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Looking Forward

It is the normal business of our Annual Meeting to lay plans for the future besides taking stock of past accomplishments. We share a common faith in the power of economic research to better human life, but the specific inquiries that we pursue require constant scrutiny and reexamination. At a time when our nation is mobilizing its spiritual and economic resources to protect its way of life against the sinister force of communism, the need for critical self-appraisal is especially strong. To aid you in making this appraisal, I shall discuss the National Bureau's program in relation to some of the practical issues of our times, and suggest the general direction in which the Bureau may usefully move in the years ahead.

I

The distribution of the national income is always a vital concern of a free and progressive people seeking to raise their plane of living. The wage bargains into which we enter, the prices and taxes we pay, the subsidies we legislate, even the careers we choose, are all affected in some degree by our notions of what is a 'fair' income. These notions are naturally linked to our impressions of how incomes are actually distributed, but on this subject we have been very badly informed. Our direct knowledge of incomes is of necessity limited to a few cases. For the rest we rely on vague impressions gathered over the years, eked out by crude statistics that occasionally come to our notice. As a result few Americans and still fewer Europeans are aware of the transformation in the distribution of our national income that has occurred within the past twenty years—a transformation that has been carried out peacefully and gradually, but which may already be counted as one of the great social revolutions of history.

Let me cite several figures from Simon Kuznets' recent reworking of income statistics. In 1929 the highest 5 per cent of the income recipients obtained 34 per cent of the total disposable income of individuals—that is, the total of personal incomes, inclusive of any capital gains but after deducting federal income tax payments. By 1939 their share had dropped to 27 per cent of total income, and by 1946 to 18 per cent. Since 1946 the size structure of the income distribution does not seem to have changed materially, so

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that we may regard the distribution in that year as roughly representative of current conditions. If we now compare 1929 and 1946, we find that the share going to the top 5 per cent group declined 16 points. Had perfect equality of incomes been attained in 1946 the share would have dropped from 34 to 5 per cent, that is, by 29 points. In other words, the income share of the top 5 per cent stratum dropped 16 points out of a maximum possible drop of 29 points; so that, on the basis of this yardstick, we may be said to have traveled in a bare two decades over half the distance separating the 1929 distribution from a perfectly egalitarian distribution. If we turn to the top 1 instead of the top 5 per cent group, the results are still more striking. The share of the top 1 per cent group in total income was 19.1 per cent in 1929 and 7.7 per cent in 1946. Since the share of this group dropped 11.4 points out of a total possible drop of 18.1 points, we have traveled since 1929 on the basis of this yardstick almost two-thirds of the distance towards absolute income equality.[1] Regrettably, the 'iron curtain' precludes comparison of our achievement with that of the vaunted 'people's democracies,' but it is permissible to wonder whether many of them can point to so vast a democratization of the distributive process in their own countries.

Considerable income inequalities still exist in our midst, but they require careful interpretation. Imagine a static society in which differences of earnings simply reflect differences in productivity; hence youngsters earn less than middle-aged men, and men with no schooling receive less than those possessing a technical education. Imagine further that real incomes are independent of location, but that both the scale of living costs and money incomes are higher in urban than in rural areas. To an uninformed observer the income differences of such a society might seem disturbing, although age and education, each correlated with productivity, account for all real differences in income. We lack the means to

[1] The above figures are derived from Kuznets' report *Shares of Upper Income Groups in Income and Savings*, now being prepared for publication. For a preliminary summary of his findings, see *Occasional Paper 35* (National Bureau, 1950). Of course, the figures cited in the text refer to only two points on a Lorenz curve, and cannot be interpreted to mean that 'income inequality,' taken as a whole, has been reduced by over half. Moreover, Kuznets' figures are estimates that may be modified by later research; though it seems unlikely that the *trend* indicated by the figures would be materially changed, as long as the income concept is confined to personal incomes. If, however, the undistributed income of corporations were allocated to individuals, the change from 1929 to 1946 would be less striking. On this basis the share of the top 5 per cent group comes out 35 per cent in 1929 and 20 per cent in 1946; while the share of the top 1 per cent comes out 20.8 per cent in 1929 and 9.9 per cent in 1946.

assess precisely the influence of the various factors that shape our current income distribution, but the data assembled by Kuznets leave no doubt that a part of the income differentials in our society is attributable to urban life; that the upper income stratum is dominated by the most productive age, sex, and educational groups in the population; and that income inequality would appear smaller if incomes were reckoned by two- or three-year periods instead of by the year.

These conclusions of Kuznets' investigation have great significance for the American people. If we are to look forward constructively to a material reduction of income inequalities in the future, we must seek to attain it principally by raising the productivity of those at the bottom of the income scale rather than by transferring income from the rich to the poor. Between 1929 and 1946 the average per capita income of our population (including capital gains but after payment of federal income taxes) rose from $690 to $1,166. Meanwhile the average per capita income of the top 1 per cent of the population fell from $13,168 to $8,994.[2] Thus the upper income stratum suffered a substantial decline in money income and a still larger decline in real income. The social experimentation of our own and other countries suggests that private incentives to embark on new and venturesome investments are more firmly rooted than was generally believed to be the case a quarter of a century or even a decade ago; but there can be no doubt that as high incomes are cut, a point must come when private investors have neither the will nor the power to launch major innovations. Substantial further redistribution of incomes may therefore affect adversely the size of the national income, while it cannot improve appreciably the living conditions of the great masses. The paramount source of the rising living standards of our workers and farmers has always been an increasing volume of production, and in the years ahead it bids fair to become the only source.

II

The evening out of incomes is partly attributable to the rapid rise of wages relative to other forms of income—salaries, dividends, and interest receipts. Another significant factor has been the progressive income tax, which now dominates the federal revenue system. Lawrence Seltzer's investigation discloses that the income actually subject to tax grew three times as rapidly as total personal income

2 See the preceding note.

between 1939 and 1948. At the same time tax rates rose sharply, so that tax payments grew twice as fast as income subject to tax. As a consequence of both developments, personal income tax payments increased six times as fast as personal incomes. The relative increase of tax revenues was still higher by 1950, and will be higher again in 1951 even if Congress accepts only partly the President's recommendations. The precise character of the additional taxes is as yet uncertain, but the raw facts on income distribution make it altogether plain that the burden will fall mainly on moderate-sized incomes. Even if the *total* income of those receiving $25,000 or more per year were paid into the Treasury, the addition to tax revenues would fall far short of the additional sums now budgeted.

The only way the government can avoid sharp increases in taxes is to finance all or a substantial part of the new military expenditures by borrowing. But experience teaches that this method of financing is nearly certain to impose greater hardships on the average citizen than would increased taxation. For, on the one hand, financial tinkering cannot of itself change the physical quantity of goods available for civilian consumption; while, on the other, debt financing will lead to a further shrinking of our shrunken dollar, and thus further obliterate the savings that ordinary folk had laid by in the form of bank deposits, government bonds, pension accounts, and life insurance holdings. It is often noted that inflation hurts the lender and benefits the borrower, but it is easy to overlook that men of small or moderate means are far more apt to be net lenders than net borrowers. The principal borrowers, of course, are governments, large business firms, and wealthy individuals.

Whether the government obtains the dollars it needs by taxing or borrowing or doing some of each, it will use the dollars to purchase a larger portion of the national output than it did previously. Hence, unless production increases or inventories are permitted to fall to dangerous levels, the quantity of goods left for purchase by civilian users must decline. In a period when industry is converting plant from peacetime to military production, an over-all increase in output per man-hour is not very likely to occur. Absorption of the unemployed into gainful occupations will tend to relieve the short supplies; but the contribution from this source will hardly be sufficient to offset the projected increase in military forces. An increase in the labor force and a lengthening of working hours are therefore the principal means that are immediately available for attaining the military goods we need without severe curtailment of living standards.

