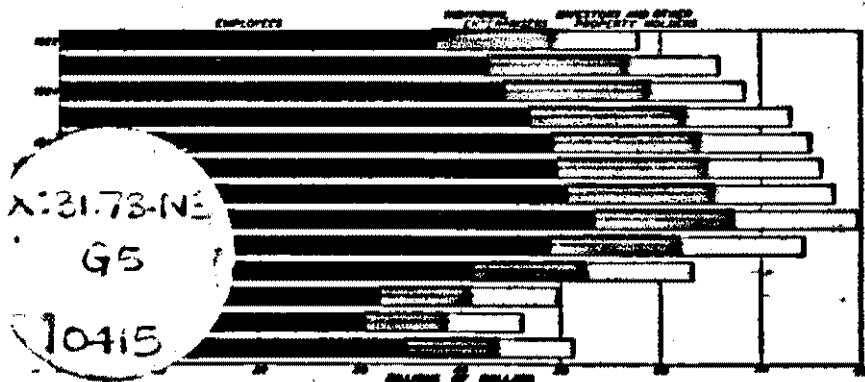


INCOME AND ECONOMIC PROGRESS

DIVISION OF THE NATIONAL INCOME



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Income and Economic Progress

by

HAROLD G. MOULTON

This book is the last volume in a series of four studies devoted to an analysis of the Distribution of Wealth and Income in Relation to Economic Progress.

In "America's Capacity to Produce" the charge that industry has been suffering from "excess plant capacity" is examined impartially and thoroughly. "America's Capacity to Consume" shows how the flow of income is divided among the several income groups in society; the character of the consequent expenditures by families at the various income levels; and the bearing of income distribution upon its allocation between spending and saving. In the third volume, "The Formation of Capital," traditional conceptions as to the forces which govern the growth of productive capital are challenged; the dependence of capital expansion upon consumptive demand is demonstrated; and how "excessive savings" may produce financial disorder rather than new capital goods is disclosed.

This present volume draws together the lines of analysis developed in the three underlying studies into a positive statement of national economic policy designed to bring about a better distribution of the national income and hence a more rapid and steadily maintained rate of economic progress. It discloses the interaction of taxes, wages, profits, and prices and discloses the possibilities and limitations of these several methods of readjustment. Major emphasis is placed on the importance of price policy as a means of passing on the benefits of rising productivity to all the population.

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BY

HAROLD G. MOULTON

WASHINGTON, D.C.
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DIRECTOR'S PREFACE

This volume is the last of a series of four embodying the results of an investigation of the distribution of wealth and income in relation to economic progress. The study has been conducted under a special grant of funds from the Maurice and Laura Falk Foundation of Pittsburgh.

The scope of the book is so fully set forth in the Introduction and its relation to the study as a whole explained in such detail in Chapters I and II that no further elaboration is required here. It may, however, be appropriate to call attention to the fact that while this completes our statement of preliminary findings, we do not regard it as in any sense a valedictory. Though it makes certain concise and specific statements of conclusion, these serve merely to point lines of attack and suggest the scope and direction of more comprehensive and intensive studies which should follow.

EDWIN G. NOURSE
Director

Institute of Economics
September 1935

AUTHOR'S ACKNOWLEDGMENTS

In view of the fact that this volume is the fourth of an integrated series in the carrying out of which a considerable number of persons have participated, it is more than ordinarily difficult to convey my sense of obligation. Each of the several authors of the numerous divisions of the study has contributed not only to the factual foundations on which the interpretations are based but also, in varying ways, to my thinking on the issues involved. To each of them I express my appreciation.

The reader of this volume should be informed of the distinctive part which has been played by Mr. Nourse in connection with the entire series. As Director of the Institute of Economics he was largely responsible for the broad outlines of the investigation as a whole, as well as being the primary author of *America's Capacity to Produce*. His contributions to this final volume have been such as to entitle him to joint authorship. He has written the Introduction and the concluding chapter and contributed much to the organization and interpretation of other chapters.

Hugo Bezdek, Jr. has rendered valuable service as general assistant to the author on this as well as the preceding volume. Maurice Leven has rendered aid in connection with the statistical information bearing on wages and profits, and Cleona Lewis has assisted in the writing of Chapter III.

HAROLD G. MOULTON

Washington, D.C.
September 1935

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INTRODUCTION

In primitive society, the road to economic progress was clearly defined. There was very close correspondence, in fact practical identity, between the people's desire to work and their ability to consume. Within their limits of strength and skill, the amount of material satisfactions varied directly with the amount of time and effort individuals were willing to spend in appropriating the materials which nature had provided, in prosecuting the simple arts of agriculture, or in devoting themselves to building shelter, fashioning furniture or utensils, and fabricating clothes.

As civilization progressed through the stages of barter and money exchange, this close correspondence between the individual's capacity to produce and his capacity to consume was not materially altered in so far as men continued to be self-employed. To an increasing extent, however, self-employment has given place to work for others under various types of status or contract. The effect of these changes on productivity has been profound.

At a comparatively early time, changes began to appear in customs and laws for the handling of labor which were designed to increase the consuming ability of the group or clan or nation by increasing its productive capacity. Entirely free labor, given or withheld at the mere whim of the worker, was superseded by various types of slavery, serfdom, feudal control, and wage employment. Some forms of forced labor persisted for longer times, some for shorter. But gradually all forms of actual compulsion (except in penal institutions) disap-

peared, while the wage system, under the spur of our industrial and financial evolution, came to take a larger and ultimately a preponderant place in the economic systems of progressive nations.

GROWTH OF LABOR POWER

It is a matter of common knowledge that our march through these three stages of economic evolution—self-employment, slave or tied labor, and wage employment—has been attended with enormous material gains. When ancient races were limited to the level of subsistence which was supplied by such labor as each individual might be pleased to put forth, laziness and inefficiency were naturally rife and the total product pitifully small. The more ambitious individuals or classes or nations sought to enlarge productivity by bringing constraint to bear upon the labor of the masses. Driven by the overseer's whip or spurred by the importunities of the bailiff or steward, labor had to increase its exertion. But by and large, the effectiveness of this labor was increased also by reason of the fact that it was better organized and instructed and was supplied with more and better equipment.

Sound economic statesmanship in this intermediate period of our development required that the "leisure class" created by these systems of forced labor should not be a merely idle class but one which applied a reasonable proportion of its time to the advance of learning and the improvement of production methods. Furthermore, any but the most short-run view of their own selfish interest dictated that the ruling classes should not withhold so much of the product from the unfree laborers as to lower their bodily efficiency, encourage disease and death, or invite the danger of servile insurrection. Finally, they

had the problem of seeing to it that a sufficient part of the enhanced product which came into the hands of the controlling classes, instead of being dissipated in luxurious consumption, should be applied to maintaining and improving herds and buildings, tools, mines, roads, and whatever other types of plant were needed to provide for an advancing technique of production.

GROWTH OF CAPITAL POWER

Our attention now shifts from the labor side of the picture to that occupied by capital. Primitive man made progress as he began working for future as well as present satisfactions. The classic illustration of economic textbooks shows the primitive hunter or fisherman setting his feet in the path of economic progress by laying out his labor to make weapons or traps, nets or crude boats. This he did in order that he might secure a more abundant product in the future or might secure it more easily. It took some degree of providence thus to plan and labor for the future even when his stomach had been comfortably filled with the day's product. Still more, the dawning of the companion virtue, thrift, would be involved if for a few days he went hungry to bed because, instead of using all his time for the satisfaction of immediate wants, he had invested part of it in contrivances (capital goods) for augmenting future product.

In the intermediate stage of economic evolution, as already suggested, this process of capital formation was accelerated by taking it out of the hands of the mass of workers and putting it in the hands of lords and masters who, partly by reason of their selfishness and ruthless power but partly also because of their larger social vision, held current consumption down at the same time that they were pushing the labor outlay up in order that capital might be accumulated more rapidly.

With the coming of the modern industrial age, the demand for capital to create ever mightier engines for transmuting the power newly discovered by science into more abundant consumers' goods became constantly more pressing. Since the coming of the industrial revolution synchronized more or less broadly with the period of political revolution and enlarged freedom for the individual, one important line of attack on the problem of capital accumulation has been the ever-growing insistence on individual thrift. There was a great fear lest the mass of workers, no longer required to provide their own equipment and raw materials, might consume the fruit of their labor too fully from day to day and thus fail to maintain and expand the capital plant out of which future product would have to be supplied. Hence the gospel of thrift was intensively developed. It took the form primarily of saving for a rainy day and particularly for old age. Through the growing system of savings institutions, insurance, and investment in bonds and stocks, the reservoir of such individual savings could be used to supply the social capital necessary for industrialized production.

Besides this democratic method of dealing with the problem of capital formation, there was an aristocratic attack which sometimes threatened to take on forms and be carried to degrees not greatly different from those seen during the prior economic stage when feudalism and other forms of plutocracy were dominant. Under corporate organization, the product accruing to the business comes first into the hands of a small executive group who decide whether it shall be disbursed to potential consumers (as dividends or bonuses to employees) or be retained in the capital fund of the given business to enlarge or modernize its existing plant and equipment or,

through the investment of reserves, be made available to other corporations for like purposes.

Finally, a new and even more dynamic factor has come into the process of capital formation through the evolution of modern commercial banking. The development of the banking system, with its ability to manufacture credit, has served to render funds immediately available for the purposes of capital creation without the necessity of waiting upon the slower processes of accumulating funds from individual savings. The result is to sustain productivity at a higher level and to facilitate the growth of new capital at a more rapid rate than would otherwise have occurred.¹

CHECKS UPON PRODUCTIVITY

This third phase of our economic evolution, with labor motivated and regulated chiefly under a wage system and with capital under the joint influence of individual thrift, corporate financial strategy, and the dynamic influence of commercial banking, has been marked by great economic progress. But in spite of the rapid spread, ingenious elaboration, and undoubted achievements of this modern economic system, it can by no means be said that either labor or capital has been brought to full productivity.

Labor often runs to waste for lack of opportunity to work. It might seem that when the material welfare of the working population comes to depend entirely on the purchasing power which it can bring to the market and with labor entirely free to give itself whenever and wherever it likes in response to the inducement of money wages, we should find our whole population pouring its

¹ For a fuller discussion, see Harold G. Moulton, *The Formation of Capital*, and Chap. III of this book.

6 *INCOME AND ECONOMIC PROGRESS*

full services of labor into productive channels. In point of fact, however, we do not find free labor under the complications of our modern industrial, commercial, and financial organization thus able to exchange itself for goods in the market place with any such degree of facility. The worker cannot in any large proportion of cases directly employ himself in the fabrication of goods which make up his own items of consumption. He must dispose of his labor, if at all, at the point where someone who has supplied equipment for the production of particular goods desires laborers because the goods which they produce can be sold at a profit.

Under our highly complex economic system, the amount of human energy that will be expended is dependent upon many other factors than mere willingness and ability to work. The number of hours and the pace at which an individual may work depends, in many lines of activity, upon factors other than his own will and power. Moreover, the very opportunity of engaging in regular work may not exist. Employment may be highly seasonal in character, or it may fluctuate periodically as a result of changes in general economic conditions. Indeed, no inconsiderable portion of the population may find itself permanently without means of employment. Under such conditions, the volume of wealth created and the rate of economic progress depend not simply upon the willingness and the capacities of individuals to work, but also upon the functioning of an intricate economic machine. Only in connection with this complex economic mechanism can their labor be performed.

Capital as well as labor runs to waste. This comes about when the owner of capital finds the market for goods not large enough to require full use of plant and equipment. Capital embodies itself in engines for the use

of men—labor-saving devices. Thus at one and the same time it increases our output of material means of human satisfaction and also displaces laborers who only through their employment gain the right to claim a share of this expanded product. Unless these workers are re-absorbed at some other point where expansion can be effected, their purchasing power is curtailed or even completely destroyed, and the market for consumption goods is contracted.

Faced by this difficulty of an inadequate market, many persons raise the cry of "over-production" and "excess capacity." Others, viewing the same problem from the side of labor rather than of capital, bemoan the dangers of unemployment and its attendant spectacle of under-consumption. The more easily discouraged even take the view that this is a permanent difficulty and tell us that there is no longer any adequate opportunity for full employment, that we must expect to have six, or eight, or ten million idle workers with us permanently and must provide for taking care of them through some system of poor relief or dole, or must scatter them through second-grade agricultural regions to lead the simple life on subsistence homesteads. Labor clamors for a thirty-hour week so that jobs may go around; industry wrote codes that prohibited the installation of new machinery; and agriculture joined the saboteurs with acreage reduction devices and livestock slaughter campaigns.

If, as the greater efficiency of our machines releases labor, we leave that labor unutilized, how can we hope to advance the well-being of our total population? Surely labor does not wish to be saved in any such destructive fashion. Most of those who make up the millions of our unemployed not only have productive labor to give but prefer to live their lives in a more high-pressure exist-

ence than is proposed for them by the prophets of the thirty-hour week and subsistence homesteads. They desire to work with reasonable regularity and energy, if by so doing they may live in a world of electric lights, talking pictures, radios, silk stockings, and electrical refrigeration, rather than to go back into an economic wilderness after they have glimpsed this promised land. To a nation which has been noted for and prided itself upon its pioneer spirit, its Yankee ingenuity, its nearly universal industry and widespread thrift, it seems impossible to accept the answer of chronic and extensive unemployment or labor too thinly spread to support a high standard of living. Certainly it should not be accepted before we have made the most searching inquiry possible as to whether we may not find a means of continuing at full stride the march of economic progress until we shall demonstrate the practical attainability, in this country at least, of material well-being for our whole population.

CHRONIC RETARDATION AND ACUTE DISRUPTION

Thus far, we have been talking of checks upon productive activity in general terms, without reference to the relative extent to which resources were unutilized in periods of depression as well as those of so-called prosperity. To many students of our modern economic problems, however, this problem of the oscillations of business activity has become the central point of concern. Furthermore, the somewhat rhythmic character of the downswings of the business cycles has convinced some minds that business depressions are not only an inevitable accompaniment, but in fact the result, of high industrialization and the profit system and are thus destined to remain permanently with us. Some even go so far as to argue that it is because production has in periods of pros-

perity been carried to excess that it must be followed by a period of arrested production—that “action must balance reaction.”

If we accept this assumption that our economic society is working in excess of its normal capacity in periods of prosperity, there is logic in the conclusion that our economic body must have prolonged resting periods of low activity. If, however, it appears that even in periods of prosperity, we are not working up to our true capacity (see Chapter I, pages 17-35), the problem becomes not one of checking the exuberance of boom times but of maintaining and indeed increasing even that rate of productive operation. It is evident that our true capacity for achieving well-being for the masses of our population cannot be realized by restraining productivity in good times in order that the trough of depression may not become so deep.

Certainly before accepting any such view, we must seek fuller light on the question of just how the economic system operates in relatively normal times and what impediments stand in the way of a full utilization of resources at such times. If by better adjustment of the several factors of the process at such periods larger productivity could be secured, are there inherent reasons why the better functioning cannot be maintained permanently? It cannot be supposed that the economic engine is properly adjusted if every attempt to accelerate it to its rated speed results in subsequent sputtering and loss of power. It is adjusted perfectly only if it hums along at a steady rate under full load.

**NOT REDUCTION BUT EXPANSION OF PRODUCTION
IS REQUIRED**

It must be quite evident to anyone who has travelled any considerable distance from his comfortable home or

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his prosperous neighborhood that we have not, even in our periods of busiest prosperity, produced enough economic goods to make a comfortable standard of living for our total population. Whatever fears may be entertained as to "excess capacity" relate entirely to an excess beyond the needs of a comparatively small privileged class which is able to command under our present scheme of distribution a disproportionate share of the goods turned out by our present economic system. If we attempted to supply everybody on any such plane, we should immediately be confronted by a condition of under-production and deficient capacity and the need for seeking better organization and more efficient techniques. Under primitive conditions, the great mass of the people were only fairly industrious and only moderately efficient. All enjoyed a low standard of living. During the economic middle ages efficiency was gradually stepped up, and industry and thrift promoted to a considerable degree. A standard of living high according to the ideas of the times was made available for a small aristocratic class, but the democratic masses remained in poverty. Since the coming of the industrial revolution, the technical possibilities of high productivity have advanced so rapidly that the group attaining to good subsistence levels has enlarged considerably and it seems morally certain, if not statistically demonstrable, that a modern industrial nation as richly endowed with natural resources as is the United States could actually achieve the age-old goal of at least moderate economic well-being for all its population.

One basic proposition cannot be blinked. Any society utilizing its productive capacities at less than their full practicable load is suffering from under-production. If only some way can be found of stepping up the ratio of

activity, economic goods can be made more abundant and a higher standard of living vouchsafed to the people as a whole. Where, then, shall we look for the source from which that stepping up may be secured?

In our modern economic society, the productive plant is not run in response to the orders of engineers free to operate it at its maximum practical capacity but by business men and bankers concerned to secure as large a profit for themselves as it can be made to yield. Since it is obvious that this profit control has not currently been calling forth from our productive plant and labor force as high a rate of productivity as technical operative conditions would have permitted, it becomes the chief concern of economic statesmanship to discover and remedy the shortcomings which are such serious impediments to productivity under current methods of economic organization and control.

He would be a hardy man indeed who would presume to say just what are the technical possibilities of the United States in 1935, or what they will be in 1940 or 1950. It is perfectly obvious, however, that our economic system has not thus far made it possible for these techniques to combine the available and willing labor of our people with our accessible natural resources to achieve the full productivity of which we are capable. No national question, therefore, can possibly be so important as that of ascertaining if possible what are the factors in our present economic system which tend to retard rather than to accelerate the march of our economic progress.

This economic system is based on individual habits, social customs, and legal institutions which jointly control the productive process in accordance with a "price system" for both goods and services. This price system determines the way in which the total product is divided

up among all classes of the people. The manner in which these recipients dispose of their income in consumptive uses or make accumulations of wealth to be used more or less actively for future production becomes the chief determinant of whether the world's work shall go forward briskly and fruitfully or whether it shall languish. Thus the distribution of wealth and income in our modern society has become the central concern of those who would unleash our productive power and accelerate our economic progress.

It was with these facts in mind that The Brookings Institution, three years ago, began an extensive exploratory study under the title, "The Distribution of Wealth and Income in Relation to Economic Progress." In three volumes, *America's Capacity to Produce*, *America's Capacity to Consume*, and *The Formation of Capital*, we have already presented the results of our investigation of the three major divisions of this preliminary survey. In this, the fourth volume of the series, we shall project the analysis forward into a discussion of ways and means by which a more effectively operating economic system may be promoted.

As stated at the beginning of our study:

"We raise the fundamental question whether the existing method of distributing the national income tends to evoke from our productive resources the greatest flow of goods and services of which they are capable. Or do certain of our practices in the distribution of wealth introduce maladjustments into the productive system which tend to interfere with its most successful functioning? . . . We shall not only give our answer to the question whether there are such shortcomings but shall also appraise their relative seriousness and suggest the types of adjustment which would seem to us to promise great-

est improvement in the situation, that is, greatest acceleration of the nation's economic progress."³

Before attempting this constructive synthesis, we shall in the next few chapters review briefly the factual data presented in the preceding volumes and certain preliminary conclusions at which we have arrived as the result of our investigations thus far.

³ Edwin G. Nourse and Associates, *America's Capacity to Produce*, p. 16.

PART I
DIAGNOSIS

CHAPTER I
OUR FAILURE TO UTILIZE
PRODUCTIVE POWER

If a nation is to act intelligently in accelerating its rate of economic progress, the first step seems clearly to be that of ascertaining what its productive capacity in fact is and how fully it is being utilized. A vast amount of discussion in recent years has centered around such catch-words or phrases as "technological unemployment," "enforced leisure," "over-production," and "excess capacity." These ideas all come back to the basic assumption that as machines have been displacing men at an accelerating rate, the productivity of these machines, so largely automatic or semi-automatic, has to such an extent outrun the purchasing power of the market that they, like the workers, are intermittently idle or are forced into complete unemployment long before they have rounded out the normal span of useful life.

Before we can arrive at any trustworthy conclusion as to whether our industrial equipment is in fact excessive, adequate, or inadequate, it is necessary to go back of these general impressions and fragmentary bits of evidence to apply some comprehensive and reasonably accurate measure of what the nation's productive capacity actually is and of the extent to which it has been utilized. Such was the task we undertook in the volume, *America's Capacity to Produce*.

PRODUCTIVE CAPACITY, 1900-29

Since the implication of current discussion is that our productive capacity has grown with enormous rapidity

and has been cumulatively outrunning our requirements, it was essential to survey the problem over a period of years. For the purpose in hand we decided that the first thirty years of the twentieth century was the most suitable period. This was an era of great economic expansion, punctuated by a number of relatively short recessions; and it embraced as long a period as seemed practicable from the standpoint of accessible statistical data. We deliberately ended our discussion with the year 1929 in order that attention might be focussed for the time being on more normal conditions than the deep depression which followed.

We sought to determine: first, whether the amount of unutilized capacity in the major divisions of economic activity had been tending progressively to increase over the space of three decades; and, second, to measure as precisely as possible the extent to which the capacity of our productive machine as a whole was utilized in the height of the boom era, 1925-29.

Our purpose was not that of determining what increases of productivity might be brought about by means of general economic reorganization or better business management. Nor were we concerned with making forecasts of scientific discovery and advances in technology. We were bent rather on ascertaining to what extent our existing plant and its accompanying labor force were allowed to stand idle and how much more of material goods and commercially marketable services they could turn out under existing methods of use if only they were utilized with as great continuity as was practically feasible.¹

¹ Some reviewers and private critics have been not a little disturbed that such a concept should be labelled *America's Capacity to Produce*. They have insisted that beyond these practical realities there lie much larger and more interesting potentialities of production under some

Many difficult problems arose with reference to the methods to be followed and criteria to be applied in determining this "practical capacity" for the several parts of our productive system. Theoretical capacities and engineering ratings had to be adjusted for climatic factors in the flow of materials or the demand for product, for breakdowns and other normal interruptions to operation, and for the availability of a labor supply. We were not content to assume that because a coal mine or a canning factory turned out a certain volume of product during its best week that it could produce 52 times that much in a year, or, because certain textile mills double or triple shifted at certain times, that the whole industry could as a practical matter operate on a full two or three-shift basis. The maximum for many lines of production is determined by the total number of workers of a particular skill who are available, and the total operations of our economic system as a whole cannot exceed the total labor force available at any given time of peak demand.

better economic system and that only these—or indeed even the most sanguine of them all—are entitled to consideration as the true measure of our productive capacity.

Obviously, the word "capacity" has a wide range of usage, including ideas of both the actual and the potential. There was no intention to make for our measurement the claim that it was the one and only measurement of capacity. The sort of capacity measured and the content of the book were more fully described in the introduction and set forth (p. 415) as a full title: *America's Capacity to Produce during the Period from 1900 to 1930 with the Capital Goods and Labor Force Which She Then Possessed and with the Technology and the General Pattern of Operative and Commercial Organization Then Prevailing*. The impracticability of putting this full title of 39 words on the backbone of the book made it necessary to devise a short title and, for this purpose, *America's Capacity to Produce* seemed appropriate.

If someone asked the capacity of a lecture or concert hall, the answer would be expected to run in terms of that hall in its existing arrangements and with its present seating facilities. It would not be the number of people who might be accommodated if the aisles were narrowed, new seating installed, or a balcony added.

The key test to which we demanded that all our separate estimates should conform was that of "continuous simultaneous operation" under practical running conditions.²

What, then, were our conclusions as to the amount of excess capacity, that is, technically unnecessary idleness, and what was the tendency for this amount of slack to increase or decrease? As to any general tendency toward increase, the evidence seemed to present a clear denial.

. . . In spite of particular instances of bad judgment or rapidly changing conditions of technology or of demand, it seems that there was no general tendency to pile up capital equipment in continually growing excess above what could be commercially employed. In two other large branches of business, namely, construction and merchandising, the physical plant plays a relatively less important part, and it was impossible to secure equally satisfactory measurement of capacity and its utilization. There seems, however, to be no reason to believe that full information on these industries would bring us to a conclusion departing at all widely from that reached in the other industries which we have just mentioned.³

As to the extent to which capacity at the end of the period (1929) was utilized in the several major lines of production, we found a range from 70 per cent to 85 per cent. There were obvious bottle-necks and disparities between branches of industry which need to be adjusted one to another for the proper integration of our productive system as a whole. Since, by the very premises of our problem, these several deficiencies could be removed by utilizing some of the slack capacities in other industries—would in fact be the very condition of such fuller utilization in construction and producer goods industries—these disparities were somewhat less than might at first appear.

² For a more detailed discussion of the issues involved see Appendix A, p. 169.

³ *America's Capacity to Produce*, p. 421.

After making allowance for them and considering the possibilities of the national labor force with such limitations to its mobility as existed, we appraised the composite picture of industrial society working as an integrated whole at approximately 80 per cent utilization or 20 per cent of practical reclaimable slack. This figure of non-utilization would apparently have to be raised about 2 per cent to cover the average of the five-year period 1925 to 1929.

These estimates were checked against the practical test of war-time experience when every effort to speed up the national industrial machine resulted in a total increase which, after translating war effort into comparable industrial enterprise, amounted to a total expansion of about 15 per cent. Hence we felt assured that our estimate of 20 per cent of non-utilized capacity was as large as could be safely counted upon in the absence of sweeping improvement in technical process, industrial management, or the installation of new and better plant and machinery.

UTILIZATION OF PRODUCTIVE POWER, 1922-34

Our analysis of productive capacity, as presented in the first volume of this series, was confined to the first thirty years of the present century. The study was not carried beyond 1929 because we wished to concentrate for the moment on the functioning of the economic system at its best, in a period of general economic expansion. To have carried the analysis through the depression years might have served to divert the reader's attention from consideration of the degree to which our productive resources are utilized in good times to mere contemplation of the extent of the ravages wrought by the depression.

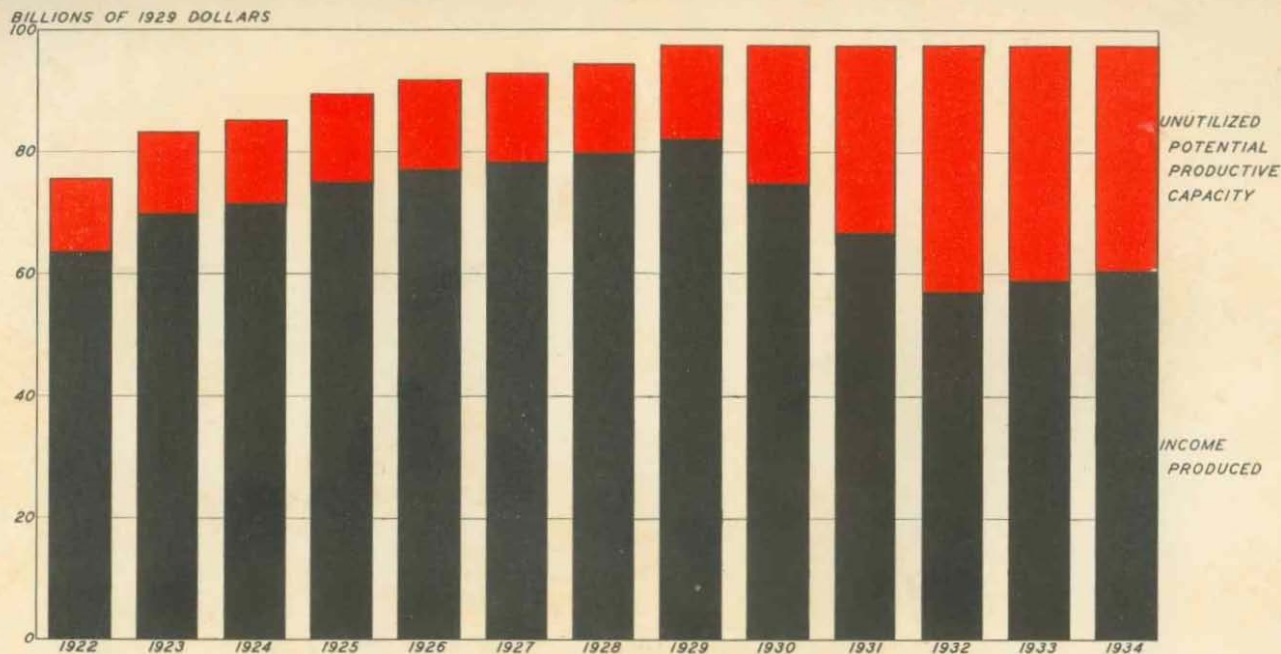
Before one can fully appraise the magnitude of the

failure of the economic system to realize its potentialities, it is necessary to have a picture of the economic situation at its worst as well as at its best. In *America's Capacity to Produce*, for reasons already indicated, attention was concentrated on the period of general economic expansion from 1900 to 1930. A series of diagrams indicating the degree to which we have utilized our productive resources over the 13-year period from 1922 to 1934 are now presented. This embraces the whole of the prosperity period of the twenties as well as the years of acute depression which followed. We shall not attempt to give detailed data with reference to the separate industries, but shall concentrate on general trends. We shall at the same time indicate the extent to which the income and the consumption of the people have been affected by the depression.

