on specific issues. Questions of priorities, whether an issue is a problem, and so forth make a comprehensive assessment difficult.
>
> (2) The causal link between growth issues and specific policies is unclear.
>
> (3) The underlying forces that, when integrated, define a growth issue are all individually based largely on freedom of action. Control, though often possible, will lessen this freedom.
>
> (4) The use of a growth policy would tend to place more power in the federal government (or so some feel). This is not looked upon with favor by those who support our system of layered government.
>
> (5) The United States is physically a very large place. The very size of the nation requires that numerous real decisions are made, largely reflecting local desires. This feature of our governmental system might be threatened by a centralized policy.

Past experience and the difficulty of the problem of planning for national growth appear insurmountable. Neither the long-range or comprehensive analysis that would be needed to do full scale planning are felt to be adequately tested, nor trusted, to bear the weight of policy needs. As with most new institutions, unless there is intense need in the form of crisis and strong policy level support, its success will depend on evolving one step at a time, progress to more planning as previous stages prove out.

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