Clarence Long's investigation of changes in the labor supply during recent decades in the United States and foreign countries throws considerable light on the elasticity of the labor force—a total that includes civilian workers, the armed forces, and the unemployed who are actively in the labor market. The labor force is normally one of the steadiest of economic factors, but it is nevertheless capable of increasing very sharply at a time of national emergency. During the 1930's the annual additions to our labor force were in the neighborhood of 600,000. Between 1940 and 1944, however, the total increase was close to 10,000,000, or about four times what it would have been under normal conditions. Over half of the 'extra' workers were girls and women, and most of them left industry at the end of the war. When the conflict in Korea broke out last June, the proportion of the population of working age in the labor force was not much higher than in 1940. Now the proportion is perceptibly rising again, and it seems likely that the general pattern of the recent war will be repeated in the present emergency.

Long's analysis of foreign experience during World War II is not less instructive than his analysis of the American record. The British augmented their labor force on approximately the same scale as the United States, when allowance is made for the difference in size of the two countries. Canada also added substantially to its labor force; Germany, on the other hand, fell far behind the democracies. According to Long's calculations, "for every hundred females at work before the war the United States added 35, Britain 21, and Canada 19 (compared with 1941); Germany relinquished 1. For every hundred males the United States added 9, Canada 6, Britain 2, and Germany 0.3."[3] The great contrast between the German experience and that of the democracies has many causes, but perhaps the most important is that a free and peaceful people have a resilience and energy at a time of crisis that cannot be matched by a dictatorial state. Years before launching an attack, a totalitarian government is likely to drive its citizens to fanatical effort, but the furious pace cannot be maintained physically or psychologically if the conflict turns out to be a protracted one. There is a nice balance in the energy of a people over a run of years that moral fervor may stretch but cannot override. To build up our military strength we must now act boldly and quickly, and

[3] [See Long's *Occasional Paper 36*, "The Labor Force in War and Transition, Four Countries" (1952), in the National Bureau's series.]

yet guard against the danger of draining the reserves of energy we shall need if our country is forced into full-scale war.

In view of the magnitude of our military program, a considerable expansion of the labor force during the next year or two is as desirable as it is likely. A moderate increase in working hours would also contribute to smoothing the transition to a sharply higher level of governmental spending. But over a longer run we must seek to protect living standards by looking to increases in the productivity of labor rather than to an extension of working hours or a rise in the proportion of people in the labor force. The American people will willingly work harder for the same or even a lower real income while our most urgent defense preparations are being built up, but they are not likely to continue to do that—unless, of course, the Korean war is extended. If the rightful aspirations of workers and farmers for better living standards are to be realized with a minimum of social unrest, it will be necessary to strive for even greater increases in productivity than have ruled in the past.

The extent and causes of increasing industrial productivity have long occupied the attention of the National Bureau's research staff. The investigations now being conducted by Mills, Fabricant, Stigler, and Barger will probably be completed within a year or two, and it is highly important to begin laying plans for new research in this critical area. But it is only prudent to assume that whatever gains may occur in industrial productivity during the next decade, controversy over the distribution of the national product will not be less intense than in the recent past. New research on the distribution of incomes therefore seems advisable, and it is likely to prove especially fruitful if linked with Wolman's and Long's studies of the labor market. Kuznets' work on income distribution, invaluable though it is, has covered intensively only the upper income strata. Fortunately, a great deal of information on low and moderate incomes has recently accumulated and awaits exploitation. Preliminary explorations suggest that it may be possible to work out tolerably full income distributions for every year since 1939, and to cross the size distributions with other classifications among which occupation, trade union status, and full- or part-time membership in the labor force are especially important. Statistics on income analyzed in this fashion would clarify the economic policies that have ruled in recent years, and at the same time provide a better factual basis on which current policies may be formulated. I hope that the Bureau's Board will authorize research in this direction as soon as funds and personnel can be assembled.

III

At an early stage of World War II Leonard Crum began an investigation of the outlook for the postwar federal budget, in which he was later joined by Slade Kendrick. Their successive estimates were widely discussed and had considerable influence on students of government, but they rested on so many uncertain assumptions—especially with regard to the state of international affairs—that the authors were reluctant to have them published. Recalling this experiment, it is especially noteworthy that back in 1943, when the thinking of so many was still geared to the 1930's, Crum foresaw that the postwar federal budget would run on a very much higher level than any prewar budget.

Crum reached his conclusion by examining individual items of the budget, taking such account as he could of the probable needs and political pressures after the war. Recently, in the course of an historical study of federal expenditures, Kendrick gave close attention to the influence of major wars and in the process succeeded in lifting Crum's conclusion to the plane of generalization.[4] After the War of 1812, after the Civil War, after World War I, and again after World War II, federal expenditures ran on a substantially higher level than in the years preceding hostilities. Of course, a large gap between prewar and postwar expenditures might merely mean that traditional methods of war financing have a powerful tendency to lift price levels. But Kendrick demonstrates that the gap is not a monetary illusion; it remains very substantial even after allowing for population growth and rising incomes, besides changes in the purchasing power of money. This persistent pattern arises, at least in part, from readily identifiable causes—such as heavy borrowing during a war which piles up embarrassing interest charges at the war's end, the need to care for veterans and their families, and a natural tendency to countenance what seem to be moderate increases in outlay on civilian functions at a time when military budgets are being drastically cut. Thus, although the bulge of war spending is followed by sharp contraction at the war's end, the level of expenditures remains considerably higher than before the war.

Whether and in what degree this pattern will apply to the pres-

[4] See Kendrick's forthcoming *Occasional Paper* on "Federal Expenditures for 150 Years."

ent bulge in governmental spending is a question that cannot be answered with assurance. War with Russia is by no means inevitable. Some approach to international comity within the near future cannot be ruled out. Further, the pattern depends on factors that are in considerable degree within human control even if the calamity of war cannot be averted. It is therefore premature to conclude that when full peace reigns again, the rate of governmental expenditures will be substantially higher relative to population and national income than in the past three or four years. At the same time it is well to recognize that apart from wars the broad trend of governmental expenditures has been emphatically upward. Fabricant's study, now approaching completion, reveals persistent growth in the utilization of human and material resources by government. Between 1900 and 1949 private employment in the United States approximately doubled, the combined employment of state and local governments quadrupled, while federal employment increased more than twelvefold. One out of twenty-four workers was on some governmental payroll in 1900; the proportion rose to one out of fifteen in 1920, one out of eleven in 1940, one out of eight in 1949. In 1902 one out of every thirteen or fourteen dollars of capital assets (excluding military equipment) was government property; in 1946 the proportion became one out of four. Nor do these striking figures tell the full tale, since they leave out of account the employment provided and the capital utilized through governmental purchases from private business, which in the aggregate add very materially to the government's command of real resources.[5]

It is interesting to speculate on what the trend of governmental activity might have been in the complete absence of wars. From this point of view, it is well that the figures I have cited on employment are imperceptibly affected by interest on the federal debt or by outlays on the veterans' program, both being predominantly legacies of war. The figures do include the military forces and the civilian workers employed by government in connection with the military establishment. If these were omitted, governmental employment would be notably lower but the broad trend would be unchanged. The crux of the problem, however, is the indirect influence of war on the civilian functions of government, and on this matter it is difficult to touch firm ground. It does seem clear that the domestic and international dislocations caused by war extend

[5] See Fabricant's preliminary report, "The Rising Trend of Government Employment," *Occasional Paper 29* (June 1949) in the National Bureau's series.

the need for governmental activity, and it is not unlikely that once government undertakes a new function there is a tendency to maintain it even if underlying conditions change. Not only that, but the decisive role of government in conducting a war probably fosters a tendency on the part of many to look to government for a solution of their special problems. But these and other indirect influences of war, important though they may be, can account only in part for the increasing role of government in economic life.

The broad trend of development in a progressive economy is towards sharply increasing emphasis on the service industries, and the government is merely one of the major channels through which the public's demand for services is satisfied. An economy undergoing rapid industrialization and urbanization increases the interdependence of men—their exposure to the wisdom and enterprise, also the folly and indolence, of their neighbors. Social and economic problems arise that cannot be handled adequately by private enterprise. With the spread of political democracy the demand increases for collective action to broaden educational opportunity, to improve sanitation and health, reduce slums, conserve natural resources, eliminate or regulate private monopoly, supervise banks and insurance companies, protect workers against the hazards of unemployment, and so on. Thus the line separating private enterprise and governmental responsibility is constantly redrawn, the range of governmental activities broadens, and a 'mixed economy' comes into being.