1. *Resources utilized.* The degree to which we have failed to utilize our productive capacity over the period from 1922 to 1934 is indicated in the diagram on the opposite page. The black area represents the aggregate value of the goods and services produced each year. The red section indicates the additional amounts which might have been produced had our productive resources been fully utilized. In order to eliminate the distortion due to price changes, current prices have been converted to the 1929 level. •

During the period of our greatest economic achievement our productive facilities, as the chart indicates, were utilized only to about 80 per cent of capacity. In the year of greatest depression, 1932, the volume of goods and services produced was approximately 31 per cent less than the production of 1929. Assuming that productive capacity remained stationary during the depression years, the actual output of goods and services

PRODUCTIVE CAPACITY AND ACTUAL PRODUCTION, 1922-34^a
(1929 = 100)



^a Data represent national income from production goods and services in terms of 1929 dollars. The years 1922-29 are from *America's Capacity to Consume*, Table 1, p. 148; 1930-32 inclusive have been projected on the basis of estimates (exclusive of income from "real estate") of the Department of Commerce (*National Income 1929-32*, pp. 26, 124). The figures for 1933 and 1934 based on preliminary estimates of the Department of Commerce. Derivation of line indicating productive capacity is explained in accompanying text. For actual figures see Appendix B, Table 1.

in 1933 and 1934 amounted to approximately 61 per cent of what might have been produced.

The amount of productive capacity for 1929 and preceding years, as shown in the diagram, is based on the results of our previous investigations. For the period since 1929 no detailed study of the trend of capacity as a whole has been made. Fortunately precise knowledge is not important for the purpose here in hand. For lack of positive knowledge it was necessary in drawing the diagram to assume that productive capacity has remained stationary since 1929. Both general observation and available data, however, suggest that there has been, in fact, an appreciable decrease in productive capacity.

In many lines of industry there has been an enormous amount of "deferred maintenance" in equipment, and there has been a steadily increasing obsolescence. The *American Machinist* has made three "Inventory and Obsolescence Surveys," at five-year intervals, in the field of metal working equipment. On the basis of a survey covering 1,345,447 major items of machine tools, presses, forging machines, and welding equipment, the following trends are revealed. In 1925 the amount of such equipment over ten years of age, and hence defined as virtually obsolete, was 44 per cent; in 1930 the figure was 48 per cent; and in 1935 it was 65 per cent.⁴

There has been almost no expansion of new plant, and there has been comparatively little replacement of worn-out and obsolescent capital structures. The amount of new capital issues for the purposes of financing new plant and equipment declined from \$3,446,000,000 in 1930 to \$262,000,000 in 1933.⁵ The data with reference to

⁴ Estimates presented to the United States Chamber of Commerce indicate that "deferred maintenance," in industry generally, amounts (in 1935) to something like 20 billion dollars.

⁵ See *The Formation of Capital*, p. 145.

the decrease in the production of goods destined for capital equipment, given on page 27, also definitely point in the same direction.⁶

In the light of these data as well as common knowledge with reference to the lack of replacement construction in connection with the transportation industry and in many lines of manufacture, we believe that there has been a considerable decrease in productive capacity since 1929. In any event, it is clear that the effective checking of the normal expansion of productive capacity since 1929 represents one of the greatest economic costs of the depression.

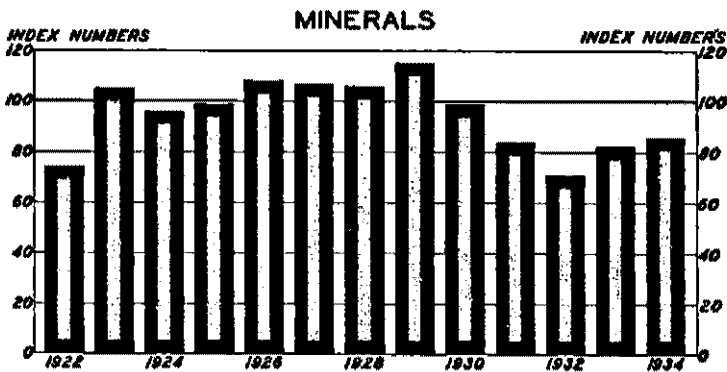
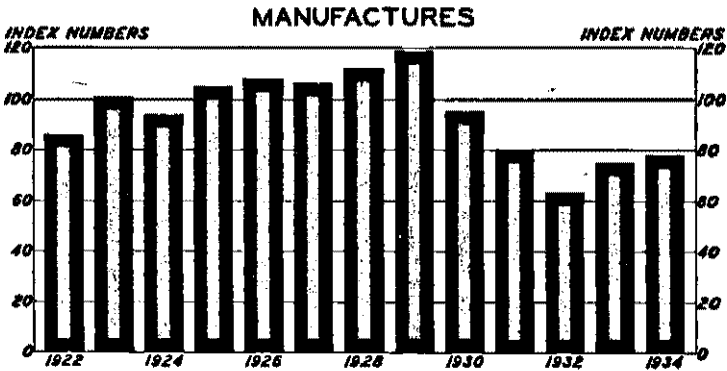
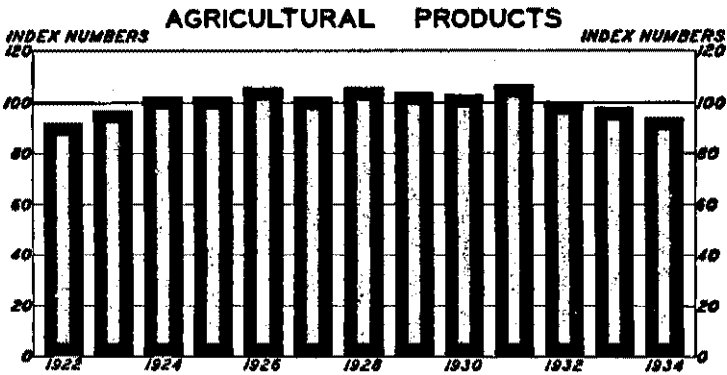
2. *Agricultural, manufacturing, and mineral production.* The chart on page 25 shows the fluctuations in the physical volume of production in the three basic lines of agriculture, manufacturing, and mining from 1922 to 1934. The figures in each case are indexes showing variations from a 100 per cent base. The figures of course reflect the general growth of population and productivity as well as fluctuations incident to changing conditions.

The fluctuations in agricultural production are largely attributable to climatic factors.⁷ It will be observed that the actual volume of production during the early depression years compares not unfavorably with that of

⁶ No little confusion with reference to the trend of productive capacity during the depression years has arisen because of the increase in *efficiency* as measured by output per worker. It is often assumed that this is a direct reflection of technological improvement. In general it is primarily attributable to an increase in average efficiency resulting from the fact that in slack times ordinary and less well-trained workers are gradually weeded out. To some extent, of course, better organization and management, and also improved equipment, have contributed to increased efficiency.

⁷ This was true even in 1934, when the effects of the drought eclipsed the effects of the Agricultural Adjustment program. Cotton is perhaps an exception.

FLUCTUATIONS IN AGRICULTURAL, MANUFACTURING, AND
MINERAL PRODUCTION, 1922-34^a
(1923-25 = 100)



^a For data see Appendix B, Table 2.

preceding years. The fluctuations in the volume of production of manufactures and minerals, on the other hand, are primarily the result of changes in business conditions. Both reached a high level in 1928 and 1929, then declined precipitately during the years of depression. Whereas the physical volume of production in agriculture was actually higher in 1931 than in 1929, manufacturing output declined during the same years from 119 to 80, or nearly 30 per cent. At the low point of 1932, the reduction amounted to 47 per cent. The decline in mineral production was slightly greater, amounting to 49 per cent.

3. *Production of consumer goods and capital goods.*

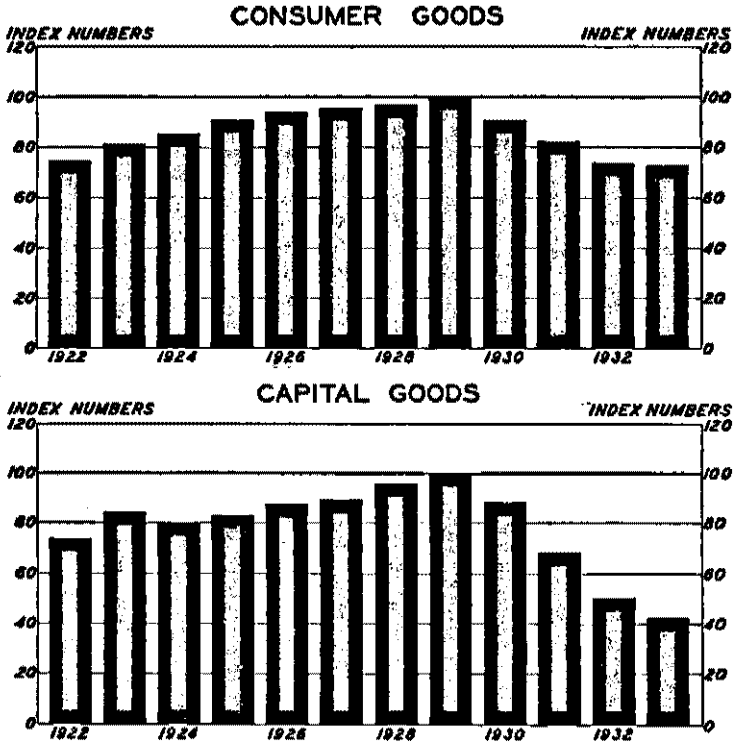
Another significant means of indicating the character of fluctuations in economic activity is to show the variations in the output of goods intended for human consumption and goods destined for replacement or extensions of capital equipment. Residential construction is sometimes classified as consumptive goods and sometimes as capital goods—according to the point of view. In the chart on page 27 it has been included in the figure for consumption goods. In studying the chart the reader should bear in mind that the bars show merely percentage fluctuations in each case and thus have nothing to do with the relative values of the various forms of goods produced. In these indexes, the year 1929 equals 100 per cent.

The decline in the output of consumptive goods from 1929 to 1932 amounted to approximately 23 per cent, whereas the production of capital goods decreased by almost 50 per cent. The decrease in residential construction, as gauged by contracts awarded, amounted to approximately 80 per cent.

4. *Fluctuations in aggregate national income.* We must now see what this failure to utilize productive ca-

capacity means in terms of the incomes of the people. The diagram opposite page 22 shows fluctuations from 1922

FLUCTUATIONS IN PRODUCTION OF CONSUMER AND CAPITAL GOODS, 1922-33^a
(1929 = 100)



^a For data see Appendix B, Table 3.

to 1934 in the aggregate national income as gauged by the income produced.

Had we made full utilization of our productive resources in the years from 1922 to 1929 the income of the American people would have been increased to the extent of approximately 113 billion dollars, or an aver-

age of 14 billion dollars a year. In the four years 1930 to 1933 the loss of potential income aggregated something like 135 billion dollars (1929 prices) or approximately 34 billion dollars a year. In addition, the expansion of productive capacity, upon which depend higher standards of living in the future, was held in abeyance.

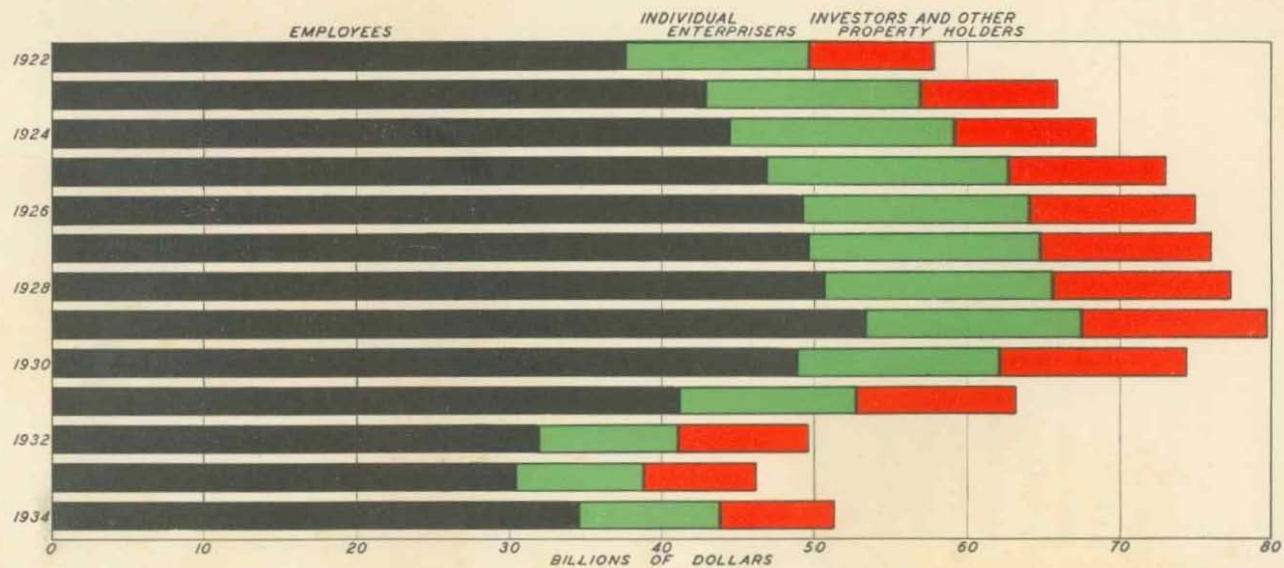
The magnitude and significance of the lost, or unrealized, income of the first four years of the depression may best be made clear by certain comparisons. The amount (135 billion dollars) represents a value in terms of goods and services equal to nearly 30 per cent of the entire accumulated wealth of the nation. It is four times the value of the nation's farms; nearly six times the value of the nation's factories; 14 times the value of all mercantile establishments; and more than 25 times the value of the 26,500,000 automobiles registered in 1929.

In the diagram facing page 22 and in the figures which we have been using all values have been adjusted to 1929 dollars in order to show the *real* variations in production and in the income of the people. The reduction in actual *dollar* income during the depression was, of course, very much greater than these adjusted figures would indicate. For purposes of comparison and reference, the aggregate and per capita income in actual dollars received for the years 1929-33 are given herewith:

Year	Aggregate (In billions of dollars)	Per-Capita (In dollars)
1929	81.9	673
1930	70.1	550
1931	55.8	436
1932	41.6	321
1933	43.5	347

5. *The division of the income.* Of equal interest are the changes in the shares going to the principal groups

DIVISION OF THE NATIONAL INCOME, 1922-34^a



^a The figures include disbursed income from productive enterprises and services, expressed in current dollars. For figures and explanation of data, see Appendix B, Table 4.

of recipients during this period. In the diagram facing page 28 are shown the relative amounts going to three primary groups—*employees, individual business enterprisers, and investors*. Employees include both wage and salaried workers. Individual enterprisers include farmers, merchants, professional firms, etc., not organized on a corporate basis. Their income represents a combination of wages, rent, interest, and profits. The investor class includes all those who receive interest or dividends from funds or property which has been turned over to others for productive purposes.

The amount of income received by the wage and salary group increased between 1922 and 1929 by about 16 billion dollars. This increase is in substantial part explained by the growth in numbers of people working for wages and salaries.

In the four years 1929-33 the income received by the employee group declined approximately 23 billion dollars, or about 43 per cent. The reduction in the aggregate amount of income going to employees indicates better than any other unit of measurement the effects of the depression upon the working classes. The figure of unemployment tells only a part of the story, because those who remained employed worked fewer hours and at reduced rates of pay. The reduction in aggregate wage and salary disbursements covers all of these factors.

The amount of income going to the individual enterpriser group increased only a little over 2 billion dollars in the years preceding 1929. The relatively slow increase is attributable in part to the fact that during this period the number of individuals in this category was practically stationary. Between 1929 and 1933 the income of this group shrunk nearly 6 billion dollars, or 41 per cent.

The share going to investors and other property holders increased between 1922 and 1929 by approximately 4 billion dollars, and then declined between 1929 and 1933 by about 5 billions, or 40 per cent. It should be pointed out that the figures showing the amount accruing to investors and other property holders do not tell the whole story with reference to invested income—either in the period of prosperity or during the depression. In the years prior to 1929 substantial sums, commonly in excess of 2 billion dollars, were annually retained in the business in the form of surplus, thereby increasing the investment of the owners. In the years following 1929, on the other hand, accumulated surpluses were drawn upon extensively for the purpose of maintaining interest and dividend payments, thereby reducing the value of the investment retained. In addition, surplus accounts of corporations were materially reduced as a result of the writing down of the value of depreciating assets.⁸

In summary, it is evident from the data which have been presented that the economic system works very imperfectly at best. Figured on a conservative basis, that takes account of practical considerations with which business is inevitably confronted, we estimate that the economic machine operates at the best around 80 per cent of capacity and at the worst at little more than 50 per cent. As a general average, over the fourteen-year period from 1922 through 1935, the productive mechanism by means of which our wants are supplied may be said to have run at little more than two-thirds efficiency.

⁸ For table showing the changes in surplus accounts of American corporations from 1922 to 1932 inclusive, see Appendix B, Table 5.

CHAPTER II

THE PRIMARY SOURCE OF ECONOMIC DIFFICULTY

The evidence summarized in the preceding chapter reveals the general extent to which our economic system fails to realize its practical possibilities. It is now our task to indicate what light our investigation has thrown on the cause or causes of this ineffective utilization of productive facilities. Our analysis will be directed to our failure to make full utilization of productive capacity in the period preceding the depression which began in 1929.

In making this economic diagnosis, we shall follow the well-known method of proceeding by a process of elimination. When an automobile engine is failing to function effectively, for reasons not clearly evident, a number of possibilities immediately occur to the mechanic: some specific connection may be the cause of the trouble; the generator or spark plugs may be out of order; the machine may need a general tuning up; or the engine may need to be knocked down and given a thorough overhauling. Similarly, when an individual is ailing, for causes unknown, his physician proceeds to test out one possibility after another, in the hope that by a process of elimination the source of difficulty will in due course be disclosed. In like manner, in endeavoring to find a primary source of economic disturbance, it is necessary to consider a whole series of possible explanations until either a single cause or a combination of causes is revealed.

THE PRODUCTIVE MECHANISM

In analyzing the possible sources of difficulty in the economic organism, one would naturally inquire first whether there might not be some missing or defective connection or limiting factor in the productive side of the mechanism.¹ Included in the complex processes of production are a whole series of operations—the growing of foodstuffs and agricultural raw materials, the extraction of mineral resources, the conversion of raw materials into manufactured form, the transportation of both raw and finished products, and the marketing and merchandising of commodities flowing from manufacturing establishments into distributive channels. The carrying out of each and all of these operations requires not only plant and equipment but it depends also upon an adequate supply of labor and other forms of energy, and also upon funds—money and credit—with which to finance the several stages of the productive process.

Conceivably, there might be a deficiency in any one of these parts of the productive mechanism which would seriously handicap the functioning of the system as a whole. The problem before us therefore is to determine whether there is any deficiency or bottle-neck in the production mechanism. The analysis which we have made in the volume dealing with productive capacity enables us to answer the question thus raised with a high degree of confidence. Our findings, as related to the successive divisions of the productive process, may be briefly summarized as follows:

¹The term production is often applied merely to activities which result in the creation of physical objects, or, to use the phrase of the economists, in form utilities; but since goods are not rendered available for human consumption until they have been placed in the possession of those who wish to use them the full productive process involves not only the transformation of natural resources into finished products but also the distribution of such products to their ultimate consumers.

(1) The supply of raw materials, both agricultural and mineral, ordinarily has been abundant. That is to say, an inadequate flow of cotton, wool, iron ore, copper, or other essential raw materials has not impeded manufacturing activity—except in war time. Not only were factories able, even in the boom period, to obtain all of the raw materials required, but the supply of materials could have been substantially increased without overtaxing existing productive capacity in the raw material industries. Likewise the capacity of agriculture to produce foodstuffs with which to support the working population was ample.

(2) There has been no dearth of manufacturing capacity. On the contrary, in practically all lines of manufacture a considerably larger flow of raw materials into the fabricating process could have been absorbed. The amount of idle capacity in manufacturing industries, generally speaking, was roughly equivalent to that in the raw material industries.

(3) The transportation system has not constituted a bottle-neck in the productive process. The fact is that the amount of excess capacity in the field of transportation has been even greater than in other lines. Except during the congestion of the war period, our transportation agencies could have carried a much larger volume of foodstuffs, raw materials, and finished products than were produced, or than might have been produced had these divisions of our economic system been operating at maximum capacity.

(4) Marketing and merchandising establishments and facilities have been abundantly adequate for the storing, handling, and selling of goods as they pass from the hands of producers to final consumers. Indeed, the duplication of facilities and the multiplication of compet-

itive sales effort in many fields of market distribution is a conspicuous feature of our economic organization.

(5) No handicap upon the functioning of the economic system has been imposed by a shortage of fuel or other forms of power. Except during the war period, our capacity to produce coal, oil, and other forms of fuel has been more than adequate to meet the needs of fuel consuming industries, transportation agencies, and household consumers. In fact, the development of new forms of power in the post-war years resulted in a more or less chronic state of excess capacity in the energy-producing industries.

(6) The supply of labor was adequate to permit a full utilization of our capital equipment. In some divisions of the economic system, especially manufacturing, the number of unemployed or partially employed laborers was much smaller than in other divisions; but taken as a whole—with some redistribution of the labor force—the supply was adequate to man all of the available plant and equipment. Some shortage of special types of labor might have become apparent had industrial establishments been run at full capacity; but in view of the minimum of training required under the standardized methods of factory operation and the high general level of intelligence and training existing among a working population experienced in the operation of farm machinery, automobiles, etc., the necessary proficiency for such tasks could have been acquired with little delay.

(7) The supply of money and credit has—except at one juncture (1920)—been altogether adequate for the needs of business. An expansion of the volume of production was not prevented by an inability on the part of productive establishments to procure either additional working capital from the banks or additional fixed capi-

tal from the investment markets. On the contrary, the supply of both short-term and long-term funds during the boom years was excessive.

The possibility remains that the degree of non-utilization which existed might be attributable to a whole series of minor impediments which in the aggregate become of genuine significance. Is it not reasonable to expect that a considerable amount of slack would be occasioned by frictional elements? May not the readjustments which are always taking place in connection with the shifting of labor and capital, in response to fluctuating demands, account for most of the difference between potential capacity and actual capacity? Does not the very process of economic advancement, with its continuous scrapping of obsolescent plant and equipment, inevitably involve lost motion on the way? Cannot such considerations as these readily explain an 80 per cent utilization? Could a dynamic society expect to make a much better showing than this?

These various factors are undoubtedly real and they have to be taken into account. In general, however, allowance was made for them in our study of productive capacity. We did not include idle or abandoned mines or establishments in our estimates of capacity. We made allowance for the normal losses occasioned by breakdowns and repair and reconditioning requirements. Moreover, we made a 5 per cent blanket adjustment to cover losses resulting from the lack of articulation between the various parts of the productive mechanism. In the light of detailed technical studies of the various industries and the several divisions of our economic system, and with due allowance for the articulation of different parts of the system, we reached the conclusion that the economic machine in the late twenties was pro-

ducing only about 80 per cent of our realizable capacity.

The failure to operate at full capacity is not to be found in any defective part or missing link in the productive mechanism. The conclusion thus reached by a study of the various parts of the productive mechanism, considered singly and in their interrelations, is moreover borne out by other commonly known facts. The enormous sales efforts, the abuse of installment credits to a point where they result in inducing consumers to buy more than they can afford, and the emphasis that is placed upon the necessity of expanding foreign trade, by means of credits and otherwise, all serve to indicate that the great problem of American business men is not how to produce more but how to sell what they have already produced.

THE DISTRIBUTION SIDE OF THE ECONOMIC PROCESS

In our search for the source of maladjustment we next turned from consideration of the technical processes of production to a study of the way in which the goods and services which have been produced are divided up. This is usually called the distributive process. It is carried out through an elaborate pecuniary system involving the translation of goods and services into *value* terms, and the allocation of shares in the national product by means of monetary disbursements in the form of wages, rents, interest, and profits. Might the way in which the aggregate money income is divided have a bearing not only upon the welfare of the various economic groups but also upon the operation of the economic system itself?

The fact that business enterprises seldom produce at full capacity and that the greatest problem of business managers appears to be to find adequate markets for their products naturally suggests that the maladjust-

ment may be between productive capacity and purchasing capacity. Does the existing distribution of income account for such a maladjustment? In order to throw light upon this basic question it was necessary to make a detailed analysis of the distribution of our national income.

In the second part of our investigation—*America's Capacity to Consume*—we showed the growth of national income as a whole, its division among various functional groups and by income classes, and its allocation by the several income groups as between outlays for consumption and savings for investment. We revealed also the amount and the character of consumption among different income groups and made comparisons between consumptive requirements and productive capacity. The conclusions bearing directly upon the question to which we are here seeking an answer may be briefly summarized as follows:

First, the consumptive requirements or wants of the people were far from satisfied during the period of our highest economic achievement. The value of the total national production of goods and services in 1929, if divided equally among the entire population, would have given to each person approximately \$665. There were nearly 6 million families with incomes less than \$1,000; 12 million with incomes under \$1,500; over 16 million with incomes under \$2,000; and over 19 million, or 71 per cent of the total, with incomes less than \$2,500. A family income of \$2,500, at 1929 prices, was a very moderate one, permitting few of the luxuries of life. Hence it was clear that the consumptive requirements, and especially the wants, of the masses of the people were far from satisfied.

To raise the incomes of the 19.4 million families receiving less than \$2,500 in 1929 to a \$2,500 level, with

no changes in the incomes of the families receiving more than that amount, would have required an increase in national production of more than 16 billion dollars. A horizontal increase of \$1,000 in the income of all families receiving less than \$5,000 in 1929 would necessitate an expansion of production to the extent of over 25 billion dollars. To give all the families of the nation a "reasonable standard" of living, such as is set forth in studies made by the Bureau of Home Economics of the United States Department of Agriculture, would have necessitated an increase in production over 1929 levels of approximately 75 per cent. The full utilization of our productive capacity, it will be recalled, would have permitted an increase in production of only about 20 per cent, or 15 billion dollars. We were clearly not confronted in 1929 with over-production either actual or potential. The desires of the people were vastly greater than could have been satisfied by the productive power then available.

Second, the *market demand* for consumption goods was less than our capacity to supply such demand. That is to say, while we could not have supplied all of the goods that were *desired* by the people we were able to furnish a larger volume than the people were willing or able to purchase—with the incomes which they had available. A substantially greater output of consumption goods would undoubtedly have resulted had the market demands of consumers been larger.²

The inadequacy of consumptive demand is not, as some writers have argued, attributed to the alleged fact that the market prices of commodities necessarily exceed

² Whether larger sales might have been realized had commodities generally been offered at lower prices than prevailed is an issue which need not for the moment be considered.

the sums disbursed in connection with their production. The truth is that there is an identity between the market price of a commodity and the sums received by those who have engaged in its production. If \$100 is paid for a commodity, \$100 is received by the seller, and any difference accruing to him over and above the disbursements to others for materials, interest, wages, etc., is profit. Since profits are also available for expenditure, they must obviously be included in the picture; and, when included, selling prices and the income of producers necessarily become equal.*

The failure of consumptive demand to equal in magnitude the volume of goods that might have been produced is attributable rather to the fact that a substantial portion of the income was not expended for consumption goods but was diverted to savings channels, where—for reasons discussed below—much of it failed to be used productively.

Third, the proportion of the national income that was *saved* was large, and increasing. The relative amount of the aggregate income that will be saved (set aside for investment) depends upon three factors: (1) the thriftiness of individuals and the policies of corporations with respect to the accumulation of profits; (2) the general level of incomes which affects the margin available for investment; and (3) the way in which the national income as a whole is divided among the various income groups.

Among these factors, the character of the income distribution is of primary importance. This is because those with large incomes automatically save a greater percent-

* See in this connection the discussion of the contentions of Foster and Catchings and Major C. H. Douglas in *The Formation of Capital*, pp. 177-81.

age of the total than those with small incomes. The truth and significance of this general statement may be gauged from the following facts. Out of 15 billion dollars of individual savings in 1929, as much as 13 billions were made by 10 per cent of the population. The 2.3 per cent of the families having incomes in excess of \$10,000 contributed two-thirds of the entire savings of American families; while the 59 per cent of the families having incomes under \$2,000 saved only 1.6 per cent of the total. Sixty thousand families at the top of the income scale, with incomes in excess of \$50,000 saved almost as much as 25,000,000 families having incomes less than \$5,000.⁴

No 1 From this study of the relative amounts of savings made by the various income groups we arrive at a general principle or law, which may be stated as follows: *The greater the number of persons in the high income groups the larger the percentage of the aggregate national income that will be set aside for investment purposes.*

The general level of incomes and the number of individuals in the higher income groups tended to increase more or less continuously throughout the period from 1900 to 1929. In consequence, there was a tendency—especially marked in the prosperous era of the twenties—for an increasing percentage of the national income to be set aside for investment purposes.

SAVINGS, CONSUMPTION, AND CAPITAL FORMATION

The determination of the foregoing facts with reference to the distribution of national income and its allocation as between savings and consumption did not, however, answer the question as to the source of mal-

⁴ For discussion of the method of estimating the volume of individual savings, see Appendix A, p. 172.

adjustment in the economic system. It was still necessary to determine whether the tendency revealed served in any way to impede the operation of the economic system. In the third division of the study we therefore turned to the analysis of the process by which money set aside for savings is transformed into new capital equipment, and the bearing of this process upon the functioning of the economic system. The task here was not so much one of assembling quantitative factual evidence as to determine the interaction of forces within a complex economic mechanism.

According to traditional views the way in which income is divided as between spending and saving in no way affects the degree to which our productive resources will be utilized. If more money is saved, the greater, it is contended, will be the construction of capital goods; if more is spent, the greater will be the output of consumption goods. An increase in savings thus merely shifts labor and materials from employment in the consumption goods industries to employment in the capital goods industries; and the total disbursements for wages, interest, etc., remain unaffected. Society would, however, have the benefit of an increasing supply of capital goods.

This traditional analysis, it should be carefully noted, is based on the primary assumption that all *money savings* automatically become new *capital equipment*. Such an assumption implies that business men will always expand plant and equipment to the full extent of the funds available. Stating the matter another way, it is assumed that the formation of new productive capital in no wise depends upon consumptive demand—that business men will increase the supply of capital goods even though the demand for consumptive goods is declining. In other words, it is assumed that consumptive demand and the

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construction of capital equipment are *independent variables*. Now if this is true we should always have—barring other maladjustments—full employment either in the production of capital goods or consumer goods. But if it is not true—if the expansion of capital goods *depends upon* a concurrent expansion in the demand for consumption goods—then an increase in savings might have very different results. How have we been able to clarify the basic issue thus raised?

First, we sought to show, on the basis of general reasoning and observation, that an increase in savings *at the expense of* consumptive demand would reduce the construction of new capital goods as well as of consumption goods. Since business men are concerned with making profits, and since profits from the use of new capital depend upon the manufacture and sale of consumer goods by such productive establishments, we contended that an expansion of plant and equipment will not take place in any large way when consumptive demand is declining and the general business situation as a whole is accordingly unpropitious.

Second, we surveyed the facts of our industrial history as a check on the validity of this general reasoning. The available evidence showed conclusively that new capital is constructed on any significant scale only during periods when consumption is also expanding. In periods of declining consumption the construction of new capital also decreases sharply.

We concluded from this analysis that if new capital is to be constructed there must of necessity be an increasing flow of funds not only through investment channels but also through the channels of retail and wholesale trade. This led inevitably to the question: How is it possible to finance simultaneously an increase in the output of con-

sumption goods and of capital goods? We showed that a concurrent increase in the flow of funds through consumption and investment channels is made possible by the expansive quality of our commercial banking system, which is a manufactory of credit. In a period of expansion, credit is in fact extended both for working capital purposes—to facilitate the production of consumptive goods—and for fixed capital purposes—to finance the construction of new plant and equipment. In either case the funds are in due course disbursed in payment for wages, materials, and other production costs, and thus the aggregate money income received by the people is enlarged. This makes it possible to spend more as well as to save more, and thus the flow of funds through consumptive and trade channels is increased concurrently. The facts with reference to investments and consumptive expenditures prove that this is the case.

Third, we found from the study of our industrial history that the growth of capital is *closely adjusted to and dependent upon* an expanding demand for consumption goods. The evidence bearing on this question is of two types.

We found in the first place that expansion or contraction in the construction of new capital closely parallels expansion or contraction in the consumption goods industries. Moreover, fluctuations in the construction of capital goods have usually followed rather than preceded fluctuations in the output of consumption goods.

The controlling importance of consumption was, however, more conclusively revealed by the discovery that the rate of growth of new plant and equipment in a period of industrial expansion is adjusted to the rate of increase of consumptive demand rather than to the volume of savings available for investment purposes.

Savings are made in the first instance in the form of ^{actual} money. This money is directed into investment channels; but it does not follow that it will always be used in constructing new capital goods. We found that between 1922 and 1929 the volume of funds rendered available for investment purposes was increasing rapidly, but that the volume of securities floated for purposes of constructing new plant and equipment remained practically unchanged in amount from year to year. In 1929 the volume of new securities issued for the purpose of actual capital construction plus mortgages was less than 5 billions, while the volume of funds seeking investment was in the neighborhood of 15 billions.⁵

The evidence thus shows conclusively that the construction of capital does not vary directly with the amount of investment money available. It is apparent that the decisions of business enterprisers with reference to the construction of additional plant and equipment are determined primarily by reference to the state of the markets for the products which such new capital equipment could turn out.

When the volume of money savings is in excess of the requirements for new capital construction, what becomes of the excess?⁶ The answer is that funds seek employment in one way or another—just how, depending upon varying economic conditions or situations. They may be loaned abroad, as large amounts were in the period from 1925 to 1929. They may be used in purchasing securities already outstanding in the markets, and be absorbed in bidding up the prices of such securities. Or, as during the

⁵ For further discussion of this phenomenon see Appendix A, p. 172; and *The Formation of Capital*, Chap. X.

⁶ They are not used directly for consumption purposes; for the amount of savings represents the aggregate funds set aside by the population as a whole for investment purposes.

depression, when new security issues for purposes of private capital expansion have virtually disappeared, they may remain stagnant in bank deposits, be used in financing government deficits, or, again, in bidding up the prices of outstanding corporate issues.

A flow of money savings into investment channels in excess of the requirements of the capital markets is a comparatively new phenomenon in the United States. Throughout our earlier history, indeed until approximately the World War period, the requirements of business enterprises for funds with which to develop new capital were characteristically in excess of the supply emanating from the savings of the people. The deficiency was made good by borrowing abroad and by the expansion of commercial banking credit.⁷ In the last twenty years, however, the situation has been profoundly altered. As a result of a higher average level of income, and particularly because of the concentration of income, the volume of money savings flowing to investment channels has so greatly increased that the balance has been shifted. Instead of having a deficiency of investment money, we have a surplus.

This diagnosis or analysis of the economic mechanism may then be summarized as follows. Our study of the productive process led us to a negative conclusion—no limiting factor or serious impediment to a full utilization of our productive capacity could there be discovered. Our investigation of the distribution of income, on the other hand, revealed a maladjustment of basic signifi-

⁷ For example, during the expansion period preceding 1907 the volume of new securities being issued was very much greater than could be currently "digested" by ultimate investors; they were held meanwhile by investment houses and stock market speculators, who were able to carry them by means of commercial bank loans secured by collateral.

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cance. Our capacity to produce consumer goods has been chronically in excess of the amount which consumers are able, or willing, to take off the markets; and this situation is attributable to the increasing proportion of the total income which is diverted to savings channels. The result is a chronic inability—despite such devices as high pressure salesmanship, installment credits, and loans to facilitate foreign purchases—to find market outlets adequate to absorb our full productive capacity.

CHAPTER III

THE POSSIBILITIES OF FOREIGN MARKETS

The titles selected for the first two volumes in this series, *America's Capacity to Produce* and *America's Capacity to Consume*, would seem to imply that the United States in a virtually independent economic entity. As a matter of fact, however, the economic life of this country is intricately interwoven with a world economic system. These international economic relations manifest themselves alike in connection with productive operations, with consumption, and with the flow of funds through investment channels.

The method which has been followed in the preceding volumes was necessary in order to simplify the exposition. It is essential at this place, however, to broaden the scope of the analysis to include the world horizon. We shall take account, therefore, of the character of these international economic relationships and endeavor to appraise their significance from the standpoint of the basic problem with which we are concerned.

THE GROWTH OF ECONOMIC INTERDEPENDENCE

American economic life has always been closely linked with that of European countries. In recent times, however, the range and character of our international economic interests have undergone great changes and our economic relations have been broadened to include the entire world. It will be useful perhaps to sketch briefly the evolution of the complex relationships of the present day.

In colonial times we naturally depended on Europe chiefly for manufactured goods; and, in return, we shipped out selected agricultural and forest products. During the first half of the nineteenth century the building of railroads and the development of our industry required the importation of railway iron, of locomotives, and of great quantities of machinery, in addition to the usual finished manufactures. At the same time, the growth of European industry and great urban populations necessitated an expanding flow of American exports of food products and raw materials. The United States and Europe were thus mutually dependent upon the system of specialized production and exchange which evolved.

The character of American foreign trade relations underwent considerable change in the last quarter of the nineteenth century. As early as 1870, American manufactures, especially iron and steel and textile products, were beginning to compete abroad with similar products of the older industrial nations. It was not until the turn of the century, however, that the so-called "American invasion" of foreign markets with manufactured products became a subject of widespread interest. Henceforth we needed from the outside world more of the raw materials and partly finished goods required in the manufacturing process, and relatively smaller amounts of manufactured goods for the American consumer. The importance of our exports of foodstuffs and selected raw materials did not, however, wane.

The shifting and broadening character of American trade was, of course, accelerated as a result of the World War and its aftermath of requirements. Today our principal imports are industrial raw materials, such as rubber, paper and pulp, copper, hides, wool and silk, and

certain food-stuffs, such as cocoa, coffee, tea, and sugar. While we continue to export large quantities of cotton, grain, and meat products, we also sell abroad a wide range of finished manufactures, notably iron and steel, textiles, automobiles, locomotives, machine tools, typewriters, sewing machines, and petroleum products.

Our economic relations with other countries involved not only the export and import of commodities, but also the rendering of a wide variety of services arising out of international intercourse and business transactions. Among the principal services rendered by foreigners to the people of the United States are the entertainment of American tourists abroad, the carrying of freight and passengers on foreign ships, and the insurance of both American property and American lives. Americans perform similar types of services for foreigners; that is to say, some foreign goods are carried in American vessels, foreigners travel in the United States, and insurance is taken out by foreigners with American companies. In addition to such major types of services, there is a wide variety of business transactions of lesser importance involving the payment of commissions, fees, and royalties.

The United States has also become intricately related to the outside world by means of credit operations. In certain periods of our history we have borrowed large sums in foreign countries for the development of our natural resources, railroads, and industrial enterprises. In later times we have lent vast sums to foreign countries both for war purposes and for the financing of private business undertakings. The character and significance of these credit relations will be given special consideration below.

If a map were drawn showing the economic and financial relations of the United States with the rest of the

world today, there would be trade lines extending outward to every nation in the world and other trade lines extending inward from every nation to the United States. There would be service lines extending outward and inward in every direction. The credit lines would be scarcely less numerous and ramifying.

In the light of this brief description of America's economic relations with the rest of the world, it is evident that the operation of our productive system as now organized depends upon the maintenance of a flow of imports of certain types of materials as well as a flow of exports. The character of our consumption also depends in no small degree upon the maintenance of imports. Moreover, the flow of funds for the development of new capital commonly involves international routing—at one period from foreign investors to America and at another time from American savings into investment in other countries.

CAN FOREIGN MARKETS ABSORB OUR SURPLUS CAPACITY?

We now turn to the possibilities of expanding foreign markets as a solution of the problem presented by excess productive capacity. Can a nation whose capacity to produce is in excess of the amount that can be sold to its own people find a solution to the problem through the expansion of sales abroad?

The analysis of this problem would be a very simple matter were it not for the complications introduced by credit operations. Trade, whether domestic or foreign, is *trade*—involving an exchange of certain kinds of goods for other kinds of goods. While international trade is conducted through the medium of foreign exchange operations, rather than by direct barter, the aggregate value of the goods and services exported by the people of the

United States must nevertheless equal the aggregate value of the goods and services imported from abroad. If we were to furnish more goods and services to foreigners than they were furnishing to us, we should simply be making them a present of the excess. Credit aside, if we are to increase our exports of certain types of products, we must be able to increase our consumption of imported commodities; otherwise foreigners would not have the means with which to increase their purchases in our markets.

But, as we have already seen, credit plays so important a part in the carrying on of international trade that it cannot be ignored. We must consider whether and to what extent foreign loans may permit an expansion of exports as a means of absorbing surplus capacity. In order to clarify the issue involved, it will be necessary to reveal the varying types and ramifying character of international credit operations.

✓ In the first place, virtually all exports of goods involve extensions of credit for at least short periods of time—either book credits (accounts receivable) granted by the individual exporter, or credit extended through the intervention of banks and evidenced by formal bills of exchange which can be bought and sold in the exchange market. Most of these short-term credits require payment within a few months. But in the effort to stimulate foreign sales, merchandise is frequently sold on “liberal” terms, calling for payment a year or two, or even several years, in the future. Even more frequently loans not paid at due date are extended once, or even two or three times; and they may ultimately be funded into long-term interest-bearing obligations.

Exports are also often initially sold on a long-term credit basis. For example, the Baldwin Locomotive

Works sold locomotives after the war on credit to the governments of Argentina, Belgium, Chile, China, Colombia, India, Mexico, Poland, and Rumania. The company received from the respective governments interest-bearing bonds, payable after a period of several years. In the case of Polish loans ten years elapsed from the time of the original credit to its ultimate payment in 1929. To cite another instance, the Ulen Contracting Corporation of New York in 1921 contracted to build a railway for the Bolivian government and took serial bonds running until 1941, since extended to 1947.

Long-term bonded indebtedness, however, more often arises out of operations which are not directly related to the financing of particular export transactions. For example, American railroad companies early began to "float securities in the London market" as a means of procuring funds for developmental purposes. These bonds were sold by investment houses to the British public generally, and the bulk of such funds was then used to pay for rails, locomotives, or other equipment which the company imported from England. In such cases, it is not essential that the funds be spent in the particular markets where the loan is granted—though such stipulations are oftentimes attached.

Foreign loans of the type that we are now discussing are commonly granted for long terms of years. Indeed, there are instances in which bonds have been issued abroad for terms of more than one hundred years. Moreover, they are frequently renewed at maturity, or replaced by new issues of similar or increased amounts. With the period of repayment thus projected into the indefinite future, such loans appear to be in the nature of permanent or perpetual credit extensions.

The extension of long-term foreign credits has in

many countries been closely related to governmental policy. Such loans have played a particularly important role in the development of colonial enterprises. They have also been made to independent nations for purposes of political strategy. For example, in the years preceding the World War, the French government, with political objectives in mind, encouraged the people of France to purchase the securities of the Russian government, and its affiliated enterprises. Another conspicuous illustration is Japanese loans for the development of Chinese railways.

Two other forms of foreign investment require mention. The first is the purchase in foreign countries of securities which have been issued and sold in the home market. It is a very common practice for the individual investors of one country to buy the securities of another through the machinery afforded by the stock exchanges. At times such purchases of securities assume very large proportions as a result of fluctuating investment conditions in different countries.

The second is the direct investment in branch or affiliated business establishments in foreign countries. A great deal of capital has flowed from England into India and Canada for purposes of financing British enterprises there. German capital in pre-war days controlled industrial establishments in many foreign countries as well as in German colonies. American business enterprise has been extended by such direct means to nearly every country in the world.

It is not surprising, in view of the magnitude and complexity of international credit operations and the long periods of time for which both loans and direct investments are made, that there should have arisen a good deal of confusion as to the potentialities of foreign in-

vestment as a means of expanding a nation's exports. If credits were extended for only a few months at the outside it would be evident that no permanent expansion of exports would be stimulated. But is the situation not essentially different when investments are made for a long period of years?

THE SIGNIFICANCE OF INTEREST PAYMENTS

In analyzing this question, the significant fact to bear in mind is that loans bear interest. The payment of interest, like the granting of the loan itself, involves in last analysis the movement of goods. If, over a period of ten years, foreign loans are made in the amount of, say, a billion dollars, and then in the next ten years none is made, it is evident that during the first decade exports would be stimulated by the amount of the loans, while during the next ten years imports would be increased by the amount of the interest charges. Only so long as the volume of new loans being currently granted exceeds the amount of the interest on the accumulation of past loans will the net effect be to expand exports relatively to imports.

Looking at the matter the other way around, when a nation is borrowing abroad it receives imports in excess of exports. But, since interest payments are required, such a country will have to shift to an export surplus as soon as the interest charges begin to exceed the volume of new loans. There are circumstances under which a borrowing country may for a long period of years borrow more than the amount of the accumulating interest charges; but eventually interest charges catch up.

This principle is well illustrated by reference to American experience. Throughout all our early history—in fact, until the decade of the seventies—the people of this

country annually borrowed abroad sums which were in excess of interest installments on loans previously made; and we were importing more goods than we were exporting. After 1875, interest charges began to exceed the amount of the new loans, and thereafter exports exceeded imports. After the turn of the century we began to lend abroad in substantial amounts,¹ and with new loans added to the interest charges the amount of the export surplus steadily expanded. We remained a debtor country, however, until the World War.

But let us return to the problem presented by a lending country. History shows that a nation may for some time have an export surplus as a result of foreign loans. But in the end interest receipts exceed the volume of new loans and result in an import surplus. Without entering into any detailed account, the shifting of trade balances which occurs after a nation becomes a substantial creditor country may be illustrated by reference to the experience of certain European financial powers.

In 1815 Great Britain was faced with the same situation which confronted the United States after the World War. On the one hand, British manufacturing had been enormously stimulated by the demands of the war and "a large excess productive capacity" had been built up in numerous lines of industry. Not only was the existing domestic demand inadequate to absorb the full output, but it was clear that foreigners would not for many years be in a position to purchase the increased volume of man-

¹ American foreign investments had of course begun on a small scale at a much earlier date. There is record of some American firms in China as early as 1836 and the beginnings of investment in Mexican railroads in the forties. Shortly after the Civil War, American mining engineers were exploiting in Mexico and Central America, although it was not until the 1890's that there was any appreciable ownership by Americans in foreign enterprises.

ufactured goods that Great Britain was able to offer. Foreign loans were then expanded as a means of increasing sales in other countries.

The funds with which to make foreign loans were abundant. As a result of developments in the fields of manufacturing, mining, transportation, and finance, and the exploitation of commercial opportunities abroad, there had long been developing a class of wealthy investors. The financial machinery for handling loan and investment operations had also been in process of development for more than a century.² The second year after the war, therefore, found Great Britain entering upon a new role as creditor to the world at large.

In the period from 1817 to 1825 the story of British foreign financing strikingly resembles that of the United States in the period following the World War. Loans were made to the Spanish colonies to help prosecute their revolutions; to Spain to cover government deficits resulting from the wars against her colonies; to Russia to continue the retirement of her paper currency; to Prussia for rearmament; to Austria for military purposes; and to Greece, Naples, and France for various purposes. Stock companies were formed to open mines in several South American countries, to establish banking institutions, and to put various other types of enterprises into operation.³

The growth of British foreign investments, however, gave the nation only a very temporary excess of exports

² The Bank of England, established in 1694, was antedated by private banks which served as intermediaries between wealthy lenders and business borrowers. The first savings bank for collecting and investing small accumulations was established in 1804. The stock exchange was not organized until 1773, but it was preceded by "coffee house sales" of both legitimate stocks and bubble shares.

³ L. H. Jenks, *The Migration of British Capital*, pp. 37, 38, 43, 55, 60.

over imports. It appears that by 1825 exports and imports were practically in balance. Despite the large foreign loans which enabled foreigners to purchase additional quantities of British goods, the British people themselves were importing comparable quantities from abroad. After about 1825, British imports continuously exceeded their exports. As overseas investments expanded in amount, payments due by foreigners to Great Britain were increased, and these payments were accepted, in the last analysis, in the form of increased imports. Loans were meanwhile continuing to increase, being made possible by the expanding earnings from the carrying trade, marine insurance, and other services.

Underlying the financial transactions were the following economic changes. Great Britain continued to increase her exports of manufactured commodities, building up internal manufacturing industries for the purpose. On the other hand, the population engaged in manufacturing was fed increasingly on imported foodstuffs, while a substantial part of the raw materials required by the manufacturing industries was imported from abroad. This concentration on manufacturing enabled Great Britain to reap advantages from specialization, but it did not for any great length of time enable her to sell more abroad than she bought abroad.

The expansion of British foreign loans did not, moreover, provide any permanent solution for the problem of excess manufacturing. On the contrary, manufacturing industries continued to expand in size, and Great Britain was faced with a more or less chronic excess of productive capacity.

A counterpart of Britain's experience is found, at later dates, in the histories of France and Germany. About 1850, France definitely established herself among the

creditor nations of the world. By 1867 her imports balanced her exports. Thereafter, except for occasional years, imports were in excess of exports. Germany's shift from a debtor to a creditor position came in the early seventies. The trade balance shifted in 1888; and from then until the outbreak of the World War imports were consistently in excess of exports.

The United States shifted from a debtor to a creditor position as a result of the financial operations of the World War period. Then our creditor position was further increased by the large loans made between 1925 and 1929. Whereas early in 1914 we were a net debtor to other countries to the extent of approximately 2.5 billion dollars, by 1929 we were a net creditor in the magnitude of approximately 10 billion dollars, exclusive of war debts.

For some years after the war, interest obligations on the war debts did not enter the picture—for they were allowed to remain in suspense. After the various debt settlements were negotiated in the twenties, the interest payments still did not give us an import surplus because we were making new loans of vastly greater extent than the modest interest installments which the settlements called for in the earlier years. The ultimate trade requirements were thus obscured and it was widely believed that a way had been found to expand our foreign sales indefinitely.

The world depression brought suspension, not only on the intergovernmental debt payments, but also on a large percentage of the private obligations. But even in the absence of the depression we should shortly have reached an independent crisis in connection with the payment of interest obligations for two reasons.

First, the amounts involved were not only of extraor-

dinary magnitude, but the war loans had been employed in destructive operations rather than in constructive economic development. Moreover, a substantial part of the subsequent private loans was used merely to restore rather than to expand productive powers. The cost to the borrowers was also exceptionally high, averaging in the case of the German loans approximately 8 per cent.

In the second place, American commercial policy worked directly at cross purposes with the requirements for interest payments. Unlike Great Britain in the last century, we were unwilling to undergo the trade readjustments required if our debtors were to be permitted to earn the money with which to pay interest. Even if it be admitted that the conditions were in some respects different, the fact remains that the loans could not be self-liquidating as long as we were unwilling to increase our imports relatively to our exports. For a time the proceeds of new loans can be used to pay interest on old ones—with the underlying realities obscured; but such a process cannot continue indefinitely.

From this brief historical review of international trade and credit operations the conclusion is inescapable that foreign loans do not afford any permanent solution of the problem of excess productive capacity. The lack of ultimate validity in the idea is perhaps best disclosed by asking the simple question whether, by means of foreign credits, all nations might simultaneously expand their exports relatively to their imports. Unless connections can be established with other planets, obviously we cannot expand sales, by credit or by any other means, beyond the amounts which the peoples of the earth are able to purchase. The problem of the distribution of income in relation to economic progress is thus a world problem.

CHAPTER IV

SOME BASIC MISCONCEPTIONS

Our examination of possible causes of retardation in our economic progress has led us to the conclusion that the basic difficulty is to be found in our manner of distributing the national income. This system fails to bring to the market a purchasing power adequate to call forth the full use of our productive capacity. Before turning to the discussion of possible means for correcting the economic maladjustment which has been disclosed, it is necessary still further to prepare the way by examining certain assumptions or theories with reference to the problem which have been prominent in popular thinking and in the development of public policy. Our investigations of productive capacity, of consumption, and of capital formation have clearly shown that several such beliefs, though widely held, rest on serious misconceptions as to the facts of our economic life. In order to focus and sharpen the discussion, these issues will be raised in the form of a series of questions.

HAVE WE LIVED BEYOND OUR ECONOMIC MEANS?

There is a deep-seated conviction in the minds of many persons that the root of our economic difficulties is to be found in the attempt made by a large majority of our people to live on a higher plane than can be economically supported. Those who hold this belief argue that the mass of consumers not only do not save enough to provide for the rainy day, but are all too frequently led to expand expenditures through various credit devices to

the point where they are unable to meet their obligations. It is argued accordingly that not until we are content with simpler standards can we expect to have a fundamentally sound economic system.

This analysis confuses two distinct issues, namely, the level of expenditures which particular individuals, or groups, can support out of the purchasing power which comes into their hands, and the general level of consumption which our productive capacity is capable of supporting. In the true economic sense, the people can afford to consume all that they show themselves technically capable of producing—without sacrificing maintenance of capital plant.

If the consumption of goods above the level of bare necessity or simple living is curtailed, this hits at many industries which occupy a large and important place in our present industrial system, notably automobiles and electric household appliances. The curtailment of activity in these lines, far from solving the economic problem, would create unemployment and retard instead of accelerate economic progress.

The facts show conclusively that at no time during the period covered by our investigation were the people of the United States, taken as a whole, living on a higher plane than was justified by our productive power. On the contrary, at no time were our productive facilities fully utilized, and in none of the so-called periods of extravagance were we failing to replace and to expand our supply of productive capital. In the most conspicuous period of high living—in the twenties—there was not only a rapid growth of plant and equipment, but the funds, materials, and labor supply available would have permitted an even more rapid expansion had prospective profits warranted. Whatever may be true of par-

ticular individuals or groups, it cannot be said that the nation as a whole is living beyond its means as long as consumption is less than productive capacity and new capital is also being created. Instead of having too high a level of consumption our analysis has shown that the flow of funds through trade channels has been inadequate to call forth our full productive powers.

ARE WE SUFFERING FROM GENERAL OVER-PRODUCTION ?

Another common explanation of the source of our economic trouble is that production is excessive. It is observed that there is difficulty in disposing of goods in the market; and from this it is reasoned that it is necessary to balance production with consumption by reducing the former.

In fact, however, production has not year in and year out been in excess of actual consumption, notably in the period of the twenties when production was at its peak. There was no large accumulation of unsold inventories but rather a notorious growth of hand-to-mouth buying with accompanying low stocks of merchandise. The phenomenon which is called over-production made its appearance, as it ordinarily does, chiefly in the ensuing depression when consumers' purchases fell off faster than productive operations could be curtailed. Even in depression, this adjustment is effected after a comparatively short delay and over-production disappears the result is but lowered living standards and retarded economic progress.

In discussing this issue attention must be given to the question whether general over-production is indeed possible. The answer of the classical writers has always been in the negative. It is pointed out that while at any given time the production of certain commodities may be too

large, relative to others, there cannot be too large a production of all commodities. The reason is that goods are really exchanged against goods, each person's product being traded for products resulting from other people's productive activities. Production and demand are, therefore, basically the same thing: as long as any person produces more, he will have more with which to demand goods in general. It is concluded, therefore, that while there might be temporary maladjustments in production there could be no universal over-production—until such time as human wants are satiated.

This analysis, which runs in terms of *bartering* goods against goods, does not, however, completely dispose of the problem at issue. In a highly organized pecuniary society, demand manifests itself not through a direct exchange of commodities between the producers thereof, but through the medium of money payments. Under these circumstances, the aggregate demand for the basic necessities and conveniences of life depends not merely upon the total volume of goods produced by the various groups of people, but also upon the way in which the money income disbursed in connection with the productive process has been divided.

If the share of the income going to the masses is relatively small, the demand for consumption goods from this source will be restricted. While this deficiency in demand might conceivably be made up by the outlays of the balance of the population, the well-to-do classes—whose unsatisfied wants are less pressing—may elect to invest a large portion of such income. In consequence, there may at times be, and we have found that there is, an insufficient demand for consumer goods to absorb, at the prices prevailing, our full capacity to turn out

such commodities. While the actual volume of production may be adjusted to the existing demand for such goods, there nevertheless exists a general excess of productive capacity relative to existing *demand*.¹

CAN CURTAILMENT OF PRODUCTION SOLVE OUR DIFFICULTIES ?

This issue is complicated by the fact that it is related both to emergency and to long-run conditions. The provisions with reference to production quotas, restriction of working hours, and the control of new capital development, recently incorporated in national agricultural and industrial policies, have been in part conceived as a means of stimulating recovery through a better adjustment of supply and demand. But they are also rooted in the philosophy that technology has given us productive power beyond our wants and an excess of goods and services, which necessitates a curtailment of output and an enforcement of more leisure. Involved in the problem is also the idea that by controlling prices in different divisions of the economic system a better adjustment can be maintained than under conditions of free competition.

Whatever may be said in favor of reducing production as a means of meeting temporary exigencies, correcting maladjustments between different divisions of the economic system, or precipitating a price advance and motivating recovery, such procedures can in the end lead only in the direction of national impoverishment.

¹ Again it should be noted that we are not here considering the possibility that a better adjustment between supply and demand might be brought about through a reduction in the prices at which goods generally are offered for sale. This issue will be considered in a later chapter; we are here concerned only with analyzing the situation as it actually has existed.

They serve to prevent productive output and standards of living from rising.

In the light of the evidence that the standard of living of the masses at the period of our greatest productivity was below the minimum requirements for health and efficiency, the primary need is obviously not smaller aggregate production, but larger. What is required is a more effective utilization of our existing productive establishment and further expansion of productive capacity, to the end that all classes of the American people may attain the standards of living to which they aspire.