In these few sentences I have touched on one of the gravest problems of our time—namely, the proper line of division between the functions of government and private enterprise. This has always been a controversial issue in our democracy, and every significant relocation of the line has been preceded and followed by extensive public discussion. What makes the problem so acute today is that despite the notable shift towards government in recent years, Americans feel that new changes are impending—the scope and consequences of which they can but dimly foresee. Over a large part of the earth collectivism has triumphed, and even in the democracies of Western Europe the government is a more significant economic factor than in the United States. To make social changes intelligently amidst the uncertainty bred of crisis and tumult in the world is not easy. But that very fact imposes a heavy obligation on economists to clarify and set out scientifically the extent, character, and impact of governmental activities.

The National Bureau's research in this area dates formally from 1939, when the Conference on Research in Fiscal Policy was set up. In the last two years our research on fiscal problems has been accelerated. Several investigators—Seltzer, Kendrick, Maxwell, Lent, Holland, and Dobrovolsky—now have in hand important research concerning federal finances and state-federal fiscal relations. But in our experience 'public finance' or 'fiscal policy' is a subject that cannot usefully be kept in a box by itself. The major projects on which the National Bureau has worked—that is, our investigations of national income, money flows, capital requirements, the credit system, business cycles, and employment and productivity—have attempted to cover, each in its own image, the operations of the economy as a whole. So large a factor as government inevitably obtrudes itself in such inquiries, and our research staff has been alive to the opportunity. Kuznets' papers on income originating in governmental activity, presented to the Conference on Research in Income and Wealth; Copeland's paper "Concerning a New Federal Financial Statement"; Stigler's paper "Employment and Compensation in Education"; Fabricant's monograph on trends in the government's use of resources, of which a preview was published as *Occasional Paper 29*; Wolman's *Planning and Control of Public Works* and Gayer's *Public Works in Prosperity and Depression*; Firestone's current study of cyclical fluctuations in federal revenues; Coppock's *Government Agencies of Consumer Instalment Credit*; Colean's recently published volume, *The Impact of Government on Real Estate Finance in the United States*; Harriss's *History and Policies of the Home Owners' Loan Corporation* which is ready for press; Copeland's new investigation of the capital used by government—every one of these studies has grown out of a major project concerned with the over-all operations of the economic system, and each has aided and will continue to aid the more specialized inquiries in public finance.

Thus government operations have for some time been a large factor in the Bureau's research program. It would be well, however, to give them greater prominence by making the expanding role of government one of the high themes of our research in the years immediately ahead. The National Bureau has recently taken one step in this direction by requesting Saulnier to organize a comprehensive investigation of the entire field of governmental lending, including federal loan guarantees and loan insurance. A still more important step is the authorization of a study of international trends in the governmental use of resources. Both in Europe and in the United States discussions of governmental activity, especially of the socialization of industry, have hitherto been carried on without the aid of basic measurements, and great confusion and suspicion have unhappily been wrought in the process. Hence the projected study will have as its first aim the development of detailed and accurate information on governmental employment of men and other resources in each of the leading countries of Western Europe since 1900. Thus a factual foundation may be laid for comparing European trends with those set out by Fabricant in his American study. But it would be desirable to go further and search for the causes of international similarities and differences in the economic role accorded by free peoples to their governments. Such a comparative study would help everyone concerned with large affairs, whether on the theoretical or practical level, to see developments in our own and other countries in clearer perspective.

To carry out this broad and fundamental investigation properly will require larger funds than we have in hand, but we shall at least get the project launched through an exploratory survey by Abramovitz. What makes the project enticing to the economic student is the prospect that it will open up an array of problems concerning not only government, but economic development at large. To derive information on governmental employment it will be desirable, if not strictly necessary, to work out occupational tables for each country covered. Thus materials of very great significance for a study of comparative economic development will come into being, and perhaps pave the way for wide-ranging investigations of the conditions of economic progress. But it is much too early to say whether we shall be led in this way or by some other route into extending the modest international studies we are now pursuing.

IV

I have emphasized the operations of government because of the strategic role they have come to occupy in the modern economy. The government, however, is merely one agency in the complicated process by which the citizens of a democracy obtain their living. The figures on governmental employment, which I cited earlier, would have appeared less striking had I observed that 96 per cent of Americans were privately employed in 1900 and that, despite the growing complexity of economic life and our participation in two major wars, as many as 88 per cent continued to be privately employed in 1949. Even during World War II, federal income payments at no time reached a fourth of the national total, although the government's payroll was swollen by over 11 million in the armed forces. Of course, these figures convey little concerning government's regulatory functions, but these too must not be exaggerated. By and large, except in times of the gravest national emergency, the predominant mass of economic decisions concerned with choice of occupation, industrial location, production, pricing, saving, investing, financing, working, buying, and selling has remained in private hands; though, to be sure, it has become necessary for everyone to function within an expanded framework of governmental rules.

Under the impact of economic mobilization such as we are now facing, it is possible to form the impression that the size of the national income, its physical composition, and the manner in which we share it are all determined by some will of government. In fact, the end results of our economic activity depend both in times of peace and in times of war on actions taken by millions of workers and farmers, households, business firms, financial institutions of various sorts, trade unions, farmers' cooperatives, businessmen's associations, and state and local governments, beside the federal government. Our vast economy is essentially a partnership. In an emergency like the present, the federal government becomes the dominant partner. But while there are many silent as well as quarrelsome partners in the joint enterprise, none is dormant—not even in wartime.

The gains registered over the last two decades by our joint enterprise have been many and substantial. The combined output of our factories, mines, utility plants, and construction yards is now about twice what it was in 1929. The production of the service industries has increased enormously, and even agricultural production has expanded about 40 per cent. The gain in population has been 25 per cent, in the physical volume of personal consumption nearly 75 per cent. The glaring inequalities of our income structure have in large degree been eliminated. We have devised a tolerably comprehensive system of insurance against the hazards of bank failure, unemployment, and an indigent old age. And we have shared the fruits of our industry and knowledge with the peoples of less fortunate nations, including our former enemies, on a scale that is probably unique in the annals of history.

These are great moral as well as economic achievements. They deserve more attention than they have received from the American people, and they deserve vastly more attention from the peoples of other nations. But if the performance of the American economy is imperfectly understood, the reason is partly that our record is not free from blemish. Despite our great economic strength, we have failed to exercise the leadership needed to restore that measure of free international trade under which the world once prospered and enjoyed substantial peace. Nor have we as yet proved ourselves capable of conducting our economy without serious oscillations. Within the past twenty years we have lived through one of the greatest inflations of money and prices in our history, also one of the severest depressions, beside smaller movements that were sufficient to cause anxiety not only to us but to the friendly peoples of Europe.

The view has gained some currency of late, as it has in other periods of exaltation, that economic institutions and knowledge have developed to the point where the government can readily prevent sizable economic fluctuations. This view can be supported by reciting the impressive contracyclical devices that have been built into our fiscal system. Recent price history, on the other hand, casts some doubt on the expectation, and so too does the longer perspective of history. Government policy with respect to booms and depressions is not an innovation of the Employment Act of 1946 or of the Roosevelt administration.[6] It can be traced to the depression of the 1890's, and indeed much earlier. At the beginning of the century the objective of policy was to prevent financial crises, such as occurred in 1893 and 1907. After the violent monetary disturbances of 1915-1921 interest shifted to the stabilization of the price level in the hope that if price gyrations could be avoided, the economy would move forward without any serious setback. When mass unemployment developed during the 1930's, the goal of a stable dollar was abandoned, and the objective of policy became full employment. Once unemployment was wiped out, price movements and industrial productivity became a serious concern. Emphasis subtly shifted from 'full employment' to 'a high and stable level of employment' or to 'economic growth and stability.' Recently, the primary goal of government policy has been maximum production rather than employment, and so it will undoubtedly continue to be for some time. But if the price inflation of recent years extends into the next decade, the clock of policy may eventually turn back to the 1920's, when the primary emphasis was on a dollar of stable purchasing power.

6 See Robert Warren, "Twenty-five Years of Monetary Controls," in *Economic Research and the Development of Economic Science and Public Policy* (National Bureau, 1946).

The shifting emphasis of our economic policies has, of course, reflected a continual effort to adjust to changing conditions and newly emerging problems. Underlying the effort there has been a growing understanding of the character and mechanism of economic fluctuations. Men seriously concerned with governmental policies have been feeling their way slowly towards a goal of balanced economic growth. The goal cannot be expressed in a simple formula because simple formulas have not conformed well to the abiding values of the American people or because they have brought new problems in the process of dealing with the old. But the goal would probably include at least the following objectives: a high and steady volume of employment relative to the size of the labor force, a high and steadily rising volume of production of goods that people wish to have, a high and steadily rising volume of imports on which the hopes of the outside world are pinned, a fairly stable level of consumer goods prices for people at every income level, and a minimal use of direct controls over prices and incomes. The conditions needed for realizing such a goal of 'balanced economic growth' are still obscure, and much experimentation may be needed before it is approximated. But the chances of success will be improved as the boundaries of objective knowledge of the interlocking processes of our economic system are extended. The National Bureau's studies of business cycles have been guided by this aim. They have already yielded results of practical value, but a vast amount of fundamental research on the pervasive problem of economic instability remains to be done.

In last year's report I presented some important facts on business cycles that have emerged from recent studies by Mitchell, Moore, Abramovitz, Hultgren, Saulnier, Ilse Mintz, and myself. I explained that our research on the typical characteristics of business cycles was sufficiently advanced to justify closer attention to the differences among the cyclical movements thrown up by history, and urged "investigation of the problem why some business declines remain mild while others reach catastrophic magnitude." Tentative plans for such an investigation have been drafted, and they are designed to handle expansions of varying degrees of intensity as well as contractions. From this matrix it would be desirable to single out two special studies for early attention. One would compare the patterns of economic change during war cycles with peacetime patterns—a comparison that might prove particularly helpful if the present phase of near-war economy stretched out, as it may, over a considerable number of years. The second study would analyze quantitatively the impact of inflation on incomes and prices, on the efficiency of production, and on the distribution of wealth. In the course of the Bureau's research on prices and business cycles, a great deal of information has been accumulated on inflationary episodes in our own and other countries. Considerable research would still be required to round out the empirical record on inflation and to analyze its ramified economic effects; but there are strong forces in our economy working towards secular inflation, and a thorough investigation of the subject might have a salutary influence on the course of events.

The problem of reestablishing confidence among the nations of the world is more important even than the problem of economic stability, but the two are not unrelated. The view is widely held by Europeans that the United States is responsible for major shifts in their economic fortunes; and for this reason, if for no other, it is important to gain better understanding of the impact of our international economic relations on us and the rest of the world. Fabricant and Ilse Mintz have begun work on important aspects of this problem, and several others of our staff are engaged in related undertakings. But we have as yet made so little progress on the international research previously projected that our immediate need is to expand the staff rather than initiate new researches.

V

The economic future of our country is now heavily clouded by political and military uncertainties. No one can tell what changes the future will bring in our daily lives or what course our economic organization will take. But in thinking of the National Bureau's research over the coming years, it is reasonable to assume that whatever happens to hearth or kin our political democracy will remain intact, that a considerable measure of economic freedom will continue to be a part of our cultural scheme, and that our national enterprise of production and distribution will continue to be a partnership in which workers, consumers, business firms, and other groups participate with the government. As long as these conditions prevail there will be a need for research on the behavior patterns of the labor market, industrial productivity, prices and incomes, capital formation, consumer spending, the machinery of credit, the finances of government—in short, for scientific study of the enduring features of economic life such as have engaged the Bureau's efforts during its entire history, and that my sketch of the future seeks to extend.

Research on basic problems makes heavy demands on an investigator's time and patience, and the usefulness of its results is not always obvious. But in the long run nothing is more practical than fundamental research. When the Bureau undertook its investigation of corporate bond experience, no one could know that results would be forthcoming to influence legislation on insurance companies, personal trusts, and savings banks. Nor did anyone know at the time our project on urban real estate finance was launched that years later the Federal Reserve authorities would need to regulate real estate credit and that our findings would be helpful in drafting the regulations. A large part of the information currently compiled by governmental agencies on the subjects of national income, money flows, capital formation, physical production, and consumer credit has grown out of or been materially influenced by the Bureau's research; but no one could know that in advance. Our studies of the national income, which were designed to promote the arts of peace, turned out to be extremely helpful also in conducting the recent war. The studies by Fabricant, Long, Kendrick, Kuznets, and others, to which I have referred in the course of this report, were started years ago and yet are capable of illuminating our most recent experiences. In planning the National Bureau's research we therefore need not be disheartened by our inability to tell what the world will be like several years hence. As long as we work on fundamental problems in the scientific spirit to which we are accustomed, we may be confident that our researches will prove of practical value to mankind.

Much of today's thinking runs of necessity along military lines. But the struggle between the Western democracies and communism is basically ideological, and we must not allow its military aspect to obscure this fact. It is a grave error to regard communism solely as a conspiracy of an unscrupulous clique to attain mastery of the world. Such a clique exists but its power derives from its ability to harness the idealistic impulses of man. To strive for peace in the world, for justice in distributing incomes, for higher living standards, for security of job and home, for protection against the ravages of disease and old age—these are natural expressions of present-day culture. Communism has made headway by promising the millennium to an anxious and partly hungry world, while exploiting our every shortcoming and diverting attention from our constructive achievements. Over a large part of the earth informed economic communication has broken down, and one of the most vital needs of our time is to find the means of reconstituting it. But fundamental economic research must also be pushed with vigor, so that our children may be better equipped with the knowledge needed to solve economic and political problems than were their fathers and teachers.

I am deeply indebted to Geoffrey H. Moore for his advice and assistance in the preparation of this report.

The Instability of Consumer Spending

I

The consumer, rarely a heroic figure in economic affairs, scored a modest but noteworthy success in the struggle against inflation during the past year. He had numerous allies—an array of price and wage controls, credit restrictions, regulations concerning the use of raw materials, and a battery of stiff taxes. Yet the consumer's role seems to have transcended all the others. He played his part without fuss or fanfare, as is his wont. A year earlier, after the outbreak of hostilities in Korea, he went on a spending spree in the expectation that shortages of civilian goods, such as had marked the recent war, would soon develop. Businessmen, acting on a similar impulse, rushed to stock up on raw materials and stepped up their production schedules. The general upsurge of spending was reflected in a rise of 17 per cent in wholesale prices and 8 per cent in consumer prices between June 1950 and February 1951. Since military orders in the meantime were only beginning their upward climb, manufacturers soon were able to add profusely to the flow of goods to consumer markets. The supply of civilian merchandise expanded along with the demand; indeed, in some lines of activity—such as textiles, television, and radio—inventories piled up and prices had to be slashed to move them. These developments led consumers to revise their outlook. Spending fell off perceptibly after the first quarter despite the steady rise in personal incomes throughout 1951; by the end of the year savings reached their highest level since the end of World War II.

Largely as a result of the lull in consumer buying, the past year was characterized by a degree of over-all stability that few economists had anticipated. The physical volume of production and employment remained substantially steady through the year. Commodity markets were also fairly stable on the average, with wholesale prices declining 2.5 per cent and consumer prices rising 2.8 per cent between the first and last quarters. Meanwhile, the nation pushed ahead towards the goal of high military preparedness. Between the first and last quarters the annual rate of expenditures on national security increased from $29 billion to $44 billion—an increase that equaled the entire increment in the gross national product and lifted security expenditures from 9.0 to 13.2 per cent

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of the gross national product. This fairly sharp twist of our economy from civilian to military ends was attained without serious imbalance in the federal budget as well as without any important change in the general level of commodity prices.

Whether last year's remarkable economic achievement will be repeated in the present year is problematical. The renewed increase in the money supply during the second half of 1951, the higher military spending scheduled for this year, the fresh resort to deficit financing—all suggest a revival of inflationary pressure. But there are as yet no clear indications whether consumers will extend their new taste for frugality into the months ahead or go on another spending spree. The consumer has emerged as a complex economic personality; to be sure, not quite so gifted with temperament as the investor or the entrepreneur, but perhaps not much less capable than these gentry of stirring up economic uncertainty.