The vital significance of a correct understanding of this problem may be indicated by reference to the movement for a universal thirty-hour week. It is argued that the thirty-hour week would permit the absorption of those now unemployed, would generate recovery, and—by virtue of the maintenance and gradual increase of wage rates—would also insure to the working masses satisfactory standards of living. Such a curtailment in the length of the working week would amount to a 40 per cent reduction from the general level of approximately fifty hours existing in 1929. In the preceding thirty years of great technological advance the reduction had amounted to about 13 per cent.

A thirty-hour working week would mean a productive output, on the basis of full employment, substantially below the level of 1929. There has been no corresponding general increase in man-hour productivity, the most reliable estimate available indicating an increased productivity per worker between 1929 and 1933 of only 15 per cent.² Some of this increase in output per worker is undoubtedly attributable to temporary factors

² Frederick C. Mills, *National Bureau of Economic Research Bulletin* No. 53.

such as the spur to efficiency resulting from the fear of losing one's job when jobs are scarce, and the elimination during the depression of the older, less efficient, and less well-trained workers. The moment this less efficient personnel is re-employed, the *average* productivity of workers will show a decline. Only that increase which results from technological progress can be expected to remain permanent.³

Advocates of a short work week have recently set forth the general principle that *the working week should be shortened in proportion to increases in man-hour efficiency*. This principle is held not only to justify a thirty-hour week at the present time but also to call for progressive reductions of working hours in the future as an offset to increasing man-hour efficiency. It is pointed out that since production per worker increased between 1919 and 1933 by approximately 71 per cent, work "which took about 52 hours in 1919 [the actual hours at that time] can now be done in thirty hours."⁴

The adoption of such a principle would mean a freezing of standards of living in general at 1919 levels. The value of the total national production in 1919, on the basis of present prices, amounted to about 35 billion dollars, which is less, in per capita terms, than the low production of 1934. The program thus calls specifically for a level of national production not only below that in 1929 but below that obtaining in the depression period. Unwittingly, this says to the laboring classes:

You can reap henceforth no advantage from technological progress, other than greater leisure; you shall have no choice as

³ For a fuller discussion of this proposal, see Harold G. Moulton and Maurice Leven, *The Thirty-Hour Week* (pamphlet published by the Brookings Institution, 1935).

⁴ William Green, *The Thirty-Hour Week*, p. 32 (pamphlet published by the American Federation of Labor, 1935).

between more goods and services and more spare time; only in so far as you may be able to obtain a larger share of a *fixed total* of wealth produced will it be possible for you to enjoy more of the material comforts and conveniences of life.

Since income is received in the form of money it is easy to believe that progress is measured by the extent to which wages and salaries, interest and profits, are increasing. It is this money measuring rod which confuses the minds of those who advocate such means of expanding purchasing power as bonuses for soldiers and pensions for the aged—provided they cease to work. It is assumed that the increased flow of *money income* will give the masses proportionally higher standards of living. In this view only one side of the economic picture is kept in mind.

What is seen is an increasing flow of money income through trade channels, constituting a market demand for new production. *What is overlooked* is that the flow of goods coming from industrial establishments to meet this enlarged monetary demand is a reduced flow—reduced by the very measure which leads to the increase of monetary income. Regardless of the quantity of money moving into trade channels, the level of consumption achieved by the people is governed in last analysis by the volume of goods and services flowing from productive sources into consumptive channels.

In a similar way, any decrease in productive operations arising from the desires of farm organizations or business groups to obtain a higher money income by selling a smaller amount of goods at higher prices only serves to reduce the aggregate income of the nation. Similarly, also, the efforts of the government to raise prices through measures which curtail production will, if successful, result in a reduced volume of consumptive

goods and services for the enjoyment of the people. We have the illusion of higher *money* incomes, but the reality of lower *real* incomes.

ARE OUR DIFFICULTIES DUE TO ECONOMIC OLD AGE ?

We come finally to the pessimistic analysis of those who believe that the days of rapid economic progress lie behind rather than before us, that rates of advance which were possible during the years of national youth and adolescence have become difficult, if not impossible, as the country approaches economic maturity. Without stopping to examine how far such a biological figure may be applicable to the economic system, the logical foundation of the idea may be simply stated. It consists of two parts, the first of which relates to the numerical growth of population, and the second to the accumulation of capital in the form of physical plant.

As to population, it is pointed out that rapid growth in numbers, both through natural increase and by immigration, was one of the major factors in maintaining our rate of economic progress from colonial days until the very recent past. Now, through the intentional restriction of immigration and an unforeseen but sharp decline in rates of natural increase, our population bids fair soon to come to an almost stationary figure. Many people leap to the conclusion that this arrested growth involves the halting or at least retarding of our economic progress—as though size and well-being were interdependent.

Concern over the arrested rate of population growth is obviously based on the thought that what is required to call forth productive activity is expanding demands for such basic things as food, clothing, and shelter. But if all we need is hunger, a yearning for clothes, or more

housing room, we might well give first consideration to the unsatisfied wants of the existing population. All the 5,169,000 farm families and the 14,399,000 urban families with incomes less than \$2,500 constituted a potential market for these very classes of goods, not to mention the additional, though less exigent, demand of another quarter of our population whose incomes ranged from \$2,500 to \$4,500. All told, they make up 90 per cent of our people, and the supplying of their unsatisfied wants would furnish a quantity of employment and a volume of business activity fully adequate to the maintaining of prosperity and the achieving of economic progress without the addition of a single person to our population.

It is true, of course, that increase in number brings a larger demand in the way of mouths to be fed, bodies to be clothed, housing, and a vast array of services to be supplied. But these bodily needs constitute effective market demand only as the additional persons are able to equip themselves with purchasing power, that is, find employment and add to the out-turn of product. Thus we get substantially identical additions to both dividend and divisor, with no appreciable change in the quotient—that is, the standard of living. There is no inherent reason why a population of 150 million people in continental United States would maintain a higher average productivity and hence a better standard of living than could 125 million.⁶

⁶ Stated from the opposite point of view, those who look to expanding numbers as a source of gain could argue that this would come through the addition that they would make to productivity. But since, along with their productive power, they bring the same average of consuming demand, the ratio of well-being would, in the absence of some other factor, not change the average situation as to prosperity and progress. That such outside factors do sometimes enter into the situation is evidenced

The argument as to growth of physical plant runs in terms practically parallel to those which we have just indicated as to population. It is pointed out that during our past history we were faced with the task of equipping a virgin land with dwellings, public buildings, transportation facilities, engineering works, factories, machinery, and all the appurtenances of industrial life. Now, however, our country is settled, our plant is built, and the needs of the future are reduced to the more modest proportions of repair, maintenance, modernization, and replacement, with demands for additional construction reduced to such modest terms as to circumscribe the field of activity of what have in the past been some of the most important branches of our industrial life. It is sometimes pointed out that our last great period of prosperity and progress was due to the invention of the internal combustion engine and that the economic activity of that period rested primarily on the equipping of our people with automobiles, trucks, and tractors, and the construction of automobile factories, tire plants, and a system of hard-surfaced roads. Some people argue that unless some equally revolutionary invention can soon be brought forward, we are destined to continue on a plane of productive activity and economic well-being distinctly below the level of the twenties.

As a matter of fact, a very considerable part of the prosperity of this period was due not to the fact that the automobile was a new type of economic good but to the

in our own immigration history. Since the immigrant population consisted of a high proportion of adult males whose cost of birth and rearing to the productive age had been defrayed by the countries from which they emigrated and since they contributed to our economy their most productive years at relatively low wages—producing more than they consumed—a surplus of wealth was made available to other groups of our society.

fact that it was produced under conditions which (besides substituting gas engines for horses) brought economical and pleasant transportation facilities within the reach of the masses. This general issue will be discussed in later chapters of the book. But at this point it may merely be observed that in so far as the attainment of economic maturity reduces the need for new construction of capital goods, it releases a proportionate amount of our energy and resources for supplying on a liberal basis the consumption needs of the masses who have thus far been very inadequately supplied with the conveniences and refinements of life. Thus the fact that we have our plant built creates not the necessity for economic stagnation but the opportunity for economic progress in the only real sense, that is, higher average well-being for the masses of consumers.

CHAPTER V

IS WEALTH EQUALIZATION THE REMEDY

Among the various suggestions and plans which have been advanced for the solution of our economic difficulties the most arresting perhaps is that which calls for dividing up or sharing the *existing* wealth or income of society. In recent years various types of proposals have, in fact, been advanced for equalizing the fruits of industry, all of which are based on the assumption that there is an abundance available with which to provide for everyone the necessities, conveniences, and even the luxuries of life—if only it were evenly distributed. What light does the analysis which we have made throw upon this issue?

Current plans and proposals, it should be observed, seldom call for so complete redistribution as to bring about absolute equality. However, for the purpose of showing the maximum possibilities inherent in such plans, we shall in the following analysis indicate the results that might be attained by means of complete equality. Since current discussions sometimes relate to the sharing of *wealth*, and sometimes to the equalization of *income*, it will be necessary to give separate consideration to these conceptions.

EQUALIZING THE OWNERSHIP OF WEALTH

If we are to understand what would be involved in a redistribution of the wealth of the United States, we

must have before us a clear picture of the composition of this wealth. What sort of things, specifically, would have to be divided?

When it is stated that the wealth of the United States in 1929 was something like 460 billion dollars, the idea is commonly conveyed that this is the amount of money possessed by the people as a whole and that its redistribution would merely involve a transfer of funds. Thus, dividing 460 billion dollars by 125 million people would appear to give to each person about \$3,700, or nearly \$15,000 per family—a very tidy sum. The truth is, of course, that the 460 billion dollar figure is merely the valuation in money terms placed upon our farms, mines, railways, factories, stocks of goods, etc. It is these physical properties which constitute the real wealth of the nation.

No annual computation is made by any government agency covering the aggregate wealth of the nation. The United States Bureau of the Census has, however, from time to time made estimates of the national wealth, the latest being for the year 1922. These have in turn been used by individual statisticians as a basis for figures covering later years. The estimates which will serve our purposes most adequately are those compiled by W. R. Ingalls for the year 1929. These estimates, reclassified for purposes of simplifying the presentation, are shown in the table on pages 74-75. The figures are in billions of dollars. As a result of the depression the national wealth, as measured in current dollars, has doubtless shrunk from approximately 460 billions to less than 300 billions.

In examining this table it should be noted, first, that a considerable part of this wealth would not be available for distribution among the people because it is already publicly owned. For example, government lands

74 *INCOME AND ECONOMIC PROGRESS*COMPOSITION OF THE NATIONAL WEALTH, 1929^a

(In billions of dollars)

Agriculture	
Farm lands (about 6,000,000 units)	35.0
Farm buildings (about 6,000,000 sets)	13.0
Farm implements	3.3
Livestock	6.0
Irrigation and enterprises	0.5
Forests (450,000,000 acres)	10.0
Mineral properties	
Mines and quarries	5.0
Petroleum—leases, tanks, pipe-lines, tank cars, refineries	6.0
Non-farm residences	
Houses and lots in small towns (about 14,000,000)	42.0
Houses and lots in large cities (11,000,000)	55.0
Hotels	5.0
Business buildings	
Offices, clubs, warehouses, repair shops, garages, etc.	25.0 ^b
Stores (about 1,550,000)	10.0
Manufacturing	
Factories (about 206,000)	25.0
Machinery and tools	17.5
Meat packing plants	0.5
Inventory and working capital	10.0
Inventories (excluding manufacturing)	
Raw materials in process, in transit, in warehouses, etc.	35.0

^a For discussion of these data, see *The Formation of Capital*, pp. 185-89.

^b Ingalls' estimates for this item is 45 billions. He makes an allowance, however, of 20 billion dollars for duplication in the classes—business buildings and non-farm residences—and deducts this entire amount from the business building category.

Transportation	
Steam railways and cars	32.1
Electric railways	5.3
Automobiles (26,500,000)	5.3
Highways, bridges, and canals	2.5
Merchant marine	1.5
Yachts, motor boats, and aircraft	0.6
Public utilities	
Telephone and telegraph	5.0
Light and power plants	10.3
Gas lighting plants	5.0
Water works (private)	0.9
Tax exempt properties	
Government lands and buildings, colleges, churches, museums, etc.	22.6
Naval vessels	1.5
Gold and silver	5.2
Foreign investments (net)	10.0 ^a
Chattels and personal effects	
Clothing, jewelry, household furnishings, etc.	48.0
Total	<u>460.0</u>

^a Exclusive of government war debts.

and buildings, colleges, churches, museums, etc. (22.6 billions), and naval vessels (1.5 billions), belong to the public. Highways, bridges, and canals (2.5 billions) are public properties, as are also some of the electric railways and public utility enterprises. The greater part of the gold and silver supply is in the vaults of the Treasury.

In the second place, it will be observed that it would be impossible to make a physical division of many of the properties enumerated. Private automobiles, yachts, and motor boats, household furnishings, jewelry, and

personal effects, together with stocks of finished goods in the hands of merchants might in some rough fashion be divided up—though the issue of who gets what would not be readily solved. Livestock might also be divided so as to give every resident of a city apartment a cow, a pig, or a flock of chickens. But it would hardly be feasible to divide railway tracks, telephone lines, a power or a gas plant, a factory, a warehouse, a pipe-line, a mine, or the Empire State building. And it would be difficult to redistribute wealth in the form of farm lands and buildings or city houses and lots in such a way as to enable everyone to have his fair share.

If the division of wealth idea is to have any real meaning, it must obviously be conceived in terms of dividing claims to ownership of properties rather than the actual properties themselves. Could not the shares of stock of existing corporations be transferred from their present owners to the masses? And in the case of non-corporate properties, could not the form of ownership be changed so as to permit stock to be issued to the public generally? It will be readily apparent that if such a plan is to be administered fairly, with a view to giving equality in ownership to everyone, it must be done by the government, and on a wholesale basis. That is to say, it would be necessary for the government to pool all the wealth of the country and then issue ownership certificates to all the people, giving each his proportionate share. This would involve confiscation procedure, since it would obviously be impossible to levy and collect taxes equal to 100 per cent of the value of railway properties, factories, mines, farms, or even household effects. As a prerequisite a constitutional amendment would thus be required.

But let us assume that the procedure could be carried

out and that everybody had ownership certificates to an equal amount of wealth. The certificates would be of value only as the real wealth—farms, mines, factories, etc.—lying back of them produced *income*. The ability of each individual in succeeding years to obtain the comforts and luxuries of life would depend upon the productivity of the properties against which the certificates were issued. Whether the productivity, or income-producing power, of the wealth of the nation would be maintained under this plan would depend upon the effects of such a plan upon work *incentives* on the part of both the rural and urban population, and upon the efficiency of the changed business organization and management. It will be observed that it would no longer be possible for individual business men to own and operate large establishments of their own. Indeed the very process of pooling the national wealth would inevitably involve complete socialization of productive operations—with government management not only of all public utilities but of all factories, stores, mines, and farms as well.

Merely to indicate the character of the issues involved in sharing the wealth is to reveal its impracticability. The only redistribution that merits serious consideration is the redistribution of *income* rather than of wealth. To this more significant question we now direct attention.

THE EQUALIZATION OF INCOMES

If we are to see precisely what would be involved in redistributing existing income, we must have before us the facts as to the amount of the national income and the way in which it is actually distributed. For the purpose in hand, we shall use the figures for 1929 when our income

was at the maximum. The value of the goods and services produced in that year was \$80,882,000,000.¹

If the entire national income from productive operations were divided equally among the population, it would yield about \$625 per capita, or the equivalent of approximately \$2,500 per family. This figure represents the maximum level of satisfactions that might be enjoyed if the income were divided on the basis of absolute equality. This, as our studies have indicated, is not adequate to provide the necessities and comforts requisite for a satisfactory standard of life.

In discussions of the redistribution of income it is ordinarily assumed that the problem would involve merely a shifting of income as between high salaried officials and receivers of investment income on the one hand, and the wage earning population on the other. This is, however, but one phase of the problem, for there are wide differences in the incomes received by the groups which constitute the working population as a whole. The number of persons listed by the census of 1930 as gainfully employed wage earners, salaried workers, and business enterprisers was 47.1 millions.² They may be classified as shown in the table on page 79.³ A large number of people engaged in clerical occupations, in farming, and in small scale distributive and service activities have incomes above the average. Even among the wage earning groups there are wide variations in the amount of in-

¹ For the trend of income from 1922 to 1934, see chart facing p. 22. This figure of \$80,882,000,000 does not take account of income from speculative profits or the imputed income derived from the use of owned homes or durable consumption goods in the hands of consumers which had been produced in preceding years.

² This figure does not include unpaid family workers in agriculture.

³ Corporations are not included, since the workers which they employ belong in the wage earning class and the officials and executives in the salaried group.

Wage earners:	Millions	
Agriculture, forestry, and fishing	3.0	
Industry and trade, including mining	19.2	
Domestic and personal services	4.3	26.5
<hr/>		
Salaried workers:		
Executives and professional	2.3	
Foremen and lower managerial, etc.	1.7	
Clerical	7.5	11.5
<hr/>		
Non-corporate enterprisers:		
Farmers	6.0	
Merchants	1.8	
Professional	0.6	
Miscellaneous	0.8	9.2
<hr/>		
Total		47.2

comes received. Skilled workers naturally receive higher wages than unskilled, and well organized labor groups receive more for their work than poorly organized groups. Many families of skilled workers in 1929, notably skilled mechanics, machinists, typographers, railway engineers, and hosiery mill operatives, received incomes in excess of \$2,500. The establishment of uniform incomes would obviously involve a reduction in income of any laborers having incomes above the average. Similarly, there are several million families in the higher clerical, technical, and professional classes whose incomes would have to be appreciably reduced.

Among the farm population income varies widely in different sections of the country. The income of the farmers of California was ten times as great per capita as that of the farmers of South Carolina, and the farmers of Massachusetts and Rhode Island received about three times as much per capita as those of North and

South Dakota. A completely equal distribution of income would involve the reduction in the income of the farmers of these states and also of the states of Nevada, New Jersey, Washington, and Wyoming. The wide variations in the amount of farm income received reflect, of course, the relative productivity of the different areas, and in some measure, perhaps, the industriousness of the population. If uniform incomes were to be established such factors would have to be ignored.

In this connection it will be well to note also the extent of the variations in the income of the entire population by geographic sections. The per capita income in the New England, Middle Atlantic, East North Central, and Pacific Coast states is very much higher than that of other divisions of the country. The range runs from \$1,107 per capita for the Middle Atlantic states as a group to \$344 in the East South Central states—Kentucky, Tennessee, Alabama, and Mississippi. The extremes by states vary from \$1,365 for New York to \$261 for South Carolina. These variations are attributable in part to the differing numbers of people in the high income groups, but they reflect also variations in the general level of productivity prevailing in different sections.

This analysis of the existing distribution of income among the various classes by geographical divisions is significant simply for the light it throws upon the complexity of the problem and the economic issues involved. To bring about a completely equal division of income would require taking money away from certain wage and farm groups as well as from salaried officials and receivers of interest and dividends, and transferring it to numerous types of people in the lower income levels, including farmers, petty tradesmen, wage earners, clerical workers, domestic servants and others engaged in the

rendering of personal services. Such a comprehensive redistribution could not be accomplished through a modification in the disbursements made by private enterprise. It would have to be brought about through the intermediation of the public treasury and would obviously require an administrative organism of vast complexity. The conclusion is inescapable that a redistribution of income so as to provide complete uniformity would be administratively impracticable.

The only real possibility for effecting any substantial redistribution of income lies in the absorption and transfer of income now received by high salaried officials and by investors from the ownership of property. If we are to ascertain the extent to which a redistribution of *existing income* might raise the incomes of the masses, we must consider the magnitude of the income now received by the high salaried and investing groups.

In 1929 the income of the United States was divided among the various groups as shown by the table on page 82.

If the salaries of corporation officials and the income derived from investment were to be completely absorbed for the benefit of the masses, the amount available would be less than 18 billion dollars, or about 22 per cent of the total. This would be equivalent to about \$140 per capita—\$560 per family—for the population as a whole. In view of the fact that corporation officials would have to be paid some salaries in any event and that a considerable amount of the items of interest, rents, and royalties accrues to people having moderate incomes, it is evident that the amount available for redistribution would be appreciably less than the figure just given.

The truth is that the actual increase in income that might be realized by the masses would be much smaller

82 *INCOME AND ECONOMIC PROGRESS*NATIONAL INCOME FROM CURRENT PRODUCTION
BY MAJOR GROUPS OF CLAIMANTS, 1929*

Claimant and Type of Income	In Millions of Dollars	As a Percentage of Total
Total.....	80,882	100.0
Employees.....	53,493	66.1
Wages.....	34,149	42.2
Pensions, compensation, etc.....	860	1.1
Salaries of corporation officials.....	3,337	4.1
Salaries of other employees.....	15,147	18.7
Individual enterprisers.....	12,951	16.0
Professional.....	2,035	2.5
Agricultural.....	5,137	6.4
Non-agricultural.....	5,279	6.5
Miscellaneous.....	500	0.6
Investors.....	14,438	17.9
Interest, domestic.....	4,514	5.6
Dividends, domestic.....	5,964	7.4
Interest and dividends, foreign.....	565	0.7
Rents and royalties.....	2,488	3.1
Corporate savings.....	907	1.1

* From Maurice Leven, Harold G. Moulton, and Clark Warburton, *America's Capacity to Consume*, p. 165.

than is suggested by any of the figures which we have been considering. No one—apart from those who favor Communism—has ever seriously suggested anything like so extensive a redistribution of income as that outlined above. As already indicated current plans and proposals, including those of the Socialist party, are of a much less extreme character.

It is evident from the foregoing analysis that the provision of reasonable standards of living for the masses of the people cannot be achieved by mere redistribution of the *existing* wealth and income of society. The amount to be divided is simply not large enough to afford the desired level of well-being. At the most, a few hundred dollars might thus be added to the incomes of the families constituting the great mass of the population.

INCREASING INCOMES THE PRIMARY OBJECTIVE

If we are to achieve the goal of satisfactory standards of living for everyone, the first requirement is to increase progressively the total amount of the income to be divided. Only as the aggregate national income increases from 80 billions a year to 100 billions, to 150 billions, to 200 billions, will the goal of a high standard of living for everyone be attained.

The distribution of income from year to year is of *primary* significance not for its momentary effects upon the well-being of the masses, but for its possible cumulative effects in promoting a fuller utilization of our productive facilities and a consequent progressive increase in the aggregate income to be available for distribution. We are not interested in maintaining a static situation in which the total income, even if equally distributed, would be altogether inadequate; we are interested rather in producing a dynamic situation in which increasing quantities of newly created goods and services would become available for everyone.

In the ensuing chapters we shall discuss several alternative means whereby the goal in which we are interested may possibly be realized. We shall discuss, first, the use of taxation as a means of accomplishing the ends in view, and the turn to a consideration of more direct methods, such as raising money wages and lowering commodity prices.

PART II
LINES OF PROGRESS

CHAPTER VI

TAXATION AND PUBLIC ENTERPRISE

Our diagnosis of the economic system has revealed that the way in which the income resulting from the nation's productive activities is divided among the various groups which comprise society lies at the root of our difficulties. Inadequate buying power among the masses of the people appears to be fundamentally responsible for the persistent failure to call forth our productive powers. It has been shown, also, that the standards of living desired for the American people as a whole can be attained only if we can somehow greatly increase the national output of goods and services. Our problem is to determine whether the flow of the income stream to the various groups in society can be so modified as to expand progressively the effective demand for goods and thus evoke an ever greater volume of production—which would mean a steadily augmenting aggregate income to be divided.

It may as well be stated here as later that there is no simple formula, the application of which will forthwith solve all our difficulties and usher in an economic paradise. The economic system is of great complexity and its improvement requires understanding and cooperation on the part of both business and government. We believe, however, that the system can be made to function with increasing effectiveness and that the rate of economic progress can be greatly accelerated. In the

ensuing chapters we shall consider a number of possible lines of attack and indicate the directions in which economic progress might most readily be achieved.

One of the most frequently discussed methods of bringing about a better distribution of income is the use of the machinery of taxation. The transfer of money by this ready and convenient means from those who are amply supplied to those who possess relatively little seems an obvious and natural answer to our problem. It is therefore appropriate that we begin the discussion of possible lines of progress by analyzing this method of accomplishing the desired results.

Since the fundamental requirement for economic progress is an increase in the aggregate production of goods and services, the merits of the method of diverting a larger portion of the money income through Treasury channels must be tested by its effects upon production. If such a method leads to a larger aggregate national output of goods and services—of a character which society desires—it will have achieved the hoped for results. If, on the other hand, it does not increase production as much as it might be increased through private enterprise, or if it does not give us the kinds of goods and services of which we stand in greatest want, then this method must be regarded as failing to reach the heart of the problem. We shall keep this basic test in mind throughout the following discussion.

TAXATION FOR THE SUPPORT OF IDLE PEOPLE

Consideration must first be given to the effects of the use of funds derived from taxation for the support of unemployed people. The answer here is simple. In periods of acute unemployment, the use of public funds

for the relief of people who cannot find jobs is unquestionably essential. But the permanent support of any considerable portion of the population in idleness is clearly undesirable, both economically and socially. When people are maintained in idleness they do not contribute to the production of goods and services. In addition to the waste of productive energy, there are also unfortunate social consequences in the form of the loss of independence, self-respect, spirit, and the desire for individual achievement upon which economic progress so largely depends.

The same argument stands against proposals to raise the incomes of the masses generally—thereby providing more adequate purchasing power for consumption goods. Unless the people who receive such funds render productive service in exchange, the real income of the nation will not be increased. Giving people something for nothing, moreover, tends to weaken rather than strengthen habits of industry.

The result is essentially different when public funds are employed to provide training for people temporarily out of employment, or to prepare the youth of the country for effective contributions in subsequent years. In such cases dividends in the form of added productivity may in due course be realized.

Insurance against the vicissitudes of life and against want in old age may also be justified as permanent policy. The provision of economic security must, however, be recognized as negative rather than constructive in character. The amelioration of want or suffering which it brings is beneficent; but it does not directly call forth added production of goods and services. In other words, it is not a device for progressively raising standards of living, but a means of mitigating the effects of existing

insecurity. What we wish, obviously, is an economic system under which the amount of social insurance required would be enormously reduced or altogether eliminated.

PUBLIC ENTERPRISE AND EMPLOYMENT

When money derived from taxation is used to provide employment in connection with public enterprises, we have a very different situation. Since work is performed, wealth is created: we have something to show for the money expended. This use of the taxation method therefore requires careful consideration.

The belief has come to be widely held in the United States that the only solution of the unemployment problem lies in the development of extensive public enterprise to supplement private business. That is to say, public works are now regarded by many as essential not only in time of acute depression but as a permanent means of providing employment. This view is rooted in the conception, to which we have so often referred, that, owing to the great increase in technological efficiency and productive capacity in recent times, it does not require the full utilization of our labor resources to supply all of our ordinary consumptive wants. It is the same thought which underlies the program for shortening the working week, for curtailing production schedules, and for restricting the rate of new capital construction. Employment requirements in private industries, it is urged, have become so restricted as to necessitate a permanent policy either of spreading the private work available or of providing additional work through public enterprise.

If we are to see precisely what is involved in this problem we must recall the various purposes for which public funds have ordinarily been utilized. Such expenditures

fall into two broad classes. First, there are the ordinary operating expenses of the legislative, administrative, and judicial branches of the government. While some employment is in the nature of the case afforded by such operations, the goal should be to render the essential services required with the minimum number of employees.

Second, and more important from the point of view of providing employment, there are the outlays for various services required by the people which, it is believed, can be furnished more satisfactorily by public than by private enterprise. The most important of these (aside from the Army and Navy) are the postal service, the lighthouse service, public schools, teachers' colleges and universities, highways and waterways, bridges, sewers, waterworks, irrigation enterprises, public parks and buildings, forests and reclamation projects, and, to some extent, gas and electric light and power plants.

In some of these cases the only public employment afforded is in connection with the construction and maintenance of physical properties as, for example, in the case of highways, waterways, and irrigation enterprises. In other cases the employment is afforded more largely in connection with operating services, as in the case of the public schools, the postal system, and the Army and Navy.

In order to gauge the real importance of government enterprise from the standpoint of employment, it will be useful to have before us precise information as to the magnitude of government outlays in connection with such undertakings. We shall consider first the situation in a normal year like 1929, and, second, in a year of great depression like 1934.

1. *Public employment in 1929.* We present on the following page the figures for public expenditures classi-

PUBLIC EXPENDITURES, 1929

I. Federal^a

Governmental costs	
Cost of operating the government proper.....	\$1,149,565,246
Other governmental costs	
Interest on public debt.....	679,696,482
Pensions, allowances, etc.....	715,539,138
Grants-in-aid to states, etc.....	111,494,896
Government territories and dependencies.....	11,347,702
Public works.....	83,388,416
Miscellaneous.....	3,474,633
Special business enterprise.....	132,166,901
Total governmental costs.....	\$2,886,673,414
Non-governmental costs	
Reduction of debt.....	673,204,717
Investments.....	31,447,685
Total non-governmental costs.....	\$704,652,402
Total federal expenditures.....	\$3,591,325,816

II. State and Municipal^b

	Operation and Maintenance	Capital Outlays
Highways.....	\$ 387,740,531	\$ 912,849,471
Education.....	1,260,871,064	218,976,609
Public service enterprise.....	176,831,575	161,792,372
Conservation of health and sanitation..	224,123,170	120,902,873
Recreation.....	73,656,673	67,706,170
Charities, hospitals, and corrections....	338,877,920	64,475,879
General government.....	277,028,690	35,004,310
Protection to person and property.....	449,570,817	33,211,536
Development and conservation of re- sources.....	69,558,604	6,698,990
Miscellaneous.....	152,148,817	4,453,221
Total.....	\$3,410,407,861	\$1,626,071,431
Payments for interest.....		\$459,827,468
Total State and Municipal costs.....		\$5,496,306,760

^a W. F. Willoughby, *Financial Condition and Operations of the National Government, 1921-30*, p. 112.

^b Compiled from *Financial Statistics of States, 1929*, pp. 74-99; and *Financial Statistics of Cities, 1929*, pp. 266-375.

fied in such a way as to show the amount of employment afforded in connection with construction activities. The first part of the table shows the principal purposes for which federal funds were expended in the fiscal year 1929, and the second part the expenditures of states and of cities in excess of 30,000 population.

Excluding operating expenses proper, interest, pensions, debt reduction and investments, the expenditures of the federal government in 1929 were approximately 1.3 billion dollars. Even when the "capital outlays" of state and municipal governments are added, the total public expenditures in connection with construction activities amounted to only about 3 billion dollars. This figure may be compared with expenditures by private enterprise in the same year of over 73 billion dollars. It should be pointed out that such expenditures do not provide a *net increase* in employment. The additional employment is measured by the extent to which the volume of services performed is greater under government auspices than it would be under private enterprise.

2. *Public employment in 1934.* Since the beginning of the great depression, extensive public work programs have been undertaken and others are in process of formulation designed to provide employment for the millions of people who are out of work. It is hoped that these expenditures will promote recovery and thus lead to the absorption of a substantial part of the unemployed in private enterprise. But it is also assumed by many government leaders as well as by private citizens that government enterprise in the construction of public works must, because of the limitations of private enterprise, continue on a greatly expanded scale.

In the light of developments during the depression period it is important that we have before us a statement

showing the magnitude of the federal government's expenditures which were of an employment creating character in the fiscal year 1934. The following figures represent the outlays of emergency agencies and do not include the expenditures of regular departments. A large part of the public work activities of the departments was, however, financed out of these emergency appropriations.

The outlays of the Public Works Administration in 1934 for loans to railroads, states, and municipalities were \$504,142,000, of which only \$149,335,000 went for construction activities. For the Civil Works Administration and emergency conservation work the amount was \$731,946,000. In addition, the Reconstruction Finance Corporation made loans for capital expenditures for self-liquidating projects, for repair of flood damages, etc., amounting to \$67,431,000.¹ Thus the total of these emergency expenditures by the federal government in employment creating activities was less than one billion dollars. This figure may be compared with disbursements through private enterprise aggregating more than 40 billion dollars.

At \$4.00 a day, or \$1,200 a year, this sum would provide regular employment for 1,250,000 workers. Assuming that in the light of accumulating experience and with better organization, public expenditures for employment purposes might be increased to three or four billion dollars, employment would be given to from two and a half to three million people out of a total working population of approximately 49 million people.

¹ The bulk of the advances by the RFC was for purposes of financial relief to financial institutions which provided no direct employment. Such outlays amounted to \$1,624,047,000. For more detailed data, see *The Formation of Capital*, p. 129.

The necessity of extensive public enterprise as a means of providing employment in a period of great emergency, may be granted but it does not necessarily follow that public expenditures for purposes of private employment should not be conceived as a part of permanent policy. Granting that work relief is superior to relief without work, we must still squarely face the question whether we have reached a stage in our economic evolution which requires a continued expansion of public enterprise for purposes of providing employment that cannot be furnished through private enterprise.

We have shown in our studies of consuming and producing capacity that the consumptive desires of the American people for the ordinary necessities and conveniences of life have never been fully satisfied, and that existing productive capacity, with full employment, is not adequate to supply satisfactory standards of living for the American population as a whole. There is no menace of overproduction in the sense that a superfluity of goods and services can be supplied.

If, therefore, public works are to be justified as a permanent policy, they must be justified on the ground that the goods and services which would thus be produced would yield to the American people greater satisfactions than they would derive from the goods and services which might be produced with the same expenditure of funds and energy through private enterprise.

What the people desire first and foremost is not additional public parks or monuments, important though they may be, nor yet duplicate transportation facilities in the form of added highways, waterways, or railways as the case may be. Similarly, if the people had free choice in the matter they would clearly not express themselves in favor of renovated forests and improved land-

scapes as against better food, clothing, shelter and more necessities and conveniences in the home. Without in the slightest degree deprecating the social utility of many of the work enterprises that have been undertaken during the depression, one may nevertheless fairly conclude that such enterprises cannot be justified as permanent policy unless it can be shown that the satisfactions thus rendered to the people are greater than might be rendered through increasing the output of the basic necessities and conveniences of life.

This issue has not been faced because of the prevailing tendency to confuse money purchasing power with real income. What has been seen is that public employment gives wages to workers; what has not been observed is that the work performed does not create additional goods and services of the kind which the workers wish to purchase in the market. In a period of depression the increased purchasing power may possibly stimulate private enterprise; but conceived as permanent policy public work enterprises provide employment but do not increase the available supply of ordinary consumption goods.

To make the problem simple and concrete, let us assume that six or eight millions of unemployed were put to work in constructing *unnecessary* public works. Six or eight billion dollars of wage disbursements would be made; but no additional food, or clothing, or automobiles, or household furnishings would be available. Prices might rise but standards of living would remain the same. To the degree that the public works constructed are useful and enhance productivity it is obvious that positive gains would result. Many types of public works are, of course, of this character, notably—at this particular juncture—reclamation and conservation enterprises, street and sewer improvements, the provision of better

school buildings and facilities, etc. It remains true, however, that these additional public services do not as a rule meet primary wants as would the production of additional food, clothing, and other necessities and conveniences.

We should not wish to be understood as being in any sense opposed to public enterprise as such. Some types of enterprise can undoubtedly be better performed under government than under private auspices, as, for example, the postal service. Moreover, with the passage of time the range and character of such enterprises may no doubt be expected to increase. It is possible also that certain types of business which have hitherto been regarded as essentially private in character, and which minister directly to the satisfaction of the basic wants of the people, may be performed more economically and efficiently under government than under private auspices. In most countries, for example, the government has taken over the management of all forms of transportation facilities in the belief that, all factors considered, such service can be rendered more satisfactorily by the government than by private enterprise. The provision of houses through government enterprise is another field in which experimentation is now being conducted in many countries; and it is possible that government enterprise in the future may become the means of supplying so primary an item in the standard of living of the masses as housing accommodations.²

² In contemplating the importance of housing from the standpoint of employment and national income, it will be helpful to know that in 1929 the total national outlay for residential construction, as gauged by contracts awarded, in the United States aggregated only 1.9 billion dollars, as compared with a total national production of about 80 billion dollars. The figure for residential construction includes both farm and urban houses, residential apartment buildings, and residential and other hotels.

The question as to precisely where the field of private enterprise leaves off and the field of public enterprise begins is not one that can be decided on the basis of any formal argumentation. Each case must in the light of experience and of special conditions be decided on its individual merits. We are not interested at this place in endeavoring to answer this question with reference to any particular form of public works. Our purpose is simply to point out that unless and until the government does undertake to provide on an extensive scale such primary requirements for the satisfaction of human wants as shelter, food, clothing, etc., we shall not be reaching to the heart of the problem with which we are concerned.

PUBLIC ENTERPRISE AND INCREASING TAX BURDENS

In appraising the possibility of providing permanent employment by means of public enterprise, consideration must also be given to the effects of such undertakings upon taxation requirements in the future. Many of the public enterprises yield no revenues to the government and hence the full cost of operation and maintenance has to be met from general taxation. Other enterprises yield some income but not enough to meet all of the costs involved. Still others, as, for example, the Panama Canal, toll bridges, and municipal public utilities, are entirely self-sustaining. Data are not available with which to show (for federal, state, and local government enterprises as a whole) the precise extent to which public enterprises impose a continuing burden upon taxpayers for costs of operation and maintenance. But in view of the fact that in the past comparatively few of the important projects have been wholly self-supporting, while many of them have yielded no revenues whatever, it is safe to say that the burden imposed upon the general taxpay-

er has become of substantial magnitude. Moreover, it increases cumulatively as new public enterprises are completed. It should be borne in mind, also, that in the case of most if not all public enterprises no taxes are levied on the physical properties as is done with private enterprises. In consequence, as the proportion of tax-free public properties increases, the burden of the charges which must be levied against the general taxpayer becomes proportionally heavier.

If, in the future, employment is to be provided in ever increasing proportion by means of public enterprise, we must either adopt a policy of constructing only self-liquidating enterprises or face the alternative of steadily increasing tax burdens on a relatively stationary volume of private business. That is to say, if we accept the view that private enterprise cannot be expected to expand materially in the future and that we must accordingly look to public enterprise as a means of providing employment for a steadily increasing percentage of the population, we must levy steadily increasing taxes upon private business operations or else adopt the definite policy of making public enterprises carry their own costs.

This issue has never been squarely faced in this country. The reason is in part that until recently the magnitude of the problem had not assumed sufficient proportions to make the matter one of real significance. In part also the explanation is to be found in the ingrained idea that the government is a sort of Santa Claus. In view of the vast credit resources at the disposal of the government, it is indeed possible to finance public enterprises for a considerable period of time without having to face the ultimate costs involved. But in the end the accumulating indebtedness necessitates the imposition of heavier taxes. The only alternative, and this is infinitely worse,

is a complete breakdown of government credit, ensuing inflation, and eventual disintegration of both public and private finance.

In emphasizing so strongly the limitations upon taxation as a means of providing permanent employment and raising standards of living, we may perhaps have given the impression that we accord no place to taxation in a program of economic readjustment. To guard against such a conclusion we now wish to emphasize that there are significant long-run possibilities of using the taxation machinery as a means of expanding the volume of free services furnished to the public as a whole.⁹

For many years federal, state, and local governments have raised taxes as a means of providing recreational and educational facilities, and, to some extent, public health service. Parks and playgrounds, schools and text books have been regarded as important, not because they provide employment and give purchasing power but because they yield to the public generally important satisfactions and services which they might not otherwise be able to obtain. As the years pass, the furnishing of such services out of funds derived from taxes might well be made very much more important than has been the case heretofore. The field of opportunity is here very great and the services rendered are of a fundamentally important character.

The extent to which at any given time public funds may be raised for the furnishing of free services depends, of course, upon the ability of the government to finance

⁹ Attention should also be called to the fact that the forms of taxes levied have an important bearing on income distribution—or rather upon the purchasing power of the groups affected. The incidence of the present tax system in relation to the problem with which we are concerned thus constitutes a fruitful field for further study.

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them in view of other fiscal requirements. At the present juncture it is clear that, whatever promise the future may hold, no great expansion along these lines may be expected for some years to come. The financial exigencies arising out of the depression have been of such magnitude that the great problem for the next few years will be to maintain financial equilibrium.

CHAPTER VII

RAISING MONEY WAGES AS A ROAD TO PROGRESS

The most obvious method by which the income of the masses might be expanded is the increase of money wages. This is the method which has been most extensively discussed in recent years; it is the method which has been steadfastly pursued by labor organizations in this and other countries; and it is the method which has been officially experimented with under the auspices of the National Recovery Administration.

In contrast to the taxation method, which seeks to *re*-distribute money income *after* it has flowed from the productive process to the hands of individuals, the wage increase method strikes at the source. By diverting a larger share of the earnings of business to the employee group, it modifies the income stream at its place of origin. This direct method of effecting a better distribution of income obviously merits thorough consideration.

The economic problems arising out of the use of this method must be analyzed in relation to two essentially different objectives. This means of increasing mass purchasing power has been invoked in periods of depression as a device for stimulating recovery; and it has also been advanced as a method of promoting continuous or long-run progress. The problems involved in the first of these purposes may be illustrated by reference to experience under the NRA, which had not only a long-run reform purpose but an immediate objective of promoting recovery.

INCREASED MONEY WAGES UNDER THE NRA

The theory underlying the wage-raising program of the National Recovery Administration was that an increase in money wages throughout industry would expand the purchasing power of the masses and thus call forth a larger volume of production which would automatically absorb unemployment. The expanding employment would in turn mean a further increase in wage disbursements, swelling aggregate purchasing power still more, and thus progressively promoting recovery. The increase of money wages was thus a device, not only for bringing about a better *momentary* division of the national income, but also for promoting—through business recovery—a cumulative expansion in the volume of income to be distributed.

It was early recognized by those responsible for the administration of the Recovery Act that an increase in prices would be an inevitable accompaniment of the advancing wage costs. But it was hoped that price advances could be restrained, thus insuring to wage earners the benefit of a lag in price adjustments. A clear statement of the theory is found in the President's statement issued at the time of the passage of the Recovery Act: "We cannot hope for the full effect of this plan unless, in the first critical months, and, even at the expense of full initial profits, we defer price increases as long as possible."

Notwithstanding the fact that price advances were expected to lag behind wage increases, it was not intended that profits should be reduced; on the contrary, profits were expected to be enlarged because of the increasing volume of business. The increased *wage* costs, it was held, would be offset by the lower *unit* costs resulting from the expanded output—and this would spread overhead charges over a larger total volume of production.

From a theoretical point of view this argument is sound. Industries which were operating during the depression at 20, 30, or 40 per cent capacity found it impossible to earn profits because of the burden of overhead charges—no matter how low the wages. If output could be expanded to 50, 60, or 80 per cent of capacity, substantial profits might be earned even though wages were increased more rapidly than prices. It is not true, as has sometimes been contended, that an increase in wages necessitates a corresponding reduction in profits. Both wages and profits may increase simultaneously when business is expanding—the expanding aggregate volume of money disbursements being derived from an increased use of bank currency. This is what always happens in a period of general business expansion.

In practice, however, certain difficulties were encountered which proved insurmountable. Granted that profits at the end of the year might have been enlarged as a result of the expanding volume of business, it was none the less necessary for business men to *advance* the funds required for enlarged wage outlays many weeks or months before increased sales could be expected. How to procure the money with which to meet these advances was the practical question which each individual business concern had to face.

Corporations which had on hand substantial quantities of idle working capital—and there were many of these—would find no difficulty in meeting the initial advances required. Other companies—and there were also great numbers of these, particularly among the smaller business enterprises—would have to borrow the required money from banks on a short-term credit basis. Where this necessity existed, the carrying out of the program obviously depended upon the co-operation of bank-

ing institutions which had a responsibility to their depositors as well as to their borrowing customers.

Had all business enterprises been able to finance the wage increases either with their own or borrowed funds, the program might conceivably have been carried out without any corresponding increase in prices. However, many business concerns were not in this favorable financial position and the NRA administration possessed no authority to compel private bankers to finance the experiment with depositors' money.

No machinery had been devised by the NRA—if indeed it could have been devised—with which to prevent business men from seeking to find a way out by means of a prompt increase in prices. Accordingly, the practical alternative adopted was to recoup the wage advances by virtually simultaneous increases in prices. In this connection it should be noted that substantial gains were also realized from marking up the price of goods which had been purchased prior to the inauguration of the establishment of the codes.

While the Recovery Act was passed in June, it was not until a month or so later that extensive increases in wage rates occurred. Meanwhile, in anticipation of higher costs and with a view to "beating the gun," "advance purchasing" developed on a large scale; and this naturally led to an immediate increase in prices. Thus at the outset, instead of price increases lagging behind wages, the reverse was true. While the situation varied widely in different industries, in the majority of instances price increases ran ahead of wage increases.

The effects upon the purchasing power of laboring groups varied widely in different lines of industry. Hourly wage rates for some classes of employees were increased more than living costs, while for others the cost

of living advanced more than wages. The wage advances were concentrated largely in certain fields—chiefly mining, manufacturing, trade, and some of the service industries. More than a third of all the employees in the country were, however, exempt from the jurisdiction of the NRA, and all these were adversely affected by the rising prices.¹

The purchasing power plan of promoting recovery was thus thwarted. While price increases might theoretically have been retarded without reducing eventual profits, the fact remains that without an effective means of controlling prices, this plan could not be expected to work. Increased wages enter directly into the cost accounts of business corporations. Since the plan was imposed at a time when a majority of business corporations were already confronted with deficits,² it was practically inevitable that prices would be raised as a means of recouping the added outlays.

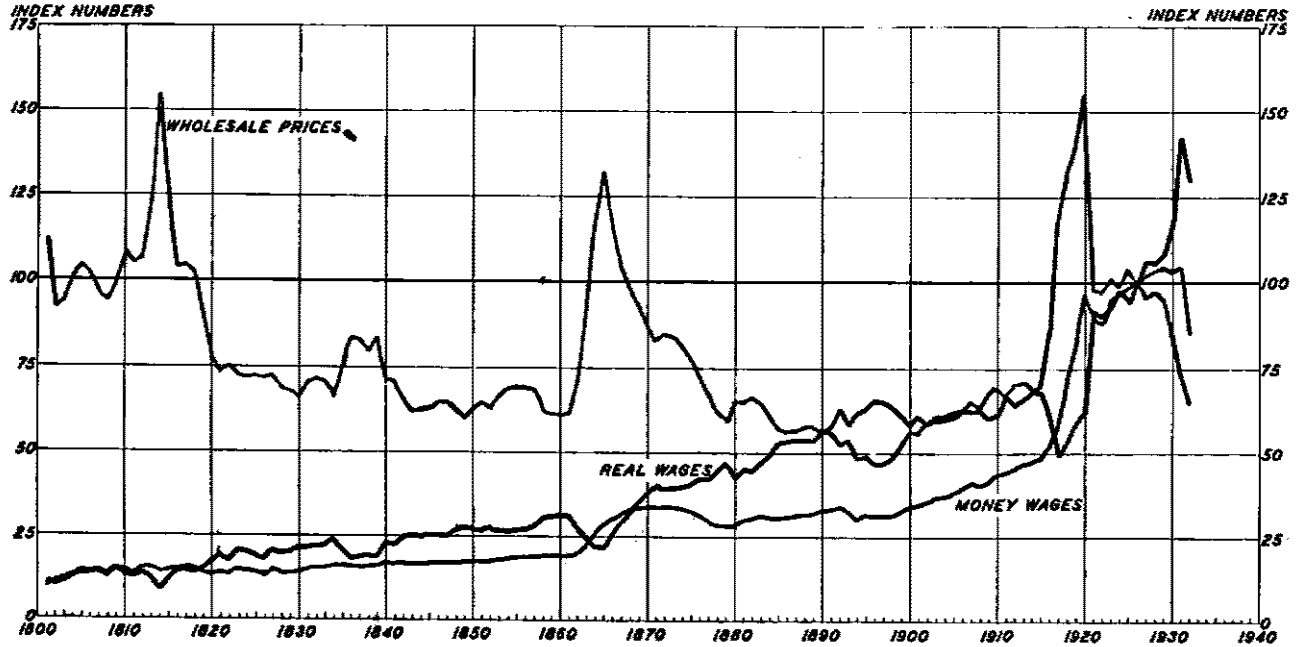
LONG-RUN INCREASES IN MONEY WAGES

The experience with wage increases under the NRA affords no conclusive evidence that the same results would follow under other conditions. The economic situation at the time, as indicated, was such as to promote a rapid increase in prices as the easy means of passing the higher costs along to the consumer. In order to gauge the possibility of promoting a wider diffusion of real income through the medium of higher money wages, it is necessary, therefore, that we consider the problem under

¹ For a fuller discussion of this problem the reader is referred to the study published by the Brookings Institution entitled *The National Recovery Administration*.

² Over 80 per cent of American corporations showed deficits at the time the higher wage program was inaugurated.

MOVEMENT OF WHOLESALE PRICES AND WEEKLY WAGES, 1800-1932



more normal conditions and in relation to longer periods of time.

While data with reference to wages and prices have until comparatively recent times been very crude the general trends for a period of more than a hundred years may nevertheless be roughly indicated. The diagram on the opposite page gives an index of wholesale prices, an index of weekly wage rates, and the resulting movement of real wages for the period 1800-1932.³ The reader will bear in mind that total wages also fluctuate with the volume of employment. Reliable series of retail prices are not available for the greater part of the nineteenth century.⁴

It will be observed that wholesale prices show a number of high peaks, occurring in war periods, but that the level in the first third of the present century averaged no higher than in the first third of the last century. Between 1830 and 1860 the trend was downward, though there were short upward movements in periods of boom. The level during these years, moreover, was a little above the level between 1870 and 1890, during which period there was also a declining trend.

The diagram indicates that the increase in real wages during the nineteenth century was more largely attributable to increasing money wages than to declining prices. For example, the level of prices in the decade of the

³ The wholesale prices are based on index numbers of the *Bulletin No. 572*, U. S. Bureau of Labor Statistics, p. 14. The index of weekly wage rates has been compiled by Dr. Rufus Tucker. For an explanation of the method which he employed, see Appendix C, pp. 180-82. The movement of real wages is determined by dividing weekly wage rates by the wholesale commodity prices.

⁴ Dr. Rufus Tucker has constructed a crude cost-of-living index for the period 1791-1890 (extended to 1932 on the basis of other indexes) which shows fluctuations similar to those of wholesale prices, but a somewhat less pronounced downward trend in such periods as 1830-60 and 1870-1900.

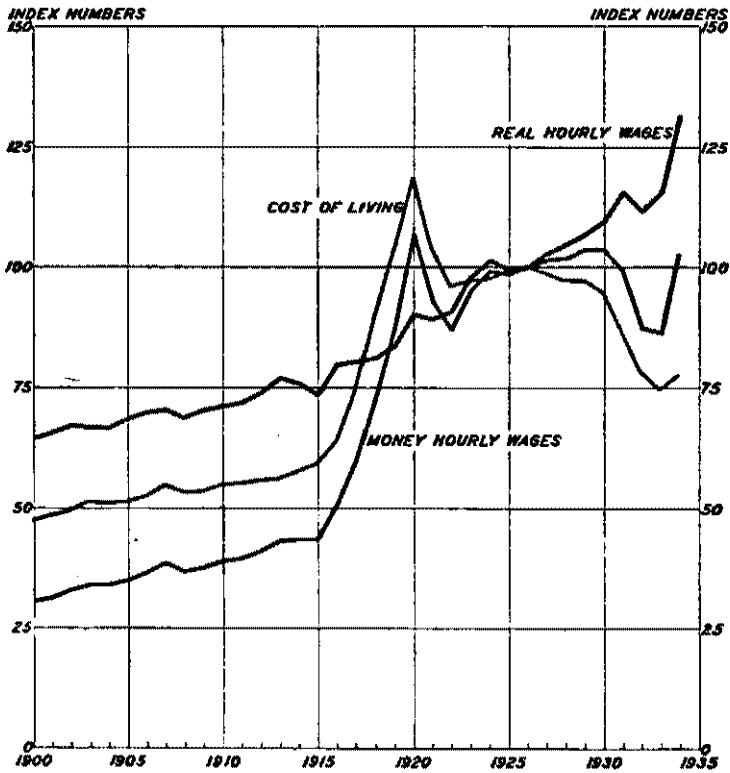
seventies was little higher than the level in the twenties. Money wages, on the other hand, doubled between these periods. Again if we make the comparison between the 1850's and the first decade of the present century we find little difference in the level of wholesale prices, while money wages increased approximately 100 per cent. It is of interest to note though, that between 1875 and 1900 the level of money wages showed little change.

The most rapid advances in real wages occurred, however, in periods of sharp business reaction following wars and periods of prosperity. At such times prices declined abruptly, while wages fell much less rapidly. Again it should be borne in mind that these figures relate to wage *rates* and not to total wage disbursements. During periods of sharp price decline, the accompanying business depression usually materially reduces the volume of employment and hence total wages; and it is not until prosperity is resumed that wage earners derive the full benefits of the higher wage rates in relation to prices.

For the period since 1900 data are available with which to make a comparison between wages in manufacturing industries and retail prices, or the cost of living. The hourly rates of wages of workers employed in manufacturing as compared with living costs during the years 1900-34 are shown in the diagram on the opposite page.

The heavy black line indicates the expansion of real income or purchasing power resulting from the fact that the hourly earnings (shown by the red line) increased more rapidly than retail prices or the cost of living (shown by the green line). It will be observed that in the general period of expansion from 1900 to 1913 hourly earnings rose considerably faster than the cost

MOVEMENT OF REAL WAGES IN MANUFACTURING, 1901-1934^a



^a For a complete and detailed account of the sources and methods of computation of the data represented in the above chart, see Appendix C, pp. 183-85. It should be remembered that the figures relate to manufacturing only.

of living. Exceptions are to be noted in recession periods such as those of 1903-04, 1907, and again in 1913-14. During the war period the cost of living rose very rapidly, but hourly earnings more than kept pace. The upward trend was further augmented by the readjustments of 1920-21, when the cost of living declined more than did hourly earnings.

In the prosperity period from 1922 to 1929, hourly earnings increased slightly faster than the cost of living, thus continuing the upward trend in the real wages of labor. Between 1929 and 1933 prices fell somewhat more than hourly wage rates, while in 1933-34 the rise in the cost of living was less than the increase in hourly wages in the manufacturing industries. It should again be remembered that these comparisons are between prices and wage *rates*. The actual weekly and yearly earnings of labor were, of course, materially reduced during the depression.⁶

Mention should be made of the fact that during the first thirty years of the century the hours of labor were reduced by approximately 13 per cent. Thus in addition to increased purchasing power resulting from an increase in real wages, there were substantial gains accruing to workers in the form of greater leisure. Between 1929 and 1933 there was a reduction in the average length of the working week of nearly 30 per cent. In view of the sharp curtailment of output, this additional shortening did not represent any net gain to workers.

It should be borne in mind that the increase in real wages during the period under review occurred at a time when plant capacity and productive efficiency were expanding. Thanks to technological progress and improving industrial organization, the payment of higher real

⁶ See data presented on p. 146.

wages did not necessitate a corresponding reduction in profits; the fact is that profits were also increasing. The situation was thus fundamentally different from that existing in connection with current plans for increasing money wages which involve an accompanying restriction of productive output—as for example the thirty-hour week proposal. The NRA experiment also involved numerous restrictions upon productive output.

The foregoing evidence clearly indicates that the money earnings of employees in manufacturing industry have at times increased faster than commodity prices. It is equally clear, however, that the expansion of the real income of the working population by this means has been slow and halting. As will be indicated in the following section, the primary explanation is that the process runs counter to the system of private competition.

THE RESISTANCE TO INCREASING MONEY WAGES

Under a competitive system a number of factors or considerations combine to resist wage increases. Indeed, there is strong pressure toward the reduction of money wages. For each particular business man, wages constitute one of the most important elements of cost; hence if he can reduce wage rates, he can gain a differential advantage over his competitors. Whatever the ultimate general results, there is immediate gain for the individual business enterprise which can reduce wages below the existing market rate.

Increases in wages above the market rate are resisted for similar reasons. As a general proposition, every individual business concern hesitates to advance its wages above the market level. The reason is obvious in cases where the margin of profit is slight; since competition

cannot be met if prices are raised, an increase in wages threatens bankruptcy. But even in the case of companies which have profit margins sufficient to permit an expansion of wages without an increase of prices, there are deterring considerations.

To pay more than the market rate for wages appears not only needless but also unstabilizing in its effects upon business generally. Moreover, the very essence of competition is to pay what has to be paid and not more. Why should one ignore market considerations when he hires labor anymore than when he buys raw materials? The only real exceptions to the practice of paying not more than the market rate are found in cases where particular business men believe that higher wages will *pay* as a result of the increased efficiency which will result.

Even though a particular business man may be convinced that higher real wages are essential to sustained prosperity, he hesitates to advance the wages of his workers above the market level, through fear that *his costs* will be raised without any proportionate increase in the demand for *his products*. This discrepancy is due to the fact that his particular employees at best spend only a small portion of their wages for the products which they have helped to create. It is essential that virtually all business enterprisers raise wages simultaneously if they are to receive the gains accruing from expanding purchasing power.

It was the early recognition of this principle which led the National Recovery Administration to adopt the *blanket* code idea. It will be recalled that the textile code was the first one adopted, and it quickly became apparent that if the textile manufacturers were not to be left holding the bag it was necessary that steel, cement, and all other industries be quickly brought into

line in a general program of wage expansion. The blanket code required a general increase in wages, with adjustments to be made later.