II

Until very recent years the subject of consumption held a distinctly subordinate place in the main body of economic theory. Even Alfred Marshall, who felt a serious need for the study of consumption, put primary emphasis on "the science of efforts and activities" rather than "the science of wants." The problem of consumer demand seemed to him to offer few major difficulties in a search for the "common kernel" in practical problems of value. Given the "familiar and fundamental tendency of human nature" to derive diminishing increments of satisfaction from successive units of a commodity, and a few assumptions of a more technical character, Marshall was able to establish a "universal rule" of demand: namely, that the lower the price of a commodity, the larger will be the amount that the public seeks to purchase. Marshall knew, of course, that the lumpy character of many consumer expenditures, people's imperfect perception of wants and of the want-satisfying power of commodities, their shifting expectations concerning prices, and sheer impulse were factors to be reckoned with in the actual world, just as he knew that changes in the size of the national income or in the value of money or in consumer tastes could obscure the effects of the "general law of demand."[1] But Marshall did not dwell on these difficulties. A dollar of changing purchasing power fell outside the scope of his *Principles*; and while he

[1] Alfred Marshall, *Principles of Economics* (Macmillan), 1st edn., p. 383; 8th edn., pp. 90, 93, 99.

made many profound observations on the nature of economic development, he concerned himself only in passing with income fluctuations.

By and large, Marshall's theory dominated economic thinking on the subject of demand until the course of events in the early thirties forced concern with a wider range of problems. This scientific development was long overdue. It would probably have occurred even without a special stimulus from practical life, once the results of empirical research on the Marshallian demand function became familiar outside a circle of specialists. But life itself, in the shape of the Great Depression, provided a far clearer and more forceful demonstration of the need to release income and other variables from the pound of *ceteris paribus* than any calculation by technicians. As the depression deepened, it became plain to everyone that the dwindling markets for consumer goods were caused, at least proximately, by the collapse in personal incomes. Declines of output and prices were general, and even the goods whose prices declined with special rapidity did not seem exempt from the shrinkage of demand. True, the decline in the relative price of a commodity might stimulate larger purchases, but this influence was usually swamped by the opposing effect of declining income. The drop in aggregate expenditure stood out as a more important matter than shifts in demand for individual articles. An increasing number of economists began to see that however expertly neoclassical theory may have dealt with the role of prices, it had neglected the influence of income on specific demands and, worse still, it seemed to have little to contribute to the explanation of variations in aggregate consumer spending beyond a few hesitant reflections on the effects of the interest rate.

The time was ripe for a major shift in economic theory. Students of crises and depressions, who for a century or longer had practiced income analysis in an effort to make sense of the fluctuations experienced by modern nations, were at last making their influence felt. Other forces were also bending economics towards an increased emphasis on income changes and income differences. Statistical explorations of family expenditures and income, on the lines initiated by Ernst Engel during the 1850's, took on a new significance under the shadow of mass unemployment. Research on empirical demand functions, which actively got under way soon after the publication of Henry L. Moore's *Economic Cycles* in 1914, was receiving serious attention. The income investigations of the National Bureau, which in the early thirties were already beginning to branch out into studies of consumer spending and capital formation, were causing a stir in the economic and statistical world. The subtle reformulation of the Marshallian theory of demand by Hicks and Allen was widely discussed. This extensive literature offered a growing challenge to the older economics; but the most important single factor in shifting the emphasis of economic theory from prices to incomes was Keynes' *General Theory*—a highly original work that met the needs of the despondent and anxious thirties for a theory that was at once simple and reassuring, clothed with the symbols of science, and yet equipped with a political handle for economic reform.

A nation's income, Keynes reasoned in *The General Theory*, consisted of two great classes of expenditure, first on consumer goods, second on investment goods. Next he argued that aggregate consumer spending depended mainly on the amount of aggregate income, while investment expenditures were not tied down by any category of receipts and depended mainly on the state of business sentiment. Finally, he showed that if the variations in consumer spending at a *given* level of income are provisionally neglected, several conclusions of great importance immediately follow. First, consumer spending can respond to changes of income but cannot initiate them. Second, national income—or its correlative, the volume of employment—cannot increase unless investment increases nor decrease unless investment decreases. Third, since investment depends on business confidence, which is notoriously unstable, our economic system is liable to wide fluctuations. Fourth, since "far-reaching change in the psychology of investment markets" cannot be expected, "the duty of ordering the current volume of investment cannot safely be left in private hands."[2]

To fortify the argument, Keynes enunciated a psychological law and an income formula. There is a "fundamental psychological law," he declared, that "men are disposed, as a rule and on the average, to increase their consumption as their income increases, but not by as much as the increase in their income."[3] Suppose, in keeping with this 'law,' that nine-tenths of every addition to the income of a period is spent on consumer goods and the remainder saved. If the volume of investment were now to rise by one dollar, consumer spending in the current period would have to increase by nine dollars and national income by ten dollars. This was the

[2] J. M. Keynes, *The General Theory of Employment, Interest and Money* (Harcourt Brace, 1936), p. 320.
[3] *ibid.*, p. 96.

formula. Keynes realized, of course, that it could be no more than an approximation. In the first place, it takes time for consumer spending to adjust to a new level of income, and the early effects of an increased volume of investment may therefore be very different from the late or ultimate effects. In the second place, quite apart from the adjustments attendant upon the passage of time, consumer spending is not governed exclusively by the amount of income. To clarify this feature of consumer behavior, Keynes analyzed the influence of other objective factors that seemed to him capable of modifying the amount of 'real' spending at a given level of 'real' income—that is, the distribution of incomes, windfall changes in the value of assets, the rate of interest, changes in fiscal policy, and expectations concerning future incomes. Keynes did not, however, attach great importance to these factors, and he practically dismissed one of them—namely, consumer expectations. To get on with his argument, he lumped them in *ceteris paribus*. He did not stop often enough to remind the reader, or for that matter himself, of the restrictive assumptions on which his analysis proceeded.

Many of the economists who were attracted by the brilliant argument of *The General Theory* gave less attention than Keynes to the factors complicating the consumption-income relation. Not a few practically overlooked them. Whereas Keynes had merely concluded that the propensity to consume was a "fairly stable function" of income, others soon began to speak of it as a "highly stable" function or simply as a "stable" function. Even those who stopped to consider what factors, beside income, may influence the amount of aggregate spending rarely inquired about the role of changes in relative prices or in expectations concerning the value of money. A new economics arose, which devoted itself preponderantly to aggregate income analysis, neglecting variations in prices, just as the older economics had devoted itself preponderantly to individual price analysis, neglecting variations in national income. To the older generation the important problems of economics revolved around phenomena of price as they affected entrepreneurs, investors, landowners, wage earners, and consumers. To the new generation of economists the important problems revolved around the deficiency in aggregate spending such as characterized the thirties; they therefore concerned themselves chiefly with two classes—consumers and investors. To the older economists, all species of economic man were more or less efficient calculators of utility or gain. To the new economists, consumers were creatures of habit whose collective propensity to spend or save could be counted on with assurance; while investors were a dynamic group whose expenditure, no matter how well cloaked in formal calculations, was at bottom swayed by emotionally tinged estimates of a precarious future.

This psychological distinction between investors and consumers opened up a new vista before economics. For if it was approximately true that consumer spending is linked passively to income, economics was at last on the threshold of becoming an engineering science. In the years immediately following the publication of Keynes' *General Theory*, it came to be widely believed that once the desired level of income was specified, the economist would be able to estimate with tolerable reliability what amount of investment—or of some practical equivalent—would bring that income into being. But if the economist was to perform this engineering function, he needed dependable empirical estimates of the relation between aggregate consumer spending and aggregate income. For this purpose statistics had to be used. A fair number of economists therefore turned eagerly to empirical research and began mining two bodies of new information that become available during the thirties—Simon Kuznets' historical estimates of consumer spending, investment, and national income, which were later extended and developed by the Department of Commerce, and the budgetary data for thousands of families brought out by the National Resources Committee.