In view of these factors, a competitive system cannot rely upon voluntary increases of money wages as an adequate means of increasing the purchasing power of the masses. Wage increases as a rule are granted only under pressure—exerted by a general scarcity of labor or by the power of labor organizations. And in view of the fact that money wages enter directly into costs of production, there is a strong tendency for such increases to be accompanied by advancing prices. The advancing prices serve to offset in part for the very workers concerned the benefits of the higher wages; and for other groups in society, including unorganized workers, clerical and professional classes, the farm population, etc., the cost of living is enhanced.*

To be sure, higher wages in certain lines of industry may bring some indirect benefits to other laboring groups. For example, a portion of the farm population may be drawn to the cities because of high wages, thereby sharing in the wage gains and relieving pressure elsewhere. The mobility of labor is, however, seriously impeded by the restrictive policies of labor organizations which seek, by controlling the supply of labor, to retain the maximum gains for their own membership.

THE STRUGGLE TO FORCE HIGHER WAGES

Labor's answer to the business man's competitive resistance to higher wages has been organization. In the course of the last one hundred years we have witnessed in one industry after another the development of labor unions having as a primary objective the increase of

* The numerical importance of these groups is indicated on p. 123.

wages. The gains realized by particular labor groups, however, have often been at the expense of other organized labor groups, and virtually always at the expense of workers, including farmers, who are without the benefit of organization. The well organized unions have justified the gains which have been realized for their membership—first, in terms of their own particular interest, and, second, on the general ground that they are blazing the way for similar gains by other wage groups.

In the course of time, moreover, labor groups which were at first organized chiefly on the basis of crafts or trades have come to be organized on the basis of whole industries and to be affiliated more or less in national organizations. The goal of such organizations naturally becomes the establishment of unionism on a universal basis and the raising of the wages of all classes of labor. Whereas in the early stages of labor history the purpose was simply to get more for a particular group of employees, with the emergence of national organizations the principle of higher wages has come to be set forth as a general economic philosophy. The establishment of higher wages throughout industry is regarded as the only real means by which enduring prosperity can be attained.⁷

At best labor organizations have been able to obtain higher incomes for but a fraction of the labor population. At the end of a century of industrial history and fifty years of intensive effort in the field of labor organization the great bulk of the working population of the United States remains unorganized. Of the 49 million gainfully employed workers in the United States in 1930, only 3.4 millions, or less than 7 per cent, were

⁷ For a statement of this philosophy, see the foreword of *America's Capacity to Produce*, pp. 11-13.

members of any labor organization. The membership of the American Federation of Labor amounted to 3 millions and that of the railway brotherhoods 410 thousands.

It is thus evident that as yet, and in all probability for many years to come, the procurement of higher wages through labor organization cannot be counted on to effect a broad nation-wide increase in the purchasing power of the masses of the people. It can at best benefit only certain groups. In so doing it tends to affect other groups adversely.

The method of bringing about a better distribution of income through the organization of particular labor groups does not overcome the difficulties inherent in the competitive system. Each particular business man resists an increase in wages through fear that he will be handicapped competitively, and each industry offers similar resistance for fear of the effects upon the industry as a whole. The method, of course, carries with it no assurance whatever that the benefits of the expanded purchasing power will offset for the particular employer or industry in question the effects of higher costs. Thus, the pressure for increasing prices as a means of recouping the higher costs remains.

It is true that when circumstances make increases in prices impossible, wage advances often exert a wholesome pressure upon business managers to effect economies in operation. But the fact remains that progress in lifting the purchasing power of the masses by this means has been extremely slow. It is a method which tends in large part to be nullified by the effects upon costs and prices. It is a method, also, which results in industrial strife, adversely affects productive efficiency, and promotes social discontent and political instability.

No one can study the long struggle of labor in this and other countries to achieve the goal of progressively higher standards by means of higher money wages without being impressed with the terrific economic, political, and social costs involved, and the meagre results that have been achieved. The time would seem to be opportune for giving the most thorough consideration to other means of accomplishing the ends in view—means which might work in accord rather than at cross purposes with the competitive system.

PROFIT SHARING

Closely akin to and yet in some respects different from the method of distributing income by means of wage increases is the sharing of profits with employees. This device has been experimented with by many individual businesses in this and other countries with varying degrees of satisfaction. It has never been instituted on any comprehensive or universal basis, and hence its potentialities as a means of distributing income have never been tested.

The sharing of profits has distinct advantages over the wage increase method from two points of view. First, since the amount that the wage earners may receive depends in part upon the amount of the earnings available, there is an added incentive to efficiency. At the same time it tends to promote more satisfactory industrial relations. It is usually with these ends in view that profit-sharing schemes have been voluntarily established.

The second significant advantage is that the added income accruing to labor by this means is not counted as a part of the expenses of production and thus does not exert a direct influence upon prices. As in the case of dividends to stockholders, the amount of profits dis-

bursed as wages is determined after cost accounting has occurred. Since profit sharing would exert no direct influence upon prices, some of the maladjustments in income between the different groups in society that flow from the wage increase method would be avoided.

Profit sharing, like the wage increase method, is, however, at best of limited applicability. It could be instituted only in those divisions of our economic life that are organized on the wage basis—which means chiefly in corporate enterprise. Inasmuch as great numbers of corporations are operated at or near the margin, a considerable percentage of corporate employees would fail to participate in the benefits. Moreover, it could be applied only to workers who have comparatively permanent tenure, which means that its benefits would accrue chiefly to the higher paid workers.

It is our view that a profit-sharing plan might be devised which would on the one hand stimulate efficiency and develop more satisfactory industrial relations, and also contribute to a more satisfactory division of income. Involved in the problem are not only such questions as the extent of the distribution to wage earners as compared with the amount distributed in dividends, but also the extent to which antecedent charges for surplus and for depreciation and reserve accounts should be permitted.⁸ Before a plan of broad general applicability can be soundly and scientifically conceived, we need to have much more knowledge than is now available with reference to corporate income and the practices which govern its allocation for varied purposes.

⁸ A novel suggestion for the effective administration of a universal profit-sharing plan which is interestingly related to the problem of corporation taxes will be found in Appendix C, pp. 187-88.

CHAPTER VIII

DISTRIBUTING INCOME THROUGH PRICE REDUCTIONS

In the preceding chapter our attention was focused upon the method of disseminating income by increasing the number of dollars paid out as wages. There is also the possibility of accomplishing the desired result by making a given number of dollars go further. As the chart facing page 107 has already indicated, real wages may be increased either by an increase in money wages or by a reduction in commodity prices. This alternative method must accordingly be analyzed.

As a preliminary to this discussion, it will perhaps be helpful if we pause for a moment to consider how the great problem with which we are here concerned has been treated in classical economic literature. Did the principles on which the capitalistic system is based take account of the relationship of the distribution of income to economic progress? Did the theory foresee a problem of distributing the additional flow of wealth which would result from increasing productive efficiency? Did it envisage the wide dissemination of well-being among the masses as the result of technological improvements, or merely the further enrichment of the few?

The answer is that not only did the theory underlying the capitalistic system squarely face the problem of income distribution and recognize the necessity of a constantly expanding purchasing power, but it set forth

in detail the mechanism by means of which the desired results would be accomplished. The forces which it was believed could be depended upon to bring about an automatic and progressive dissemination of the benefits of progress among the masses may be briefly stated.

THE COMPETITIVE METHOD OF DISTRIBUTING INCOME

Under a system which is operated with a view to private profits, each business manager strives in every possible way to reduce his costs of production. He may accomplish this by the construction of a larger and more efficient plant, by the installation of improved equipment, by the introduction of superior internal management, by improved methods of marketing, by integrating various stages in the productive process, or by a combination of various methods. (The lowering of wages as a means of reducing costs will be considered later.)

When any particular business man has succeeded in reducing production costs he is in a position to increase his profits in one or another of two ways. He may continue to sell at the same price as before, enjoying the advantage of a wider margin between cost and selling price; or he may expand the volume of his business by means of price concessions. Since the increase in efficiency which is responsible for the reduction in costs commonly involves an expansion of productive capacity, and since the maximum economies can be obtained when operating at full capacity, the wise alternative obviously is to expand sales by offering the products at a lower price.

In short, increased efficiency *makes possible* lower prices, while the profit incentive *insures the actual reduction* of prices. The greatest profit to the business enterpriser is thus derived through giving to the masses the most for their money. The interest of the profit-maker,

therefore, coincides with the welfare of the consumer.

Under the pressure of competition not only is the selling price of commodities gradually and persistently reduced, but the process naturally involves the continuous elimination of obsolete, obsolescent, or otherwise inefficient high-cost, or marginal, establishments. The fit, as gauged by ability to sell at minimum price, alone survive; moreover, the efficient of today promptly become the inefficient of tomorrow. A particular business man, firm, or corporation may indeed survive over a long period of years, but only if the production methods employed keep always abreast of changing times.

The gains resulting from increasing technological and operating efficiency are passed on to consumers through the medium of price reductions. If, for example, productive efficiency in general should increase 100 per cent over a period of, say, 25 years, costs—other things being equal—would be cut in two and prices would be reduced proportionally. Thus each dollar of monetary income would purchase progressively increasing quantities of goods. The expanding demand required to take the increasing quantities of goods off the markets would be automatically created by the reduction in prices.

This method of expanding purchasing power does not, like wage increases, threaten insolvency to those who follow it. On the contrary, it is conceived to be the road to increasing profits. Instead of running counter to the principles of competition, it is the essence of competition.

Note that the theory of progress under capitalism thus outlined definitely implies the maintenance of money wages. For if wages are not maintained the real purchasing power or income of the laboring class would not be expanded. The reduction of prices which is significant is that reduction which results from increased produc-

tive efficiency. In practice, considerable departures from the general theory have taken place in connection with both wage and price policies. The latter will be discussed in detail in the following chapter. A few comments with reference to the former may be made at this place.

In the actual operation of the competitive system the importance of maintaining the level of wages as a part of the process of disseminating income has commonly been forgotten. Indeed, the system itself exerts a strong pressure on business managers to reduce wages. The individual business manager is concerned with obtaining the maximum profits for his particular company, and a reduction of wages naturally suggests itself as one of the most effective means of reducing costs. If by cutting wages he can reduce costs, and selling price, say from one dollar to fifty cents, he will be able to sell a larger volume of goods quite as though the reduction in costs was the result of increased technical efficiency.

While this method of reducing costs may yield temporary gains to the particular business man, it will be observed that it decreases the purchasing power of the workers. This fact is often lost sight of because attention is riveted upon the problem of the individual business rather than upon the economic system as a whole. It is observed that the individual business enterprise may expand its sales through price reductions made possible by a decrease in wages—the lower price enabling consumers generally to buy more of this particular commodity. What is overlooked is that the reduction in the wages of this particular group of workers proportionally decreases their purchasing power for the product of other establishments. Hence there is no net increase in buying power.

If a reduction in prices, made possible by a reduction

of wages, thus does no good, it might still be argued that it does no harm, inasmuch as it does not decrease aggregate purchasing power. This would be true were it not for the fact that effects of wage reduction upon business conditions in general are likely to be unsettling—either because of ensuing labor difficulties or because of the disturbing effects of sharp price competition.

It should be borne in mind in considering this phase of the problem that the lowering of prices through the introduction of more efficient technical processes is usually a gradual process; and such price reductions cannot be immediately met by the adoption of similar improvements by competing concerns. In contrast a business manager may cut wages at a moment's notice; and his competitors may almost immediately follow suit with similar reductions. The process may thus produce rapid price declines and hence an unstable business situation.

In any event, this method of reducing costs does not increase the income of the masses as a whole, or provide more abundant employment. At the best it is negative in its effect; at the worst it is productive of business instability and unsatisfactory relations between industry and labor.¹

Although there has always been strong pressure upon business managers to reduce wages, there have also been strong offsetting forces. In periods of active business when the supply of labor is comparatively scarce, it has always been difficult to cut wages and obtain the neces-

¹ In this discussion of wages and prices we have been concerned with long-run considerations and not, except very incidentally, with the situation in periods of acute business depression. At such times wages and prices in some lines fall very sharply, while in others they fall little if any. The resulting price disparities disturb the normal balance of exchange relationships and present, therefore, special problems of readjustment within the price structure.

sary workers. It has only been in periods of comparative dullness, when the supply of labor is abundant, that the reduction of wages has offered a ready means of reducing costs. With the growth of labor union organizations, it has become increasingly difficult to reduce wages either in periods of active business or in times of depression. For these reasons, as the chart facing page 107 indicates, while there have been numerous temporary reductions in wages, the level over the years has been maintained and even increased. From the standpoint of the basic principles upon which the capitalistic system relies such a maintenance of wages must be regarded as having been distinctly helpful.

THE UNIVERSAL BENEFITS OF PRICE REDUCTIONS

The price-reduction method of distributing income has an outstanding advantage over other methods in that the benefits are extended automatically to the entire population. An increase in money wages, with prices remaining stationary, will enlarge the buying power of the wage-earning group; but it will not directly improve the position of the equally important portions of the population which do not work for wages. Similarly, profit sharing may bring higher standards of living to that particular section of the population which is in a position to share in profits; but it will be of no direct value to the agricultural population or to persons whose incomes are derived from salaries. But a reduction of prices gives to *every purchaser* a larger return for his money.

In order to appreciate the significance of the advantage of the price-reduction method, it is necessary to have in mind the composition of the American population as a whole. According to the latest census the total population in the United States was 122,775,046, of which

44,636,770 were classified as farm population, while another 9,183,453 lived in towns having less than 2,500 inhabitants. The urban population was 68,954,823, of which 4,717,590 lived in towns between 2,500 and 5,000 inhabitants. The rural and village population was approximately 44 per cent of the total.

The importance of the farm population in relation to potential markets is not fully revealed by the number of people involved. It must also be recalled that the farmers as a class have the lowest incomes of any important group in the body politic. The per capita income of the farm population of the United States as a whole in 1929 was only \$273.

If we are to find adequate markets for the products of our industrial establishments the 54 millions of people who live on the farms or in adjoining small towns obviously cannot be ignored. The money-wage method of extending the benefits of industrial progress does not envisage this greatest single group. The price-reduction method, however, automatically extends its benefits to the agricultural and non-industrial small town populations.

A substantial part of the urban population, also, would receive no benefits from the wage-increase method of distributing income. Salaried workers in industrial establishments might be expected to share with wage earners the benefits of technical progress, but those employed in connection with government activities, by educational, philanthropic, and charitable organizations, or in personal or domestic service, would not necessarily obtain increased salaries. The number of individuals employed in domestic and personal service was 4,952,453 and those in public service 856,205.

The professional group numbered 3,253,884 indi-

viduals. There are also many small shopkeepers and tradesmen who fall outside the wage system. All told, these urban groups, with their dependents, constitute a population of something like 20,000,000 people. The wage increase method of disseminating the benefits of technological progress would therefore not extend to more than 40 per cent of the population. In contrast, again, price reductions benefit the entire population.

THE CONFLICT BETWEEN WAGE EARNERS AND FARMERS

In considering the price-reduction method as an alternative to wage increases attention should also be called to a broad social consequence of the latter that has apparently seldom been recognized. The disparity in the incomes and purchasing power of the industrial and agricultural populations resulting from the wage-increase method creates a basic maladjustment between two great divisions of our economic life and imposes a serious barrier to economic progress. It is apparent that there would be a growing disparity in the economic position of the agricultural and industrial populations even if prices of industrial products showed no tendency to rise as wages rose: the income of the urban population would be increasing while that of the agricultural population would be stationary. In practice there is, however, a tendency for industrial prices to rise somewhat as wages are increased, and the consequence is that the purchasing power of the farm population tends to be actually reduced. The consequent inability of the agricultural population to buy ever increasing quantities of industrial products limits the scale on which industrial establishments can operate.

The struggle to obtain higher living standards through the medium of higher money wages has been

the cause of a long and deep-seated conflict between the agricultural and urban populations. The people of the cities have fought for higher wages even though it has meant somewhat higher prices for industrial products. The farmers have long fought for lower prices on the commodities which they have to buy. The struggle underlies the so-called granger movement of the seventies; it explains the traditional opposition of the agricultural South to high protective tariffs; and it lies at the basis of farmer opposition to trusts, monopolies, and combinations in all their forms.

Owing to the failure of the farm interests to secure lower industrial prices a change of strategy has in recent years been adopted. If the prices of industrial products cannot be brought down by means of legislative or other action, then the prices of agricultural products must be raised. Thus we have the development of farm co-operative organizations, the growth of agricultural tariffs, and, finally, under governmental leadership, the restriction of agricultural output with a view to restoring the purchasing power of agriculture in terms of industrial products.

Assuming that price equilibrium may be re-established by this method it is nevertheless at the sacrifice of wealth production. Whatever temporary benefits might thus be conferred, it is a method which, if pursued as long-run policy, can result only in stationary or declining standards of living.

PRICE REDUCTIONS AND INTERNATIONAL COMPETITION

By way of concluding this discussion of the different methods of disseminating the benefits of progress, attention must be called to their bearing upon international competition. In so far as an increase in money wages is accompanied by increasing prices, the ability of Amer-

ican manufacturers to meet competition in foreign markets is obviously impaired. And even though prices should show no increase, the competitive power of the American manufacturer would be affected in a negative way. That is to say, he would not be in a position to reduce his selling price with a view to expanding foreign sales.

On the other hand, a progressive lowering of the prices of commodities strengthens a nation's competitive position in foreign markets. The greater the technical progress and the lower the consequent selling price the greater will be the chance of expanding foreign sales. Success in international competition will in the long run depend upon productive efficiency and not upon the level of money wages.

Consideration must also be given to the import side of the problem of international competition. High money wages in the United States are made the basis for demands for protection of American wage levels against cheap foreign-made goods. The American-made goods may be quite as *cheap* as the foreign in terms of the amount of human energy required to manufacture them; they are dear only in the price sense—the result of the higher level of money wages. The realities of the situation are obscured by the money-wage equation. The adoption of a policy of distributing benefits of progress by means of progressively lower prices rather than by means of advancing wages—particularly if adopted by all countries—would enormously clarify and simplify the problem of international competition.

The broad highway along which continued economic progress must be sought is the avenue of price reductions. When this road is followed the benefits of technical improvements are conferred automatically upon

all divisions of the population. Maximum opportunity for expansion of production and the free interchange of goods both between different divisions of our domestic economy and between nations is thus provided. Such a method instead of centering upon a redistribution of an existing amount of income promotes the progressive erection of additional income and its prompt and thorough dissemination among the entire population.

CHAPTER IX
PRICE STABILIZATION IN RELATION
TO PROGRESS

We have shown that the only way in which the gains resulting from technological improvements may be continuously and automatically distributed to the *entire population* is through the medium of price reductions. We have indicated, moreover, that this method of income distribution was supposed to be inherent in—or guaranteed by—the capitalistic system. It is, however, evident from the facts disclosed in our general study of the distribution of income that the competitive process upon which we rely to disseminate the benefits of progress has failed to function with expected effectiveness. Accordingly, we must now seek to discover what factors or forces have impeded the operation of the price-reduction method of distributing income.

For the purpose in hand we must first survey the movement of prices in relation to changes in productive efficiency. Satisfactory data are not available with which to study this problem over a long period of years; hence we shall confine the present discussion to the significant trends during the period from 1922 to 1929. For these years the available data are more complete and reliable, and, moreover, for this eight-year stretch there were no violent business fluctuations to obscure or confuse the general trend.

STABLE PRICES DESPITE INCREASED EFFICIENCY

As has been indicated in our preceding studies the years of prosperity in the twenties constituted a period of ex-

ceptionally rapid technological progress. It will be recalled that in practically all lines of production, there was an increase both in the amount of capital and in the efficiency per unit. From corporation income tax returns it appears that in manufacturing industries there was an increase in investment between 1922 and 1929 of some 40 per cent. What this meant in terms of productive efficiency may be indicated by reference to the changing output per worker.

In the economic system as a whole it appears that efficiency—as gauged by the growth of production *per gainfully employed person*—increased between 1922 and 1929 by about 18 per cent.¹ In manufacturing industries, where technological progress was most rapid, the productivity *per wage earner* increased by more than 25 per cent during the period.²

Under a freely functioning competitive system, such an increase in efficiency would be expected to manifest itself in a substantial reduction in the prices of commodities. That is to say, the decreased costs resulting from the increase in efficiency would make it *possible* to reduce prices, while the forces of competition would *insure* that actual reductions would promptly occur. The only factor that might prevent price reductions would be an offset-

¹ Based on data in *America's Capacity to Consume*, p. 150. The average rate of increase for the period as a whole computed on the basis of a least-squares trend line was 2 per cent a year. For computations see Appendix C, Table 4.

² Frederick C. Mills, in *Economic Tendencies in the United States*, p. 308, estimates an increase of 22 per cent between 1922 and 1929. He places the annual rate of change at 3.3 per cent a year. It should be observed, however, that an increase in the efficiency of labor might result either from harder work or better scientific management in the plant or more and better capital equipment. The index of productivity does not distinguish between these alternative elements; but in a period such as that under discussion it is evident that the two latter were of primary significance.

ting increase in costs due to rising money wages.³ In analyzing the situation in the decade of the twenties, we shall consider the movement of both wholesale and retail prices.

Wholesale prices in general declined but slightly between 1922 and 1929. The index number of wholesale prices covering *all* commodities showed a decline from 96.7 to 95.3—which represents an annual reduction of negligible importance. This general index, however, includes food products the prices of which rose slightly; hence, we shall have a better picture for our present purpose if we concentrate on manufactured commodities.

In manufacturing there was a decline in the trend of prices between 1922 and 1929 amounting to about 5 per cent.⁴ Incidentally, prices of raw materials as a group remained practically stationary.

Any general index of prices merely reveals the *average* situation; it fails to disclose the divergent price trend for different types of commodities. The fact is that the trend of wholesale prices varied widely in different manufactured products during the years in question. In some lines there was little if any change; in others there was an appreciable rise; while in some instances there was a material decline.

Manufactured commodities which showed appreciable declines include such important products as automobile tires, automobiles,⁵ farm cultivators, brick, cement, sev-

³ Again, it should be noted, we are not considering monetary influences affecting prices.

⁴ The decline in the actual index numbers for the two terminal years was only 2.1 per cent, but prices were appreciably lower in 1922 than in 1923 and 1924. The average annual decline, as shown by a fitted trend line, was 0.7 per cent. Frederick C. Mills, *ibid.*, p. 333.

⁵ The general index of automobile prices declined from 1922 to 1927 but rose in 1928 and 1929. This rise is apparently attributable chiefly to the introduction of certain new models which sold at higher prices than the older ones. For example, the Ford model of 1927 sold at \$456 and that of 1929 at \$558.

eral types of lumber, and numerous textile products. On the other hand, the price of steel rails and plates, farm tractors, copper ingots, sewing machines, and men's shoes either increased or remained practically stationary.⁶

In such lines as this latter group it is apparent that gains in efficiency resulting from technological progress were not manifesting themselves in price reductions to consumers. The failure of these prices to decline not only produced inflexibility in important sections of the price structure but also imposed checks on the reduction of other prices. Many of these products, it will be seen, are of primary importance because they are basic materials of wide general use. It is evident that when the prices of commodities which enter into later stages of manufacture fail to decline, resistance is thereby offered to price declines at subsequent stages in the productive process.⁷

Retail prices remained practically stationary from 1922 to 1929. The best index available with which to reveal the trend in retail prices of manufactured commodities is that showing prices paid by farmers for commodities which they buy—which excludes many food-stuffs. Since the prices paid by farmers for manufactured goods are typical of the prices paid by all consumers for such commodities, this index affords a satisfactory gauge of the movement of retail prices in general. The following table gives the retail prices of manufactured commodities for the years 1922 to 1929. (See also cost-of-living chart, opposite page 108.)

⁶ During this period the quality of products was in many instances being improved. To the extent that this was true, there was a concealed gain accruing to the consumer. Improvements in quality, however, are not necessarily attended by increasing costs.

⁷ Mention should also be made of the fact that railroad rates—a basic element in the cost of production—remained practically stationary throughout the period under review, few rate reductions of any significance being made. Average receipts per mile from freight traffic, however, showed a decrease of about 6 per cent.

Although the wholesale prices of manufactured commodities, taken as a whole, showed a slight decline, the ultimate consumer apparently did not reap any benefit. In general, the reduction appears to have been absorbed in connection with the marketing process. The failure of retail prices to decline may be attributable to some extent to more and better service rendered to the customer. In the main, however, it appears to be due to increased costs

RETAIL PRICES OF MANUFACTURED GOODS, 1922-29*
(1910-14=100)

Year	For Consumption Goods	For Production Goods	Total
1922	156	139	149
1923	160	141	152
1924	159	143	152
1925	164	147	157
1926	162	146	155
1927	159	145	153
1928	160	148	155
1929	158	147	153

* "The Agricultural Situation," *Bulletin of the U. S. Department of Agriculture*, July 1935, p. 21.

of distribution resulting from a duplication of facilities and the multiplication of services. In our study of the distributive industries in *America's Capacity to Produce* we found that a large amount of unnecessary facilities and service existed and that the essential functions could have been performed with a substantially smaller personnel.

In considering the failure of retail prices to decline, it should be borne in mind that whereas in former times wholesaling and retailing were usually separate and distinct functions carried out by independently organized agencies, increasingly, as the years have passed, manufacturing enterprises have sold direct to the retailer and even to the ultimate consumer. Moreover, even where separate distributors remain the retail prices are fre-

quently determined by the manufacturing companies. Thus the failure of retail prices to decline cannot be placed solely at the door of separately organized middlemen.

The reader should bear in mind that the failure to reduce prices in proportion to increasing efficiency does not necessarily mean that all of the gains accrued to the owners of capital in the form of interest and dividends. The fact is, as was indicated in Chapter VII, that wage rates increased considerably during the post-war years. (See chart facing page 107 and table facing page 108.) The available data are not sufficiently precise to permit a reliable statistical measurement of the extent to which the gains from increasing efficiency were matched by higher money wages. A careful appraisal of existing data, however, indicates that in manufacturing industries the increase in wage rates with allowance for salaries, absorbed roughly 40 per cent of the increase in efficiency, the decrease in prices about a like amount, with the balance going for profits. The amount of profits is also influenced by other factors. A discussion of this problem is reserved for the following chapter.

Summarizing the foregoing data, it is clear that the method of disseminating the benefits of technological progress through persistent reductions in prices was largely in suspense during the post-war expansion period. So far as the ultimate consumer was concerned, it can be said that no gains accrued as a result of lower prices—the slight reduction in wholesale prices being absorbed in marketing channels.

FORCES RESPONSIBLE FOR PRICE STABILIZATION

It is evident from the analysis which we have been making that the system of wealth production and distri-

bution has not been working in the manner that had been expected. The method of continuously expanding markets through a persistent reduction of prices as efficiency increases has in considerable measure ceased to operate. Price stabilization policies have in many lines come to stand in the way of a dissemination of the benefits of progress, and have therefore tended to nullify the results of technological advance. This unexpected outcome of the evolution of the capitalistic system obviously requires explanation.

A number of factors and forces have combined to produce what may be called the price stabilization movement. The phenomenon with which we are concerned had its beginnings as far back as fifty years, and it is apparent in the industrial history of other countries as well as of the United States. Hence the following discussion relates to tendencies which are worldwide in scope though showing considerable variations in different countries. No detailed consideration of the problem can here be undertaken. It must suffice for our purposes to indicate briefly the major considerations and developments involved.

Interferences with the competitive price system have occurred as a result of the development of at least three major types of business organization. The first is the unified monopoly or industrial combination, by means of which the prices of particular commodities are controlled by a single management. The second is the cartel, or "collective monopoly," under which there is group control of production with a view to stabilizing prices in a given industry. The third is the trade association, which seeks, usually through informal co-operation, to stabilize certain conditions within particular industries, without interfering with the control of production. Such associations are of various types and the degree to which they may influence prices varies widely. Unified monopolies,

private and public, exist in all countries; the cartel is found chiefly in Europe; and the trade association is essentially an American development which has flowered in the post-war period.

The growth of industrial combinations came with the development of large-scale corporate enterprise in the last quarter of the nineteenth century. When unified control over production and price is obtained, a monopoly naturally seeks to fix the selling price of its product at a level which will yield the largest possible profit to the company. Such a price is not *arbitrarily* set at a very high level; it is necessary to consider the volume of sales that may be obtained at various prices and also the extent to which unit costs change with varying amounts of production. Nor is a monopoly likely to quote an unchanging price over a long period of years, for the price that will yield the largest net return will naturally vary with changing conditions. Nevertheless, the existence of monopolies tends to promote a greater price inflexibility than would exist under competition.

It should be observed in this connection that under conditions of monopoly, as under competition, it pays to increase efficiency and to reduce costs of production. Under full competition the lowered costs will quickly result in lower prices to the consumer, but under monopoly there is no compelling force which will result in lower prices. It might be argued that it would pay a monopoly to make persistent reduction of prices as efficiency increases with a view to the greatest possible expansion of the market over a period of years. There is, however, an inevitable tendency to seek the largest possible profit from year to year, and this can usually be obtained by maintaining a relatively high price. A comparatively short-run point of view commonly prevails and this

means at best a lagging downward movement of prices.

Mention must also be made of the growth of public monopolies in this and other countries, chiefly in the field of transportation and other service utilities. There is a tendency with governmentally owned or controlled public utilities to hold rates at comparatively stable levels. Government revenue considerations frequently take precedence over everything else, prices being adjusted with a view to maximum returns. While there is always a demand from the consuming public for lower rates, there is usually an offsetting demand from employees for higher levels of wages; and wage earners are more effectively organized than the general consuming public. Although rates may be gradually reduced over a period of years, there tends to be a substantial lag behind increasing efficiency.

The cartels which have been a striking feature of European industrial development had their beginnings as far back as the decade of the seventies. They assume various forms, but the general purpose is always to restrict free competition among the affiliated enterprises with a view to obtaining control over the market. The degree of market control which is possible of course varies with the circumstances of particular industries and the checks established through legislation.

The cartel differs from the industrial combination in certain important respects. In the first place, it is an agency which usually arises out of depression conditions. Consolidations or mergers of the American type, on the other hand, are usually developed in periods of prosperity. The primary purpose of the cartel is defensive—to prevent over-production and price demoralization. Faced with inadequate markets, the cartel endeavors to

stabilize prices and safeguard profits by adjusting production schedules to the demand at prices which will yield an adequate profit to the highest cost producer. The industrial merger or consolidation of boom time, on the other hand, is offensive in character, its purpose being to exploit market possibilities and reap maximum profits through introducing production economies on the one side and controlling prices on the other.

In the second place, the European cartels are usually looked upon with favor by governments and are often actually fostered by them. They are conceived by governments as essentially stabilizing instrumentalities and thus promotive of the public welfare. It remains true, however, that the cartel organizations tend in periods of expansion, as well as in time of depression, to prevent reductions in price. Their primary interest is in the stabilization of prices and the adjustment of production schedules to "existing market requirements." On the other hand, mergers and consolidations of all kinds have commonly been regarded in the United States and in some of the British dominions as opposed to the public interest. This difference reflects the differing circumstances under which the two types of agencies have originated and their varying objectives.

A trade association, typically speaking, does not have power to control prices comparable to that possessed by either the unified combination or the cartel. As an association it can merely work by informal means to bring about concerted policies designed to "stabilize" the industry. The actual extent to which trade associations have been able to control various industries is shrouded in uncertainty; and the results obtained vary widely in different lines. There is no doubt, however, that the

tendency of trade associations has been to promote a greater fixity of prices than would otherwise have occurred.

Trade associations have on the whole been viewed with much less disfavor by the United States government than have consolidations. Whereas the evolution of monopolies in the 1880's was promptly followed by anti-trust legislation intended to preserve free competition in the interest of the public welfare, the development of trade associations in the 1920's was systematically encouraged under the leadership of the United States Department of Commerce. Indeed "stabilization" was one of the fundamental policies of the Hoover regime—the stabilization of prices being regarded as a means of preventing market disorganization and hence as a key to stable production and permanent prosperity.⁸

The evolution of industrial policy in recent times has thus served in substantial measure to prevent or impede the functioning of the competitive price mechanism. That is to say, over an ever-widening segment of the economic system the process of persistently expanding purchasing power by means of price reductions has been checked. Thus one of the primary agencies of adjustment upon which the capitalistic system was supposed to rely has in substantial degree ceased to be operative.

The significance of the change that has occurred in in-

⁸ The term "price stabilization" has more than one connotation. In addition to referring to the maintenance of the prices of particular commodities, it is also used in connection with efforts to control the general level of prices through the manipulation of money and credit. Many economists who have favored the control of prices by means of money and credit have been interested in preventing depressions which, it is assumed, are primarily due to general price fluctuations arising from variations in the volume of money and credit in circulation. Their attention has not been focussed on the problem of price reductions as a means of disseminating the benefits of progress. Stabilization of the general level of prices by monetary means lies outside the scope of our discussion.

dustrial policy may best be indicated by comparing modern trends with those prevailing between 1870 and 1900. This was a period in which the march of invention and the improvement of technological processes was extraordinarily rapid. New labor-saving mechanical equipment was being rapidly introduced not only throughout manufacturing industry but also in the fields of raw material production, transportation, and even agriculture. To quote from an economic historian of the period, "The progress of the race in mechanical and scientific methods of directing human labor in the production of our satisfactions was something little short of incredible."

The chart of wholesale prices for all commodities facing page 107 shows that the general level of wholesale prices declined materially over this period taken as a whole.⁹ Transportation rates were also very greatly reduced. The magnitude of the price declines which occurred in important lines of manufacture where the rate of technical progress was most rapid are indicated by the following figures.

The price of pig iron declined between 1870 and 1900 from \$33.23 to \$19.98 a ton; the price of open hearth steel rails decreased from \$106.79 a ton in 1870 to \$67.52 in 1880 and to \$32.29 in 1900. (In contrast, from 1902 to 1913 the price remained absolutely fixed at \$28.00 a ton.) Standard prints declined in price from

⁹ The general decline in prices during the period from 1873 to 1895 has been ascribed by many writers solely to the fact that the annual production of gold was declining. We cannot here enter into any discussion of the controversial issues involved in the relation of gold and prices. It may appropriately be pointed out, however, that those who—when discussing the general theory of prices—explain the decline during this period by reference to gold production, commonly argue, when discussing the effects of technological developments upon cost of production, that in a period such as that here under consideration selling prices would progressively decline.

12.41 cents per yard in 1870 to 5 cents in 1900, and standard sheetings fell during the same period from 14.58 cents per yard to 7 cents.¹⁰ This reduction in selling prices was not accomplished by means of lower money wages, for wage rates showed only a very slight decline over the period.¹¹

Although this period witnessed the beginning of the consolidation movement, competition prevailed in a much wider range of activities than has been the case in recent years. It is not to be inferred, however, that competition has entirely disappeared in recent times. In certain branches of industry, particularly in the newer lines, the policy of reducing prices as productive efficiency increases is still pursued. But it is not to be denied that, as industries reach a more mature stage of development and as production becomes concentrated in larger units a policy of maintaining prices with a view to stabilizing conditions and safeguarding immediate profits comes increasingly to prevail.

As the years have passed the necessity of progressive price reductions as a means of expanding purchasing power and markets appears to have been forgotten, alike by business managers and economic statesmen. The conclusion is inescapable, however, that in so far as the effort to stabilize prices is effective the broad distribution of income upon which continuous economic expansion depends is circumvented.

It is true that the importance of high incomes among the masses has not been forgotten. Indeed, there has been a growing recognition, particularly since the end of the World War, of the significance of mass purchasing

¹⁰ For figures showing annual prices of these commodities from 1870 to 1900, see Appendix C, p. 186.

¹¹ See chart opposite p. 107.

power. But discussion of the means of achieving this result has been centered increasingly on expanding money wages rather than on reducing commodity prices. The efforts to obtain higher wages have, moreover, encountered the various obstacles discussed in Chapter VII, with the result that progress along this line has been slow and halting. Moreover, it has been an unbalanced progress tending to be self-defeating in character by virtue of the fact that the gains resulting from higher wages accrue only to those particular groups which happen to be receivers of wages. Unlike price reductions, the benefits do not extend to the entire population, and hence tend to produce maladjustments between the different divisions of the economic organization.

CHAPTER X

WHAT ABOUT PROFITS?

Thus far in this discussion no consideration has been given to the question of profits—the motivating force of business activity. The existing system is operated with a view to the making of profits through selling goods at prices above the costs incurred in their production. Since the continuous payment of interest on invested capital, and even of wages and salaries, depends upon the profitable operation of business enterprise, industrial policies must ultimately be tested by their effects upon the earnings of business.

In preceding chapters we have shown that in the prosperity period of the twenties there was a slight reduction in the wholesale prices of manufactured commodities as a whole and some increase in money wages. The first question which we must consider, therefore, is whether it would have been possible to make further reductions in prices (assuming wages to remain unchanged). Was not the maintenance of prices during the period under review essential in order to provide an ample margin of profits? Concretely, if prices had been materially reduced would not profits have become too low to attract the necessary capital with which to expand plant and equipment and promote industrial progress?

There are two ways in which light may be thrown on this issue. The first is to study the data as to the actual trend of profits during the period in question; and the second is to analyze the factors upon which the magnitude of profits depends.

THE RATE OF PROFITS IN MANUFACTURING
INDUSTRIES, 1922-29

It must be pointed out at this place that data are not now available with which to make a genuinely adequate appraisal of the capacity of corporations to pay higher wages or to reduce prices to the consumer. The records are available covering profits, dividends, and the setting aside of surplus; but the volume of net earnings available for dividends and surplus is itself greatly influenced by policies with reference to charges for depreciation and depletion and reserve accounts. For a full appraisal of corporation policies in relation to the distribution of income, we should need to know what tendencies have been apparent over a period of years in connection with wages, interest, and dividends, and surplus, depreciation, depletion, and reserve accounts.¹ Fortunately for our immediate purpose of gauging the general trend of profits during the prosperous period of the twenties the data now available will serve reasonably well.

The rate of profits upon capital investment in manufacturing industries as a whole showed a moderate upward trend between 1922 and 1929. As will be seen from the table on page 144, the amount of capital increased from 37.4 billions in 1922 to 52.7 billions in 1929. The column showing estimated profits includes not only dividends disbursed but sums set aside as surplus. The profit ratio, both before and after corporation taxes, increased at the rate of about one per cent annually.²

Figures covering *all* manufacturing corporations do not, however, fully answer the question about profits. Such figures, it will be observed, cover companies which

¹ It is hoped that we may be able to make such a study in the near future, with the data analyzed not only for corporations as a whole but with a view to showing the differences between corporations of varying size in different lines of enterprise. It is believed that such a study would throw much additional light upon the problem of income distribution.

² Computed as a trend line.

had losses as well as those which earned profits. They thus include a miscellany of small and inefficient enterprises, many of which were in process of being eliminated from the industrial picture, as well as the larger and better organized manufacturing establishments. A truer measure of the trend of profit rates is therefore afforded

CAPITALIZATION AND PROFITS, ALL MANUFACTURING CORPORATIONS, 1922-29

Year	Estimated Capitalization ^a (In millions of dollars)	Estimated Profits ^b		Ratio Profits to Capitalization	
		Before Corporation Tax (In millions of dollars)	After Corporation Tax (In millions of dollars)	Before Corporation Tax	After Corporation Tax
1922	37,400	2,832	2,442	7.6	6.5
1923	40,000	3,784	3,299	9.5	8.2
1924	42,800	2,978	2,548	7.0	6.0
1925	44,400	3,973	3,426	9.0	7.7
1926	46,274	4,041	3,456	8.7	7.5
1927	48,050	3,405	2,897	7.1	6.0
1928	50,017	4,280	3,735	8.6	7.5
1929	52,694	4,864	4,317	9.2	8.2

^a From assets and liabilities summaries recorded in *Statistics of Income*. The figure of capitalization excludes bonds. During these years there was a tendency for the amount of bonded indebtedness to be reduced relatively to stock. Since dividends are at a higher rate than interest the effect of this would be to reduce slightly the average rate of return on stock.

^b "Compiled net profits" corrected for intercorporate dividends.

by the figures for a group of larger manufacturing corporations of the type which should and usually does set the pace in the determination of prices.

A special study has been made by the National Bureau of Economic Research of 2,046 large manufacturing corporations.² These corporations cover 62 industries, representing approximately 45 per cent of all manufacturing

² Frederick C. Mills, *Economic Tendencies in the United States*, p. 486.

industries. The rate of profits (before taxes) from 1922 to 1929 was as follows:

Year	Profit Rate (Per cent)	Year	Profit Rate (Per cent)
1922	9.7	1926	12.7
1923	11.2	1927	9.8
1924	10.1	1928	11.3
1925	12.4	1929	12.8

The annual average rate of increase in profits (computed as a trend line) was here considerably greater, amounting to 2.3 per cent a year. It is evident that in the larger and pace-setting corporations profits were large and were increasing throughout the period.

WERE AGGREGATE PROFITS ADEQUATE?

The mere fact that the rate of profits showed an increase during these years does not of itself show that the volume of funds available for the expansion of plant and equipment was adequate. Granted that the rate of return was comparatively high and increasing, we must still ask: Were not even higher rates necessary in order to finance expansion and thus promote a more rapid economic progress? In other words, were profits in general adequate for the requirements of business enterprise?

In answering this question, attention should first be called to the trend of aggregate profits. Owing to the increasing investment, aggregate profits increased between 1922 and 1929 much more rapidly than did the rate of profits. The table on page 146 shows for manufacturing enterprises as a whole the aggregate profits, cash dividends, and the aggregate wages and salaries paid annually from 1922 to 1929.

It will be observed, first, that the aggregate profits, after taxes, were very much larger in the later than in

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the earlier years. It will be noted, second, that the percentage disbursed as cash dividends tended to increase—which indicated that such funds could be spared from the business. The aggregate sums retained as surplus showed no appreciable increase over these years.

AGGREGATE WAGES AND SALARIES AND PROFITS IN
MANUFACTURING, 1922-29
(In millions of dollars)

Year	Wages and Salaries ^a			Profits ^b		Cash Dividend	
	Wages	Salaries	Total	Before Corporation Income Tax ^c	After Corporation Income Tax	Gross ^d	Net ^e
1922	8,750	2,525	11,275	2,832	2,442	1,505	1,419
1923	11,009	2,806	13,815	3,784	3,299	2,006	1,887
1924	10,250	2,885	13,135	2,978	2,548	1,883	1,782
1925	10,730	2,922	13,652	3,973	3,426	2,224	2,088
1926	11,100	3,060	14,160	4,041	3,456	2,544	2,360
1927	10,849	3,230	14,079	3,405	2,897	2,603	2,450
1928	10,950	3,260	14,210	4,280	3,735	2,982	2,782
1929	11,621	3,595	15,216	4,861	4,317	3,159	2,959
<i>Percentage change, 1922-29</i>	+33	+42	+35	74	76		108
<i>1923-29</i>	+5	+28	+10	28	31		57

^a *Census Industries*. Census year, as compiled by the Bureau of the Census; inter-censal years estimates. Wages on basis of Bureau of Labor Statistics index of factory payrolls; salaries on basis of W. I. King, *National Income and Its Purchasing Power*.

^b Corporations only, from *Statistics of Income*, U. S. Bureau of Internal Revenue. Profits from sale of capital assets have not been eliminated because prior to 1929 the item was not reported. The amount, however, is negligible.

^c "Compiled net profit" corrected for intercorporate dividends.

^d As reported in *Statistics of Income*.

^e Corrected for intercorporate dividends.

Attention should also be directed to the fact that in these industries the rate of increase in profits and dividends was very much greater than the rate of increase in wages and salaries, particularly the former.

The amount of funds available for business expansion

is not measured solely by the amount of business profits. Funds for business expansion are also derived from the savings of individuals, made from wages, salaries, or other sources of income. Moreover, as has been shown in our preceding analysis, funds for both working and fixed capital purposes may also be procured from commercial bank credit expansion. The adequacy of the funds for business requirements thus depends not merely upon the amount of profits, but upon the aggregate supply of investment money available.

The truth of the matter is that there was available in the markets throughout the period of the twenties an abundance of funds for purposes of capital expansion. As was shown in *The Formation of Capital*, the supply of investment money was greatly in excess of what was required for the expansion of plant and equipment. The surplus of funds available sought utilization, as we have seen, in foreign loans and in investment in securities already outstanding in the market.*

We must conclude from this analysis that business expansion and economic progress were not being impaired during these years for lack of profits. Not only was the rate of return adequate to attract investment money, but the supply of investment money was more than adequate for the financing of business expansion. Instead of shortage we had abundance.

CONTROLLING FACTORS IN THE RATE OF PROFITS

Thus far we have been inquiring whether the volume of profits was such as to make possible further reductions in prices. We must now raise a more fundamental question, namely, whether a reduction in prices would have resulted in a reduction of profits. It is often assumed

* See *The Formation of Capital*, Chap. X.

that since profits represent the difference between the cost of production and the selling price of a commodity, any reduction in price—unless accompanied by corresponding reductions in wages or other costs—necessarily involves a decrease in profits. An analysis of all the factors in the situation, however, indicates that the general level of profits need not be decreased by means of lower prices.

The reasoning underlying the theory that profits would necessarily be reduced if the selling price is decreased ignores the significance of overhead costs and the dependence of the cost per unit upon the volume of output. Modern business enterprise involves the use of large amounts of fixed capital in the form of plant and equipment and also requires a substantial administrative organization. Interest charges on invested capital and general administrative expenditures—the so-called overhead costs—are incurred whether or not the business is operated at full capacity. If a plant which is capable of producing a million units in a year is producing only 500,000 units, these overhead costs will obviously be higher per unit of product than would be the case if the plant were operating at full capacity.

It is a fundamental principle of business operation that *added volume* of business ordinarily *pays heavily*. To use a common business phrase, the added volume provides the "velvet." A very considerable volume of business is required merely to cover fixed charges; earnings with which to pay dividends increase rapidly as the volume of production expands beyond the minimum required to meet interest and other overhead expenses.

The importance of overhead costs and the degree to which unit costs are reduced as output expands naturally vary widely in different lines of production. The greater

the amount of fixed capital involved in proportion to labor, the greater will be the reduction in costs as output expands. Similarly, the larger the volume of interest-bearing indebtedness, the greater the amount of fixed charges that must be met before dividends are available. It is accordingly impossible to generalize for all industry as to the precise influence of an expanding volume of production upon unit costs. It is perfectly obvious, however, that in most industries it makes a vast difference whether production is at 20 or 40 or 60 or 80 per cent of capacity.

The effect of the volume of business upon profits may be indicated by a comparison of earnings with the volume of business transacted. The following table shows the gross sales and the profits of manufacturing corporations annually from 1922 to 1932.

First, it will be observed that the increase in gross

GROSS SALES AND PROFITS OF MANUFACTURING
CORPORATIONS, 1922-32^a

Year	Gross Sales (Millions of dollars)	Net Profits ^b	
		Aggregate (Millions of dollars) ^c	Ratio to Capitalization
1922	42,576	2,832	7.6
1923	53,889	3,784	9.5
1924	51,436	2,978	7.0
1925	57,084	3,973	9.0
1926	59,863	4,041	8.7
1927	60,932	3,405	7.1
1928	64,361	4,280	8.6
1929	69,236	4,861	9.2
1930	57,687	1,530	2.9
1931	41,978	- 501	-1.1
1932	29,078	-1,588	-4.7

^a Based on *Statistics of Income*, for different years. The profits are figured upon the capital exclusive of bonded indebtedness.

^b "Compiled net profits" corrected for intercorporate dividends.

^c Computed before deduction of corporation taxes.

sales as business staged a strong recovery in 1923 resulted in a great increase in profits. The effects upon profits of the sharp business reaction of the first half of the following year are also clearly in evidence. Much more striking, of course, were the effects of the great depression which began in 1930. A decrease in gross sales from 69 billions in 1929 to 57 billions in 1930 decreased profits by more than two-thirds. With the further reduction in the volume of business in 1931 and 1932, profits were completely wiped out (in manufacturing corporations as a whole) and replaced by large deficits. To be sure sharp price reductions which could not be offset by corresponding reductions in cost played an important part in eliminating profits during these years. But in general the industries which have been able to operate at less than 50 per cent capacity during the course of the depression have sustained heavy deficits, while those which have been able to continue operations at a 60 or 70 per cent rate have usually earned something over and above fixed charges.

The restoration of net earnings and dividends which have occurred in 1934 and 1935 are, of course, very directly related to increases in the volume of business. The influence of wage rates and other elements of direct cost upon the margins of profit in such a period are dwarfed in comparison with the influence of the volume of business. The importance of volume is perhaps most strikingly revealed by the admitted fact that an increase of only 15 or 20 per cent in railway traffic at the present time would mean the difference between a precarious railroad situation and reasonably satisfactory earnings.

In order to reveal the bearing of the volume of production upon costs in more concrete terms, we have obtained from a large company in the field of heavy manu-

facturing a careful estimate of the unit cost at varying levels of operation—assuming no change in wage rates or other direct costs of operation. The company in question has no bonded indebtedness.

Fluctuations of Cost with Volume of Business

Percentage of Operation	Cost per Unit
20	164
40	132
60	119
70	115
80	108
90	103
100	100

It will be seen that the cost per unit decreases continuously as the percentage of operation increases—though the rate of cost reduction declined as maximum output is approached. In this particular industry the amount of plant and equipment is large relative to the labor employed, hence this may be regarded as an extreme illustration. The general principle, however, holds for every enterprise.

The moral of this analysis is that if through the offer of lower prices business men are able to expand the volume of sales, profits need not necessarily be reduced. The reduction in unit costs offsets the lower prices and tends to protect the profit margin. Even though the margin on each unit might be less, such loss may be offset by gain accruing from the sale of more units. While in the nature of the case it is impossible to generalize as to the precise effects upon profits, it is not improbable that profits would in many cases be increased.

BUSINESS PROFITS AND BUSINESS EXPANSION

When it is stated that profits are the motivating force in business activity, and that the payment of wages depends upon the existence of profits, some people immediately jump to the conclusion that profits necessarily come first in time sequence. That is to say, it is assumed that before we can have business expansion we must earn the profits with which to make such expansion possible. Indeed, this notion is deeply imbedded in economic literature. In connection with discussions of the business cycle, for example, it is frequently contended that recovery depends simply upon an adjustment of costs and prices at a profitable level; then, when profits are earned, funds will become available with which to finance an expansion of output.

It is obviously true that profits are essential under a profit system. But it does not follow, as some are wont to put it, that "profits make prosperity," or that profits somehow have to be made before any expansion in business can occur. In the light of the analysis and data presented in this chapter, it is apparent that profits depend chiefly upon the volume of business. They expand concurrently with the volume of business—because of the expanding volume; they do not increase first, with business expansion following. It is true, however, that as profits are made further expansion is facilitated, the process being interacting and cumulative.

The relation of profits and business expansion may be conveniently illustrated by reference to recent events in the motor industry. After a profitable season—based, it must be observed, on a great increase in automobile sales to consumers—the General Motors Corporation enlarges its dividend disbursements and also announces a program of improving and expanding plant and equipment. For

this purpose use will presumably be made of profits retained in the business—though in view of the improved credit position funds could readily be borrowed on advantageous terms. We do not wish to be understood as contending that the level of wages and other operating costs is of no significance or that business expansion is not stimulated when profits are large. We merely observe, first, that the volume of profit depends largely upon the volume of sales, and, second, that instead of business expansion's being contingent upon an antecedent increase in profits, any significant increase in total profits can come only with an expansion in business.

In concluding this analysis, we must return to the fundamental question at issue. In the prosperity period of the twenties there was a great increase in production efficiency; but there was no corresponding reduction in selling prices—indeed retail prices did not decline at all. Instead of vigorously reducing prices as costs were reduced, the practice prevailed over broad and basically important sections of American industry to hold prices at or near existing levels, or even to advance them when the current of demand ran strong. Thus the volume of sales was prevented from attaining the dimensions it might have reached.

Instead of tapping the vast sources of potential demand residing in the unfilled wants of the American people, price policy tended to freeze the market at existing levels. Instead of endeavoring to expand sales through price reductions, we sought by high pressure salesmanship and installment credits to induce people to buy more than they could afford. Despite such temporary stimulation of demand and the expansion of sales abroad by means of credits and dumping policies, American industry in gen-

eral continued to have a substantial margin of unutilized productive capacity.

The point must again be noted, moreover, that, had the volume of sales been expanded as a result of price reductions, unit costs would have been reduced and profits might well have been larger. The business manager who progressively reduces selling prices as technological improvements are made need have no real concern over the long-run trend of profits. The history of business enterprise shows that under such conditions profits usually take care of themselves. Even if profits should not actually increase, a contribution is nevertheless being made through the expansion of wealth production toward raising the level of material well-being—which is the ultimate purpose of an economic system.

CHAPTER XI

ECONOMIC PROGRESS AND THE DEMOCRATIC IDEAL

We now draw to a close our exploratory study of the distribution of wealth and income in relation to economic progress. When this investigation was begun three years ago, we set up two questions as marking the general lines of our inquiry: (1) is our failure to establish a universally high standard of living due to inadequate capacity to produce the necessary goods and services; or (2) is it attributable to an inability to handle the pecuniary processes of income distribution in such manner as to call our productive capacities into full operation?

In pursuing these inquiries, we did not attempt to calculate results which might conceivably be achieved by a shift to some other form of economic organization, notably the more drastic, not to say revolutionary, changes contemplated under state Socialism, Fascism, or Communism. To us, it seemed a more fruitful, indeed a more scientific, procedure, to begin close at home with the economic institutions under which we are now operating and upon which data of actual performance are available.

With such a task in view, we set our major question in the following terms:

Can we not, within the limitations of our natural resources, our people, and our traditions, with only evolutionary modifications and readjustments to current conditions, restore and stabilize such a productivity of goods and services as will provide a general standard of living as high as that which we have known at the peaks of prosperity in the past? Can we not expect to im-

prove on our best past performances until every citizen (barring physical or mental defectives) who cared to exert himself could attain a material standard of living equal at least to that of the so-called "middle class" in the prosperous days before the collapse of 1929?

As recapitulated in Chapter I of this volume, the findings of the first division of our study were to the effect that plant and labor capacity under prevailing techniques and schemes of industrial management showed an unutilized capacity capable of bringing the incomes of all the lower classes well above the \$2,000 per family level. We limited our task to that of measuring capacity practically attainable under existing technical conditions and left to others the more elusive problem of prophesying how much additional capacity might be developed out of the potentialities of new techniques or plans of business reorganization.

As to income distribution and its results, we found in the second division of our study the proceeds of the nation's productive efforts going in disproportionate and increasing measure to a small percentage of the population—in 1929 as much as 23 per cent of the national income to 1 per cent of the people. We found the unsatisfied wants—*needs* according to any good social standard—of the 92 per cent of all families who are now below the level of \$5,000 annual income sufficient to absorb the product of all our unused capacity under present conditions of productivity and still demand much more from such unexplored potentialities as might thereafter be opened up. We found the incomes of the rich going in large proportion to savings and these savings strongly augmented by others impounded at the source by corporations through the practice of accumulating corporate surplus. These savings, after providing for such increase

of capital goods as could be profitably employed, we found spilling over into less fruitful or positively harmful uses, ranging from foreign loans (bad as well as good) to the artificial bidding up of prices of domestic properties, notably corporate securities.

Thus, we began to discern the answer to our question whether the basic defect in our economic system, not discovered in the technical processes of production, is to be found in the way in which we conduct the distribution of income. The answer is affirmative: this is the place at which we do find basic maladjustment.

The magnitude of the disorder and its significance in terms of national well-being is, however, not fully measured by the amount of the loss in income at any given moment of time. We found from our measurements of productive capacity that we were able to operate in good times at about four-fifths capacity and on the average over such a period as that from 1922 to 1933 at only about two-thirds capacity. But this is only a part of the story. The answer thus far is in relatively static terms, whereas we should think in dynamic terms of a society marching forward at as brisk a tempo as the progress of its knowledge and invention makes attainable. In a society in which consumptive demand lags behind productive capacity we have not only unutilized capacity but also a retardation of the rate of new capital development.

Could we find means of closing the 20 per cent gap between capacity and utilization, we should in the process be doing something more—something of even greater importance. We should be progressively reaching over the old limit of productive capacity, tapping new sources of efficiency, unleashing forces of progress which come to action only as the prospect of profitable use becomes

clearly discernible. As this dynamic situation is attained, suppressed patents are brought to use, new invention stimulated, obsolescent machines displaced by others of more efficient character. Then integrated processes and mass production may move forward as the engineer lights the way¹ and labor-saving machinery may be introduced without fear that workers will starve. No actual addition to production can be a harm to the economic body except as our system fails to provide for distributing the net product (above the needs of replacement and improvement) fully and promptly into the hands of actual consumers (not mere accumulators).

In computing productive capacity in the first volume of this series we were concerned, as already indicated, solely with estimating what might be turned out at the existing stage of industrial development. Our conclusion that we have not yet reached a stage in which productive capacity is in excess of consumption requirements—that the age of plenty for everyone has not yet arrived—was, curiously enough, interpreted by some to imply that we did not think the economic system capable in the future of providing satisfactory living standards for the American people as a whole. Nothing could be further from our view. The accumulated knowledge resulting from modern² scientific and technical discoveries is so

¹ This does not mean that all new types of equipment or new methods of production can necessarily be put in operation instantaneously upon their discovery or perfection to the operative stage. It is obvious that at times the rate of invention and scientific discovery may move so fast that the immediate installation of the new process would involve costs of change disproportionate to the amount of saving or betterment to be accomplished by the use of the new process. As an extreme case, plants might be laid by for modernization so continuously as not to have any time left for operation. It is this necessity for compromise between engineering and economic considerations which dictates the use of the phrase "no actual addition to production" at the beginning of the next sentence in the text.

great that were it rapidly and continuously applied to the improvement of productive processes, we could have a rate of industrial advancement, and attain a level of production in the not distant future, that would dwarf anything that has been known in the past. The problem is to create the conditions essential to the promotion of ever more rapid technological advances.