As these and other statistics were worked over, the results at first looked very promising. Not only did the correlation between aggregate consumer spending and income turn out to be remarkably high, but some investigators found that the correlation could be improved by adding other factors—such as the degree of income inequality, the size of population, the rate of change in total income, or time itself—to the list of independent variables. However, as the statistical experiments piled up, the disturbing fact emerged that rather minor shifts in the period covered by the correlation were capable of modifying appreciably the estimated parameters of the consumption function. The same thing happened when one reputable series on income or consumer spending was substituted for another. Further analysis suggested that what economic policy required was not so much an estimate of the consumption function as an estimate of its complement—that is, the savings function. "The most important single economic fact about the community," declared Beveridge, is "the amount which the individuals of a community will try to save under conditions of full employment, with a given distribution of income."[4] But if this was the critical fact, then the high correlation between aggregate consumer spending and income had slight significance. Clearly, since consumer spending was on the average about nine or ten times as large as saving, a small percentage error in the spending estimate could mean a large error in the saving estimate. Indeed, independent calculation showed that the correlation between saving and income was by no means so high as between spending and income, and that "the most important single economic fact about the community" was therefore a somewhat elusive magnitude. When the forecasts even of what consumer spending would be after V-J Day were found to be in error by an uncomfortable margin, faith in a stable consumption function was severely shaken.

Many believed, however, that consumer spending would emerge as a fairly stable function of income, once the shortages accumulated during the war were made good. Reflecting this view, the President's Economic Report to the Congress in January 1947 stated that "if consumer incomes should remain at current levels, we would expect savings to drop little, if any." The report also expressed doubt "whether the rate of consumer savings will or even can be reduced much further except by adversity." As it turned out, the rate of savings was reduced much further during 1947—and not by adversity, but by prosperity. More recent events, especially since June 1950, are familiar and have led to a sharp reversal in economic thinking. The President's latest Economic Report declares that "consumer spending is the most uncertain factor determining the general inflationary outlook for 1952."[5] A few years ago a statement of this character would have invited ridicule. Today it hardly causes a ripple. Few, if any, economists are any longer disposed to question the capacity of consumers to change their rates of spending and saving without prior notice. Indeed, there is some danger that the whimsical character of consumer spending will now be as roundly exaggerated as was its mathematical determinacy only a short time back.

III

The ups and downs in recent economic thinking about the consumption-income relation require appraisal. It is salutary for prac-

[4] William H. Beveridge, *Full Employment in a Free Society* (Norton, 1945), p. 96.
[5] *The Economic Report of the President*, January 8, 1947, p. 13; January 16, 1952, p. 20.

ticing economists to fight each year's battle; but it is not less important to try to see such activities as a historian might see them. The recent controversies and reversals of opinion about the consumption function are not likely to stir deeply a later generation. What future economists will look for are the cumulative trends, of which controversies such as this are merely a surface expression, and that is what we ourselves should try to see.

One of the trends that has been gathering force in economics, and never more rapidly than in our generation, is an interest in a widening range of problems connected with the activities of consumers. The speculations of Cournot on the elasticity of demand, which were ignored by his own generation, have been turned to practical account by businessmen and governmental agencies in ours. Budgetary studies, which several decades back were of interest chiefly to social workers, have become instruments for analyzing how the economy at large functions. Fluctuations in aggregate spending, which not so long ago many viewed as an obsession of the crank, now occupy the time and thought of reputable economists, businessmen, and even heads of governments. Perhaps no other general subject receives as much attention nowadays as the spending of different consumer groups on specific goods and in the aggregate, the shift in these patterns through time, the movement of total spending and saving, and the degree of adequacy of current living standards in our own country and other parts of the world. Vast changes in the political and economic environment, as well as many intellectual currents, have converged to produce this emphasis on mass consumption and well-being. Keynes' aggregate consumption function is a symbol of our era, just as Marshall's individual demand function symbolized an earlier time.

Another major trend which has been gaining strength is a tendency towards closer fusion between speculative theorizing and empirical testing. Already in 1838 Cournot, having expressed with theoretical precision the relation between the demand for a commodity and its price, went on to plead for the statistical calculation of demand elasticities, or at least the empirical classification of "articles of high economic importance" according as their elasticity at ruling prices was above or below unity.[6] His plea went unheeded. In 1890 Marshall went beyond Cournot, and actually sketched the basic design that would need to be followed in testing and applying his demand theory. But while Marshall's work

[6] Augustin Cournot, *Mathematical Principles of the Theory of Wealth*, tr. Bacon (Macmillan), p. 54.

aroused considerable literary controversy the world over, his ideas on statistical procedure remained fruitless until Henry L. Moore took them up in the first of his books on business cycles in 1914. Thus, depending on whether we look back to Marshall or Cournot, one-quarter or three-quarters of a century elapsed between the formulation of an economic theory and its first significant statistical test.[7] There was, however, no such hiatus in the case of the Keynesian theory. The world which it entered was already accustomed in some degree to require of an economic theory that it pass the test of applicability to experience. Almost as soon as *The General Theory* was published, the question was raised whether its novel notions concerning consumer demand were valid; and while this question was more often discussed on a speculative than on a factual plane, within a year or two statistical measurements and tests of the aggregative consumption function began to appear in economic journals. The process of scientific checking and sifting is still going on. A *Technical Paper* by Robert Ferber, which I hope we may publish this year, will contribute to this essential task by examining the degree of success that has thus far attended the numerous efforts to establish the characteristics of the consumption function.

The promptness and persistence with which the Keynesian theory has been subjected to the testings of experience are not yet typical of economic inquiry generally. But the trend is definitely in the direction of an economics in which quantitative records and empirical tests play a significant part. Recognizing this need of modern times, the National Bureau has steadily sought to develop and clarify the economic facts that surround major social problems. Our very first investigation produced approximate measures of the size and distribution of the national income—a subject obviously of critical importance, yet one that at the time was still being handled on the basis of opinion and guesswork. Even while this study was in progress, Wesley Mitchell called the Board's attention to the need for investigating quantitatively the subject of savings versus current consumption. After several tentative efforts in this direction during the twenties, a fairly comprehensive investigation was started in January 1933, under Simon Kuznets' direction. Within a year or two his researches yielded annual estimates of the flow of services and commodities to consumers, beside estimates of investment, back to 1919. Later Harold Barger con-

[7] See Henry Schultz, *The Theory and Measurement of Demand* (University of Chicago Press, 1938), pp. 63-65.

verted the annual figures into quarterly form; Shaw and Kuznets carried the statistical record back to around 1870; Duncan Holthausen, collaborating with Rolf Nugent and Malcolm Merriam, prepared monthly estimates of consumer instalment credit; and David Wickens improved existing measures of the aggregate cost of new dwellings—a consumer good that statisticians usually prefer to treat as part of investment. More recently, in connection with a comprehensive accounting of the flow of money through the economy, Morris Copeland has developed annual estimates of money flows and year-end estimates of cash and related assets for households. Each of these statistical efforts[8] has met a widely felt need. Each has been taken over, extended, and improved by one or another agency of the federal government. Governmental agencies in turn have initiated many new statistical enterprises in this general area, one of the most interesting being the annual survey of consumer finances conducted jointly by the Federal Reserve Board and the Survey Research Center at Michigan.

I have already referred to the eagerness with which economists turned to the new statistical materials in an attempt to test, apply, or extend Keynes' theory. That some of the statistical research was done with excessive haste is a trivial matter at this distance. The vital fact, from a historical viewpoint, is that economics has reached a stage where theoretical propositions are often taken so seriously that they are not permitted to become an object of purely dialectical concern and development. The great power and promise of empirical economics lie not in its voluminous records or formal methods of handling hypotheses, but in the attitude of mind fostered by its practice—an attitude of mind that is sensitive and receptive to the teachings of experience. It is this attitude of mind, more than anything else, that has blurred the line that not so long ago separated the 'old' and 'new' economists, that has brought to light the strength and weakness of the Keynesian theory of consumer demand, and that has driven an increasing

8 See the following: Simon Kuznets, "Gross Capital Formation, 1919-1933," *Bulletin 52* (1934); *National Income and Capital Formation, 1919-1935* (1937); *Commodity Flow and Capital Formation* (1938); *National Product since 1869* (1946). William H. Shaw, "Finished Commodities since 1879, Output and Its Composition," *Occasional Paper 3* (1941); *Value of Commodity Output since 1869* (1947). Harold Barger, *Outlay and Income in the United States, 1921-1938* (1942). David L. Wickens and Ray R. Foster, "Non-Farm Residential Construction, 1920-1936," *Bulletin 65* (1937); D. L. Wickens, *Residential Real Estate* (1941). Duncan McC. Holthausen, Malcolm L. Merriam, and Rolf Nugent, *The Volume of Consumer Instalment Credit, 1929-38* (1940). Morris Copeland, *A Study of Moneyflows in the United States* (1952). All of these titles are publications of the National Bureau.

number of investigators to probe intensively beneath the surface of economic aggregates when searching for the causes of their movements.

A generation or two ago the properties of abstract utility schedules were a favorite topic of discussion among economists interested in the subject of consumer demand. Interest later shifted to the properties of indifference curves, and later still to the properties of a supposedly stable schedule linking aggregate consumption and aggregate income. These subjects have not been outmoded by time; but nowadays economists address their theoretical questions more frequently to records of experience and less frequently to one another. The subject of primary interest concerning consumer demand has become the consumer himself—that is, his actual behavior and the kind and degree of regularity that characterize it. How, in what directions, and in what degree is the current spending of individual families influenced by the size of the family, the age of its members, their occupation, their place of residence, their income, any recent shift in their income, their highest past income, the amount of their liquid assets, their stock of durables and semidurables, recent changes in their buying, their highest past spending, their expectations concerning future incomes and prices, the amount and kind of their neighbors' buying, and by still other factors? How, in what directions, and in what degree is the consumer spending of a nation influenced by, among other things, the distribution of individual incomes, the amount of capital gains or losses, changes in the general level of prices, the dispersion of individual price movements, the terms on which consumer credit is extended, the introduction of new commodities, advertising expenditures, the rate of formation of new families, the geographic mobility of the population? These are some of the questions now being put by economists;[9] and while none have as yet been answered with precision and some have hardly been answered at all, the rough foundations of an empirical science of consumption are slowly beginning to take shape.

IV

The National Bureau has participated in this adventure by making analytical investigations, beside developing basic factual records such as I previously mentioned. In a study now approaching

[9] For a survey of recent empirical research see the paper by Ruth Mack, "The Economics of Consumption," in Volume II of *A Survey of Contemporary Economics*, ed. Bernard F. Haley (Irwin, 1952).

completion Thomas Atkinson has explored the amounts of financial assets held by individuals, with an eye to the factors that underlie the distribution of different categories of wealth among them. Another study in its closing stages, and which bears more directly on the inchoate science of consumption, is Lawrence Klein's investigation of family spending and saving,[10] based on the individual returns obtained by the Survey Research Center in recent sample surveys. These returns contain unusually extensive and varied information about each of the spending units interviewed and permit fuller empirical analysis of the forces that shape consumer saving than has hitherto been possible.

Klein has made good use of the opportunity. His basic and most suggestive finding is that family spending and saving depend upon many factors, not upon one or a few variables.[11] In contrast to the magnificent coefficients of correlation between consumer spending and national income over time, which abound in statistical literature, very humble correlations show up between the spending and income of individual families during any one year. This means, of course, that factors other than current income are much too important to be slighted. Klein finds, for example, that the greater the amount of liquid assets held, the smaller—other things equal—will savings tend to be, especially in low income groups. Again, homeowners tend to save more than occupants of rented premises; people expecting favorable economic developments tend to save less than folk expecting unfavorable conditions; and so on. By his careful comparisons of different samples, Klein also shows that the direction of the specific influences he examines is more dependable than their numerical effect. To be sure, as he points out, much of the numerical instability would tend to vanish if the samples covered a larger number of spending units. This still means that uncomfortable margins of error may attend projections based upon the present samples. Furthermore, some of the variations from one year's equation to another's cannot be attributed to sampling fluctuations; they may be due to intrinsic flaws in the equation or to 'jumps' in behavior which defy any equation. The

10 For some preliminary results see two papers by Lawrence R. Klein: "Assets, Debts, and Economic Behavior," in Volume XIV of *Studies in Income and Wealth* by Conference on Research in Income and Wealth (National Bureau, 1951); and "Estimating Patterns of Savings Behavior from Sample Survey Data," *Econometrica*, October 1951.

11 This mathematically tested finding is an extension of earlier research by the Survey Research Center. See George Katona, *Psychological Analysis of Economic Behavior* (McGraw-Hill, 1951), chap. 8.

movements of consumer spending after the outbreak of the Korean War are an outstanding example of a 'jump.' Another instance is the behavior of consumer spending and borrowing at the end of World War II. As Kisselgoff's recently published study shows, a formula that summed up effectively the forces impinging on the volume of instalment sales credit before 1941 was quite unable to cope with the conditions that prevailed after the war.[12]

To improve our ability to distinguish between the stable and capricious elements of consumer behavior, it is highly important that studies such as Klein's be repeated for future samples and that careful consideration be given to the research needs disclosed by his investigation. The noncorporate part of the business world has always been a somewhat cloudy corner of the economy to the statistician. Unincorporated firms are usually small and do not practice meticulous bookkeeping. Moreover, producing and consuming activities are much less distinct in a family whose head operates a farm or a small business than in the run of households. It is not surprising, therefore, that Klein found that his calculations of spending and saving propensities are less reliable for farmers and independent businessmen than for other groups. To remedy this defect of existing knowledge, one or more specially designed sample inquiries would be necessary. Such inquiries would probably yield a maximum of instruction if students concerned with the producing and financing activities of small business worked side by side with others interested chiefly in household operations.

Another difficulty that Klein has encountered is the absence of adequate information on the stocks of goods possessed by households. Survey techniques, which have already yielded much more than seemed likely only a few years ago, may perhaps be developed before long to a point where chairs, lamps, and shirts held in varying stages of physical decrepitude and personal incertitude can be expressed in useful numbers. An alternative approach to consumer stocks that warrants study is through the medium of time series. If consumer purchases exceed the actual consumption of a period, stocks are being built up. If consumer purchases fall short of consumption, stocks are being drawn down. Such investment or disinvestment in inventories is always taking place in the nation's households, but we have not had a systematic or continuous record of it. An interesting method for attacking this problem has re-

[12] "Factors Affecting the Demand for Consumer Instalment Credit," *Technical Paper 7* (National Bureau, 1952).

cently been worked out by Raymond Goldsmith in connection with the intensive study of savings that the Life Insurance Association of America has been making under his direction.[13] Apart from price adjustments, the procedure consists in applying depreciation rates to different categories of durables, subtracting the estimated depreciation during a period from the dollar value of new purchases so as to get the net addition to consumer stocks, and then cumulating the increments to derive a series of total stocks. Goldsmith has made annual calculations of this type for consumer durables back to the beginning of the century. With further research his procedures might be extended to semidurables and the entire plan of measurement put on a quarterly basis. Estimates such as this have obvious defects, but their practical importance must be gauged in the light of experience. If tolerably dependable statistics of consumer stocks can be devised, it seems likely that they will prove helpful in judging current developments as well as in historical and analytical investigations. An incidental but not unimportant advantage of such statistics might be that their mere existence would curb the fairly common but misleading tendency to identify consumer spending with consumption proper.

I cannot dwell further on the gains to be sought by developing new statistics or by refining and testing the statistics we already have or the concepts that underlie them. Fortunately, there is no need for special emphasis on these matters; they are now well understood and will doubtless continue to receive active expression. What does require emphasis is that even existing statistics can help us go further than we have in tracing the interrelations between the activities of consumption and production. The consumer research of the last ten or fifteen years has centered primarily on the facts and causes of variation in consumer spending and saving. The intricate effects of these variations on the over-all operations of the economy—particularly, on the production of consumer as well as investment goods industries—have received much less attention. This one-sided accent was natural as long as the belief was widespread that consumer spending was merely a passive response to national income, and that private investment and governmental

13 R. W. Goldsmith, "A Perpetual Inventory of National Wealth," in Volume XIV of *Studies in Income and Wealth*, cited above. [Dr. Goldsmith's intensive work, *A Study of Saving in the United States*, will be published by Princeton University Press in 1954.] See also Lenore A. Epstein, "Consumers' Tangible Assets," in Volume XII of *Studies in Income and Wealth* (National Bureau, 1950), and Reavis Cox and Ralph F. Breyer, *Consumer Plant and Equipment* (Retail Credit Institute of America, Washington, 1944).

spending were therefore largely, if not entirely, instrumental in driving and shaping the level of income. Now that statistical research and the course of experience itself have made it clear that this simplification is unwarranted, there are signs of a renewed theoretical interest in the dynamic interconnections of consumption, production, and income distribution. But the theorists need aid and guidance from empirical research if their models are to cope seriously with the problem of how changes in consumer spending spread their influence over the economy.

How much there is to be learned about this problem is indicated by Ruth Mack's searching investigation of the causal links between shoe buying and earlier stages of production and distribution. She finds, for example, that about a year typically elapses between the first appearance of a hide at market and its later entry, in the shape of shoes, into a consumer's closet. This long interval leaves, however, no obvious imprint on retail sales of shoes relative to shoe production or still earlier stages of the industry—all of which exhibit nearly concurrent fluctuations. Again, the retailer does not merely transmit the changes in consumer purchases to the wholesaler or manufacturer; he magnifies them. Thus the amplitude of fluctuations is larger in wholesale sales than in sales at retail, also in shoe production than in sales at wholesale, and to some degree in leather production than in shoe production. Here the intensification of the cyclical movement stops; the production of leather is preceded by the movement of hides into commercial markets but this activity undergoes narrower fluctuations than the production of leather. Of course, the varying amplitude and similar timing at successive stages of the shoe-leather industry imply that the cycle in retail sales is accompanied by a corresponding cycle of investment in shoe and leather inventories and by an inverse cycle of investment in hide inventories. These movements of sales, production, and inventories—and I have singled out only a few—raise difficult questions. How does the cyclical synchronism in the different parts of the shoe-leather industry come about? Why are the fluctuations of retail sales, when passed on to earlier stages, at first magnified and later moderated? And why does this industry, beside participating in business cycles, trace out a shorter cycle of its own? To clarify these striking phenomena Dr. Mack has put principal stress on four factors: first, the rate of change in consumer buying; second, the degree of firmness in the inventory objectives of dealers and manufacturers; third, the adjustment of orders to the varying length of delivery periods over the course of a cycle; fourth, expectations concerning price movements. But the importance of these factors differs from one branch of the shoe-leather industry to another and, of necessity, from one industry to another.

Once the full report on this investigation, which is now being revised, has been completed, it would be well to consider what additional studies may be needed to advance realistic understanding of the vertical transmission of cyclical impulses. Some useful suggestions about this problem are made by Wesley Mitchell in his posthumous volume, *What Happens during Business Cycles.* A special aspect of the problem, namely, the effects of variations in instalment credit on economic activity at large, was treated by Gottfried Haberler in *Consumer Instalment Credit and Economic Fluctuations*—a volume that has exercised a significant influence on both business and governmental policies since its publication ten years ago.[14]

V

The relation between 'wants' and 'activities' is the basic theme of economics. Numerous theoretical systems have been constructed by assigning primacy to wants, and again by assigning primacy to activities. But in actual life there is only interdependence. The principal task of economic science is to analyze this interdependence and to extract the elements of regularity that underlie or characterize the influence of wants on activities and of activities on wants, especially under conditions of change. This task is proving harder than many thought likely in the early days of enthusiasm over the new doctrines of Keynes. But some progress has been made, and knowledge concerning the interrelations of consumption, production, and income distribution is cumulating.

In addition to the general research tasks that I have already mentioned, there is one that falls peculiarly within the range of the National Bureau's experience. We have devoted over the years considerable resources to the study of trends in national income, production, employment, the labor force, and business finance; and we are now making an elaborate study of trends in capital formation and the prospective requirements for capital. Would it not be desirable, once some of our present investigations taper off, to supplement these studies by equally systematic research on

[14] Both Haberler's and Mitchell's volumes were published by the National Bureau, the former in 1942, the latter in 1951.

consumption trends? Such research would help to clarify our present and earlier investigations, and it would help the research of others as well as our own. Indeed, nothing seems more likely to contribute to perspective and informed judgment on consumer problems than a comprehensive survey of trends in consumption, analyzed so as to bring out their relation to the general development of our economy since 1900 or, better still, since 1870.

The doctrine of secular stagnation, which stirred economic circles only a short time ago, owed some of its popularity to inadequate appreciation of the historical fact that the spending of the 'average' family at a given level of family income has shown a progressive tendency to increase across the decades. One of the main explicit pillars of the stagnationist theory was, of course, the absolute decline in the year-by-year increments of our population; but this decline ceased just about the time when the theory was first articulated. The last fifteen years have witnessed a great upsurge of population and the years since the close of World War II a tremendous boom in home construction. In 1890 owner-occupied dwellings constituted 36.9 per cent of all occupied dwelling units; this proportion stood at 41.1 in 1940 and climbed to 53.3 by 1950.[15] In 1900 the value of the structures and equipment of business firms about equaled that of the dwellings, carriages, and household durables of consumers. In 1948 the consumer plant and equipment exceeded the value of business plant and equipment by about 30 per cent.[16] Spending on durables, which was 11.9 per cent of total consumer expenditure in 1929 and 10.4 per cent in 1937, rose to 13.3 per cent in 1949 and 15.1 per cent in 1950.[17] Per capita food expenditure, exclusive of alcoholic beverages and adjusted for the rise in retail food prices, increased nearly 40 per cent between 1929 and 1948.[18] These and a thousand other statistics on consumer behavior require assembly, perhaps rectification, and certainly interpretation.

Vast changes have occurred in recent decades in technology, the distribution of population between urban and rural centers, the industrial status of women, the education of children and adults, the length of human life, the range of available commodities and services, the speed of communication, the income per capita, the

[15] Ernest M. Fisher and Leo Grebler, "A Stocktaking of Housing in the United States," *Appraisal Journal*, July 1951, Table III.

[16] R. W. Goldsmith, "A Perpetual Inventory of National Wealth," *op.cit.*, p. 18.

[17] Estimates by the Department of Commerce.

[18] "Consumption of Food in the United States, 1909-48," *Miscellaneous Publication No. 691* of the Department of Agriculture, p. 138; see also pp. 71-103.

distribution of incomes among the people, and the activities of government. How have these and related developments affected consumer spending patterns? To what extent, in particular, has the decline in the inequality of personal incomes since 1929 helped to create mass markets for a wide range of commodities? In what ways has the recent sharp increase in the marriage rate, in home ownership, and in the number of children affected the allocation of consumer income among different kinds of expenditure and between saving and spending? How, in turn, has the modern emphasis on possession of ever larger amounts of consumer goods reacted on the pecuniary ambitions of people, their willingness to work, and their attitude towards assuming the risks of innovation and enterprise? How has the trend of employment in the service industries[19] been affected by our changing consumption standards? How has the surprisingly high rate of food expenditure in recent years affected the fortunes of farmers and the long-run prospects of agriculture? With what speed, and with what effect on saving and other types of spending, have industrial prodigies like the electric refrigerator, the radio, and the television receiver been absorbed into the consumer economy? What part has the development of consumer instalment financing played in this process? How has the extension of life insurance, social security programs, and private pension plans affected consumer spending and saving? And what does the increasing proportion of consumer outlay on goods that need not be purchased continuously, either because they have a long life of service built into them or because they are of a luxury character, signify for the problem of maintaining economic stability in the future?

These questions are of practical as well as of scientific interest. Perhaps some of them are unanswerable, and perhaps all are only partly answerable. But it will be well to keep them in mind when we come to think more concretely about a survey of consumption trends. The past studies of the National Bureau have helped to illuminate a few corners of the vast terrain of economic life. With careful planning and the help of investigators in other institutions, it should lie within our power to illuminate a few additional corners.

19 This subject has already been partly elucidated by George Stigler and he is investigating it further. See his "Domestic Servants in the United States, 1900-1940," *Occasional Paper 24* (National Bureau, 1946), and "Employment and Compensation in Education," *Occasional Paper 33* (National Bureau, 1950).

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