On the basis of material presented in the volumes on *America's Capacity to Consume* and *The Formation of Capital*, together with Part I of this book diagnosing the nature and magnitude of the maladjustment of our economic system which results from the present distribution of income, we have in Part II analyzed the major lines of attack by which an acceptable rate of economic progress may be brought about.

All the world loves a panacea. But anyone broadly experienced in the actual operation of our business world or professionally trained in the study of social organisms knows that there is no single formula by which desired results can be brought about, just as the natural scientist long ago learned that there is no philosopher's stone and no fountain of youth. Sound proposals for a better system for the distribution of income cannot be over-simplified nor can the prospect of general amelioration come through attention to a single phase of the process.

The ultimate distribution of the national income is brought about through an elaborate process of pricing goods; determining wage and salary payments; disbursing premiums and bonuses; accumulating surplus and determining other aspects of corporate fiscal policy; operating profit-sharing, insurance, and pension schemes, both public and private; and carrying out an elaborate system of taxation and government expenditure. It is not

likely that any of these general devices will entirely disappear from our distributive system in the near future. Hence we need to consider several types of distributive processes in their relation to the basic principles of economic progress discussed in the earlier stages of our study.

First we looked at taxes. In Chapter VI, we have indicated our belief that taxation will ultimately play a considerable role in the process—though for some time to come it will be a part which is distinctly minor as compared with the total of private distributive operations. We have also pointed out some possibilities as well as limitations in the use of taxation as a means of promoting national economic progress. We hope in the not distant future to be able to make a careful study of the field of taxation as it relates to economic welfare and not merely to administrative convenience.

Analysis has also been made of the more direct attacks upon the distributive problem through enhancement of wages and the elaboration of profit-sharing programs. Our study of this phase of the question, however, has led us to the conclusion that difficulties and complications inherent in this method of attack, as well as its unequal application to different classes and occupational groups, stand in the way of its being relied upon as the principal means for attaining such a distributive system as would promote maximum economic progress.

Even so, paychecks will continue to be, for as long as we can see in the future, the principal vehicle through which the total income produced by society is apportioned among its individual members. The relationships among these shares and the devices by which they are adjusted will continue to be matters of deep public concern even

though the adjustment of the individual differences does not furnish the key by which the storehouse of generally increased productivity may be unlocked.

Extensive and detailed further studies of the various aspects of the problem of wage adjustment, including many types of supplementary payment—both public and private—need to be made. Such studies should not have as their frame of reference the static idea of a more equitable division of some fund of wealth already produced. Instead, they should be animated by the dynamic concept of wage and salary payment as the means of drawing out the full labor power of our available working force and thus materially augmenting the volume of that which is to be divided.

Since the economic system of the modern world is organized on a pecuniary basis and conducted with the aid of a whole series of financial institutions, private and public, further detailed study of the operation of the financial system is also required. In view of the vitally significant role played by commercial banking credit in providing both working and fixed capital for the needs of an expanding economy, particular study should be given to the problem of safeguarding the use of credit, while giving the indispensable flexibility that is required.

Finally, there is one type of distributive reform which in our judgment outranks all others in its promise of attaining the goal we seek. This is in the gradual but persistent revamping of price policy so as to pass on the benefits of technological progress and rising productivity to all the population in their role of consumers. Such a procedure seems to us to assure the maximum gain to the masses both in the short-run and in the long-run. At the same time it does not destroy the profit motive nor jeopardize the winning of such profits as are necessary

to maintain our capital fund and make possible the financing of improvements in plant and equipment on a basis even more liberal than that now obtaining. To seek the acceleration of economic progress by means of price reduction is not to attack the system of private capitalism but rather to return to the very logic upon which that system was justified and extolled by both lay and professional students of the economic process during the days when the system was assuming its present general character.

The basic economic policy which we are enunciating does, however, definitely attack what we regard as a serious abuse of the profits system and the institutions of private capital which have grown up in modern times. This is the tendency to centralize economic advantage, to protect existing business enterprises by protecting the price structure. For more than fifty years this process has been developing through the devices of corporate consolidation, pools, trusts, cartels, trade associations, and code authorities. Particularly since the World War, and often with the active assistance of governments, efforts have been going forward to "stabilize" existing business situations and to underwrite the prosperity of individuals, corporations, or large business groups by attempting to stabilize prices. We believe the evidence is clear that such attempts, however well intentioned, are dangerously short sighted. They result inevitably in "freezing" situations which in the interest of economic progress must be left as fluid as it is possible to make them.

A certain amount of economic progress can be secured by institutions and practices which advance the interests and protect the prosperity of particular lines of business, of special occupational groups, of financial solidarities, all relatively few in number. But we need to obtain eco-

conomic progress in a broader measure than this. We need economic progress compatible with the richness of our resources, the technical power put in our hands by modern scientific knowledge, and the labor power of a capable working force most of whom want to give their labor steadily and effectively in order that they may win the means to more ample living. We need economic progress that includes all our people, the unskilled laborer as well as the master of a trade, farmers as well as townsmen, those seeking to develop a new business as well as those entrenched in an old one—the masses, not the classes.

This is not to inject ethical values or political ideals into an economic problem. The underlying purpose of business is to serve people; indeed only as it serves people can it serve its own best interests. To serve a small part of the people cautiously, guarding oneself at every turn lest one's own advantage might be made less by passing on the benefits of new knowledge or better methods, will give but a cramped life and a stunted development even to one's own enterprise. To prosper to the full requires constant reaching out to serve more people and to serve them more fully. Taken for business as a whole, it means serving all the people up to the maximum possible under technical limitations.

In other words, growth in the economic organism must proceed from the deepest and broadest possible rootage. The elaborately industrialized system known as "mass production" marks the highest level attained under man's productive programs. But we cannot have the economics of mass production save in an economy of mass consumption. Each is the condition of the other. The more acute minds within the ranks of business leadership have perceived these facts of the economic process

and that only by acting in conformity with them can they assure the long-time success and growth of their own companies as well as minister to general well-being. Some of them have found in their own particular enterprises soundly conceived and practically workable ways of putting price-reducing policies into effect. Even among those who perceive the underlying principle and are seeking to make it operative, difficulties present themselves and much care must be given and much study applied to detailed proposals of the manner in which and the rate at which these fundamental business readjustments can be worked out. It is our hope that we may continue particularized and intensive studies in this field, supplementing them with the practical experience of business executives. In such work we bespeak their interest and counsel and co-operation.

No attempt has been made in this volume to set forth the details of such a price program as we have been sketching in broad outline. It would need to be highly detailed to meet the peculiar situations of varying industries, and the time is not yet ripe for the presentation of anything more than general principles. Extended study of the general problem has, however, led us to a profound conviction of the validity of the underlying principle. We believe that this general proposition today presents an open challenge to the business men of America.

There is general faith that we will come out of the depression and rise in due time to levels of prosperity better than the best attained in the past. But the pathway of this achievement is still obscure. It is pointed out that there does not appear to be on the horizon any new and distinctive factor or circumstance which will lead the way to a new economic advance—such as the settlement of a

virgin empire, or the development of transportation or great new divisions of industry which contributed to growth in former periods of economic expansion.

Perhaps the newness of the new endeavor may lie in the principle involved or the methods employed rather than in any novelty in the line of production which it concerns. In putting the old common necessities of food and clothes and housing within reach of the millions who are now underfed, ill-clad, and housed only in the tenement of the city slum or the shack of the country slum, we have an ample and accessible field of business enlargement. With capital resources ample and labor abundant to the needs of an increasingly automatic machine technique, we are confident that this goal is practically attainable if only our distributive system is readjusted along the general lines which have been set forth.

APPENDIXES

APPENDIX A

A FEW POINTS RE-EXPLAINED

MEASUREMENT OF PRODUCTIVE CAPACITY

In order clearly to understand the materials presented in *America's Capacity to Produce*, it must be remembered that the study was undertaken for the purpose of exploring a particular hypothesis, relating to the effect of wealth distribution upon national productivity. As was pointed out in the introduction, there is no statistically practicable way of measuring productivity in a variety of physical units having no common denominator, whereas a statement in value terms would involve complications which would obscure the very fact which we were attempting to illuminate. The most feasible way of showing productivity in broad general terms was as a ratio of actual product.

In such ratios, capacity is a purely physical concept and thus does not involve the question of whether that productive power would be called into operation by a particular increase in price or whether the putting out of a certain additional product would cause a specified decline in price. At this stage of our study, we sought merely to ascertain whether unutilized capacity was piling up and the magnitude to which it existed at a particular time.

Such an idea of physical capacity is sometimes referred to as an "engineering" concept. This characterization, however, is only partly correct, since the engineer would count as capacity the whole amount that plant and personnel were technically capable of producing under continuous operation. What we needed was an estimate of

engineering possibilities as qualified by limitations of weather, consumers' habits, and similar considerations which are social in character rather than economic in the sense of being price-controlled.

It must be admitted that this is a fine distinction, but it is one which is of fundamental importance if our exploration of the idea of productive capacity is to proceed by a series of definitely marked steps rather than to attempt to consider all aspects of the problem at once—with confusion inevitably resulting. The distinction has in fact proved to be too much for certain commentators. Some of them have leaped to the conclusion that, because we realistically took into account the limitations in the way of a society living in a land that has both weather and various non-economic determinants of economic behavior attaining 100 per cent utilization of productive resources, we were accepting these limitations. Harold Loeb, of the National Survey of Potential Product Capacity, says:

Brookings scrutinized productive capacity and accepted current conventions and institutions as a limiting factor. Since all producers produce everything they can sell at a profit and since they cannot under our system produce goods on any other conditions, the acceptance of custom or current business practice would seem to make the Brookings hypothesis of 19 per cent increase extremely doubtful. . . . To say that in 1929 we could have produced 19 per cent more goods and services than we did produce if we had in 1929 produced 19 per cent more goods and services than we could have produced, does not seem to us enlightening.¹

The obvious error in this interpretation lies in reading the second sentence into the terms of our computation when it was precisely the thing which we isolated in the form of an hypothesis to be tested. Such "custom or current business practice" as was a part of our formula of measurement specifically excluded the whole matter of

¹ *Controversy*, June 15, 1935, p. 5.

ability to buy. Mr. Loeb's last sentence, freed of disingenuousness, would be to this effect:

Brookings said that in 1929 we could have produced 19 per cent more goods and services than we did produce if we had in 1929 produced all the goods of which we were technically capable regardless of the question whether there was a profitable market for them. Since I have said that producers *cannot* under our system produce goods on any other conditions than those of being able to sell at a profit, I am substituting "profitable operation" for "technically practicable operation" which was the basis of the Brookings estimate.

A much more frank and enlightening comment on the difficulty of excluding price considerations from estimates of capacity was contained in the review of Professor McCracken in the December 1934 issue of the *American Economic Review* (p. 686). He observed:

The strategy of ruling out of the picture idle and submarginal plants and mines is one of doubtful merit. True, it simplifies the problem of capacity measurement, but it does so by ruling out an important item. Submarginal plants are not engineering concepts. They are wholly economic and related to price. If the price of coal goes up, mines which were not a part of America's capacity to produce coal immediately become such.

This matter is one which we found it impossible to handle in a completely satisfactory manner. It is true that submarginality is an economic and not an engineering concept. But to say that submarginal plants are "wholly economic and related to price" is to oversimplify the matter. Some idle plants or idle machines within a plant are technically quite the equal of others which are in operation. In other cases, the idle machine, or plant, or mine is one which has dropped out of production definitely because of its relative inefficiency. It would not at all follow, however, that such a plant would with an advance in price come back into operation. As pointed out in *America's Capacity to Produce*, mines out

of use for a time often become irreclaimable and, in the case of manufactured products, the demand for added product is likely to be met by the installation of new machines or plants of superior type rather than incurring the expense of rehabilitating those which have been for some time idle and are in the average of cases less up-to-date and efficient than those which have remained active.

We felt distinctly that too great a hazard was involved in attempting to estimate the productivity of one-time productive plants now on the border-land between the obsolescent and the obsolete. As is explained on pages 25, 54, 65, 102n, 117n, 140n, 141, 146, 174, 301n, 419, 420n, and 455-58 and by the charts on pages 53, 66, 80, and 81, the only reasonable expedient appeared to be to present figures for the capacity of active properties with a second figure where possible for idle plants. Unfortunately data on idle manufacturing equipment is very meager. Expert opinion is heavily against the idea that any considerable amount of capacity in the mines listed as idle would be reclaimed under any fore-seeable conditions.

SAVINGS AND INVESTMENTS IN 1929

Since the publication of *America's Capacity to Consume*, William H. Lough has published a volume under the title, *High Level Consumption*, which contains estimates of national expenditures and savings. An appendix is devoted to analyzing the difference between his estimates and those derived in our study. Mr. Lough's method of computing consumptive expenditures consists mainly in "building up estimates from census records of output and from other records of receipts and transactions," whereas our estimates were built up from family budget studies, the totals of which were checked against census data.

Although Mr. Lough contends that the family budget method of estimating expenditures is fundamentally de-

fective, it nevertheless appears that our estimates of aggregate national expenditures for food, attire, and home maintenance are very close to those derived by his method. The figures, in billions, are: food, 19.8 and 19.6; attire, 11.1 and 12.1; home maintenance, 21.5 and 22.4. The chief differences are found in connection with the items "other living" and "savings," particularly the latter.

Our computation of savings is derived in the main from budget surveys. Mr. Lough, on the other hand, has computed his savings from the records afforded by the financial markets, in the form of life insurance premiums, bank accounts, security purchases, etc. He arrives at a *net* savings figure for 1929 of 9.3 billions, which he compares with a figure of 17.8 billions found in *America's Capacity to Consume*.

This difference is largely explained by two items included in the estimate of 17.8 billions which are not included in Mr. Lough's figure. First, we have included direct savings made by individuals in the form of improvements in home, farms, and non-corporate business properties, amounting probably to two or three billions of dollars. Second, the 17.8 total includes all funds devoted to investment, whether derived from current income or from capital gains. If we were to further subtract 6.2 billions of capital gains (our estimate of the *total* amount), we should have approximately 9 billions. The results obtained by Mr. Lough's method, with allowance for these two items, thus tend to support the general reliability of our estimates. The surprising thing, in view of the rough character of the data which have to be used by either method, is that the results should be as close as they are.

In view of the fact that Mr. Lough as well as some other readers appear to have been disturbed by the inclusion of capital gains in our computation of the national monetary income in 1929, a further word of explanation

is perhaps required here—although the reasons are fully set forth in *America's Capacity to Consume*. To our way of thinking, capital gains should be included in national income for some purposes and not for others. When we are measuring the growth of national income over a period of years, we exclude capital gains as not representing any increase in produced goods and services. But when we are considering the actual *monetary* expenditures and *monetary* savings made by individuals, it is necessary to include income derived from capital gains when estimating disbursements for various purposes.

Some of the income derived from capital gains in 1929, for example, probably the larger part, was invested in the security markets. Some of it was also spent for consumptive commodities—the demand for luxury goods, and hence the production thereof, being materially expanded in 1928 and 1929 as a result of expenditures made from windfall profits. The *aggregate* consumptive expenditures and money savings of the nation, in the very nature of the case, include funds derived from speculative profits. Indeed they are automatically included in computations like Mr. Lough's, which are derived from the records of the financial markets and from census data covering production and sales of commodities. Since they comprise a portion of the total disbursements they cannot be subtracted unless the total purchases of consumers' goods and securities combined are reduced by a like amount.

It is commonly assumed that when capital gains are eliminated from money savings we obtain an accurate picture of the amount of real capital created. The truth is, however, that the volume of money savings from *actual income* may not be matched by a corresponding production of capital goods. As we have shown in *The Formation of Capital*, the volume of securities floated for the construction of new capital equipment may be very much smaller than the volume of funds seeking

investment. This was the situation for several years before the speculative gains from stock market operations assumed large proportions; indeed, as we have indicated, the capital gains were themselves largely the result of an inflation of values arising out of a redundant supply of money savings.

Mr. Lough's figure of 9.3 billions of savings in 1929—computed from the records of financial transactions—does not represent that amount of *real savings* in the sense of actual additions to the supply of capital goods. The sale of securities for productive financing in that year was only a little over one-third of that amount. Approximately 4 billions went to purchase the securities of investment trusts and public utility holding companies, which were using the money to buy other securities rather than to expand actual plant and equipment.

APPENDIX B

STATISTICAL TABLES

I. PRODUCTION INCOME AND POTENTIAL PRODUCTIVE CAPACITY, 1922-1934
(In millions of dollars)

Year	Total Income Produced				Potential Productive Capacity. In 1929 Dollars ^a
	In Current Dollars ^a	As a Percentage of 1929	In 1929 Dollars ^b	As a Percentage of 1929	
1922.....	59,602	72.7	63,474	77.5	75,534
1923.....	68,381	83.5	69,991	85.4	83,289
1924.....	69,924	85.3	71,570	87.3	85,168
1925.....	75,918	92.7	75,315	91.9	89,625
1926.....	77,177	94.2	77,254	94.3	91,932
1927.....	77,003	93.4	78,335	95.6	93,219
1928.....	79,679	97.2	79,759	97.3	94,913
1929.....	81,940	100.0	81,940	100.0	97,508
1930.....	70,119	85.6	74,744	91.4	97,508
1931.....	55,779	68.1	66,800	81.5	97,508
1932.....	41,605	50.8	57,000	69.6	97,508
1933.....	43,500	53.1	59,000	72.0	97,508
1934.....	49,500	60.4	60,400	73.7	97,508

^a 1922-29 inclusive from *America's Capacity to Consume*, Table 1, p. 148; 1930-32 inclusive projected on basis of estimates of Department of Commerce (*Survey of Current Business*, August 1935); figures for 1933 and 1934 are also based on estimates of Department of Commerce and are *highly tentative*. The figures do not include additions to or subtractions from "surplus" of non-corporate business. If these were included, the decline from 1929 would appear to be greater than here shown.

^b For the purpose of deflation a composite index was obtained by combining the Bureau of Labor Statistics index of wholesale prices, Carl Snyder's index of general prices, and an index of wages per hour outside of agriculture. The weights assigned to the three indexes are 5, 3, and 2 respectively. The composite index undoubtedly falls short of an ideal measure of changes in the value of the product resulting from changes in the value of money, yet it is perhaps as good an index as can be devised with existing data. Using different weights would not materially affect the results. The merits and deficiencies of the index may be indicated by the following statement of the items entering into its composition. Since Snyder's index, which is given a weight of 3, is already a composite containing wholesale prices and wages, our final index gives a greater weight to wholesale prices and wages than is indicated by the original weights. On the basis of the weights used by Snyder it would

2. INDEXES OF AGRICULTURAL, MANUFACTURING, AND MINERAL PRODUCTION, 1922-34

Year	Agricultural Products ^a	Manufactures ^b	Minerals ^b
1922.....	92	86	74
1923.....	97	101	105
1924.....	102	94	96
1925.....	102	105	99
1926.....	106	108	108
1927.....	102	106	107
1928.....	106	112	106
1929.....	104	119	115
1930.....	103	95	99
1931.....	107	80	84
1932.....	100	63	71
1933.....	98	75	82
1934.....	94	78	86

^a Average production 1923-25 = 100. From *Yearbook of Agriculture*, 1934, p. 693. The figure for 1934 is the preliminary estimate of the U. S. Department of Agriculture.

^b Average production 1923-25 = 100. From *Federal Reserve Bulletin*, March 1935, p. 163.

appear that the final weights in our own index are: wholesale prices, 5.6; wages, 2.45; and all other items—such as retail food prices, rents, securities prices, machinery—1.95. It may perhaps be assumed that the retail pricey and also the security and realty prices introduced by Snyder's index will reflect to some extent changes in prices of professional and other services, thus re-enforcing the labor portion of our index. The weakest point in the index is the wage series, which fails to represent adequately the changes in the value of services rendered by salaried workers and entrepreneurs in trade and in the professions.

^c In our previous investigations, it was found that there was about 19 per cent unutilized capacity in 1929, and that this was approximately the figure for the preceding five years. From 1922-29 we have raised the figures in Column 3 by 19 per cent. Since we have not computed estimates for the depression years, the 1929 total is projected forward. See Chap. 1.

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3. PRODUCTION OF CONSUMER AND CAPITAL GOODS, 1922-33^a (Based on 1929 prices with 1929=100)

Year	Consumer Goods ^b	Capital Goods ^c
1922.....	74.4	74.1
1923.....	81.4	84.6
1924.....	85.3	79.7
1925.....	90.8	83.1
1926.....	94.0	87.6
1927.....	95.8	89.8
1928.....	96.6	95.3
1929.....	100.0	100.0
1930.....	90.8	88.8
1931.....	82.3	68.6
1932.....	74.0	50.6
1933.....	72.9	42.8

^a Based on estimates of Simon Kuznets, "Gross Capital Formation, United States, 1919-33," *Bulletin No. 52*, National Bureau of Economic Research, Nov. 15, 1934.

^b Includes durable, semi-durable, and perishable goods. Includes residential construction, the estimates for which are very rough. Dr. Kuznets' figures for 1925-32 have been raised to allow for "unallocable" construction. Prior to 1925 the estimates are based on the Federal Reserve Board index of residential construction.

^c Represents production which is destined for capital equipment. Includes non-residential construction and public works. They represent replacements of existing capital as well as new capital construction.

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4. DIVISION OF THE NATIONAL INCOME, 1922-34^a (Realized income from productive enterprises and services in current dollars)

Year	Total		Employees		Individual Enterprisers		Investors and Other Property Holders	
	In Mil- lions of Dollars	As a Per- cent- age of 1929	In Mil- lions of Dollars	As a Per- cent- age of 1929	In Mil- lions of Dollars	As a Per- cent- age of 1929	In Mil- lions of Dollars	As a Per- cent- age of 1929
1922..	57,926	72.7	37,700	70.7	12,093	85.2	8,133	66.9
1923..	65,949	82.7	42,893	80.4	14,185	99.9	8,871	72.9
1924..	68,461	85.9	44,493	83.4	14,745	103.9	9,223	75.8
1925..	73,067	91.7	46,855	87.8	15,960	112.5	10,252	84.3
1926..	74,954	94.0	49,245	92.3	14,857	104.7	10,852	89.2
1927..	76,007	95.4	49,724	93.2	15,164	106.9	11,119	91.4
1928..	77,291	97.0	50,617	94.9	15,078	106.3	11,596	95.3
1929..	79,702	100.0	53,350	100.0	14,188	100.0	12,164	100.0
1930..	74,374	93.3	48,918	91.7	13,301	93.7	12,155	99.9
1931..	63,106	79.2	41,191	77.2	11,495	81.0	10,420	85.7
1932..	49,606	62.2	32,000	60.0	9,112	64.2	8,494	69.8
1933..	46,063	57.8	30,410	57.0	8,411	59.3	7,242	59.5
1934..	51,300	64.4	34,600	64.9	9,250	65.2	7,450	61.2

^a The figures above show only the income from productive enterprises and services that was distributed each year to individuals. Income produced, but retained in business, is excluded.

Basic data for the years 1922-29 are from *America's Capacity to Consume*, p. 157. For the years 1930-33 the figures are based on revised estimates from Division of Economic Research of the Department of Commerce, modified to agree with the data from *America's Capacity to Consume*.

5. CHANGES IN CORPORATE SURPLUS, 1922-32^a

Year	Amount (In millions)
1922.....	1,676
1923.....	2,432
1924.....	1,463
1925.....	2,851
1926.....	2,223
1927.....	996
1928.....	2,388
1929.....	2,238
1930.....	-4,255
1931.....	-7,327
1932.....	-8,001

^a Includes all corporations except life insurance companies. The figures are exclusive of the profits or losses of corporations resulting from the sale of capital assets. Data for the years 1922-29 are from *America's Capacity to Consume*, pp. 152-53; for the years 1930-32 inclusive they are from *Statistics of Income*, U. S. Bureau of Internal Revenue.

APPENDIX C

PRICE AND WAGE MOVEMENTS

In Chapters VII and IX numerous series of price and wage data were presented which require supporting figures and explanatory notes as to sources and methods of compilation.

WAGES AND PRICES, 1801-1932

The chart facing page 107 presents indexes of wholesale prices, money wages, and real wages for the years 1801-1932. The indexes used in the chart are cited and explained below.

The wholesale price index is compiled by the Bureau of Labor Statistics and is presented in *Bulletin No. 572*, page 14.

The money wage index has been compiled by Dr. Rufus S. Tucker and was published with full explanation of the method employed in Barron's *National Financial Weekly*, October 23, 1933. Dr. Tucker's figures cover the period from 1791 to 1932, but since he does not attach great value to the figures for the earlier years we are beginning the series at 1801.

In brief, Dr. Tucker's method of deriving a continuous series of weekly wages was as follows. For the period 1890-1932 he used Carl Snyder's *Composite Index*. From 1841 to 1890 Mr. Snyder's index was averaged with the Bureau of Labor Statistics' *Index of Hourly Wage Rates*, and with a reduced estimate of the index compiled by Professor A. H. Hansen. For the period before 1841 Tucker's index is based on C. D. Wright's

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**1. INDEX NUMBERS OF WHOLESALE PRICES, MONEY WAGES, AND
REAL WAGES, 1801-1932
(1926=100)**

Year	Wholesale Price	Money Wages	Real Wages	Year	Wholesale Price	Money Wages	Real Wages
1801.....	111.8	11.0	9.8	1841.....	70.5	15.6	22.1
1802.....	91.8	10.1	11.0	1842.....	65.7	16.1	24.5
1803.....	93.9	11.0	11.7	1843.....	61.8	15.6	25.2
1804.....	101.5	12.9	12.7	1844.....	62.1	15.6	25.1
1805.....	104.2	14.2	13.6	1845.....	62.6	16.1	25.7
1806.....	102.2	13.8	13.5	1846.....	64.8	16.5	25.5
1807.....	96.0	13.8	14.4	1847.....	64.9	16.5	25.4
1808.....	93.9	12.4	13.2	1848.....	61.8	16.5	26.7
1809.....	98.7	14.7	14.9	1849.....	60.1	16.5	27.5
1810.....	107.7	14.2	13.2	1850.....	62.3	17.0	27.3
1811.....	104.9	12.8	12.2	1851.....	64.5	17.0	26.4
1812.....	106.3	14.7	13.8	1852.....	62.5	17.0	27.2
1813.....	123.6	14.7	11.9	1853.....	66.4	17.4	26.2
1814.....	154.6	13.8	8.9	1854.....	68.8	17.9	26.0
1815.....	121.5	14.2	11.7	1855.....	68.9	18.3	26.6
1816.....	103.5	14.7	14.2	1856.....	68.9	18.3	26.6
1817.....	104.2	15.1	14.5	1857.....	68.5	18.8	27.4
1818.....	102.2	14.2	13.9	1858.....	62.0	18.8	30.3
1819.....	89.7	13.3	14.8	1859.....	61.0	18.8	30.8
1820.....	76.6	12.8	16.7	1860.....	60.9	18.8	30.9
1821.....	73.2	13.8	18.9	1861.....	61.3	18.8	30.7
1822.....	75.2	12.8	17.0	1862.....	71.7	19.3	26.9
1823.....	71.8	14.7	20.5	1863.....	90.5	22.0	24.3
1824.....	71.1	14.2	20.0	1864.....	116.0	25.2	21.7
1825.....	71.8	13.8	19.2	1865.....	132.0	28.0	21.2
1826.....	71.1	12.4	17.4	1866.....	116.3	29.8	25.6
1827.....	71.8	14.7	20.5	1867.....	104.9	30.7	29.3
1828.....	68.3	13.3	19.5	1868.....	97.7	31.2	31.9
1829.....	67.6	13.3	19.7	1869.....	93.5	32.6	34.9
1830.....	65.6	13.8	21.0	1870.....	86.7	33.0	38.1
1831.....	70.4	14.7	20.9	1871.....	82.8	33.0	39.9
1832.....	71.1	15.1	21.2	1872.....	84.5	33.0	39.1
1833.....	70.4	15.1	21.4	1873.....	83.7	33.0	39.4
1834.....	65.6	15.6	23.8	1874.....	81.0	32.1	39.6
1835.....	74.6	15.1	20.2	1875.....	77.7	31.2	40.2
1836.....	83.5	15.1	18.1	1876.....	72.0	30.3	42.1
1837.....	82.8	15.1	18.2	1877.....	67.5	28.4	42.1
1838.....	79.4	15.1	19.0	1878.....	61.7	27.5	44.6
1839.....	83.5	15.6	18.7	1879.....	58.8	27.5	46.8
1840.....	71.1	16.1	22.6	1880.....	65.1	27.5	42.2

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Year	Wholesale Price	Money Wages	Real Wages	Year	Wholesale Price	Money Wages	Real Wages
1881.....	64.4	28.9	44.9	1911.....	64.9	43.1	66.4
1882.....	66.1	29.4	44.5	1912.....	69.1	44.0	63.7
1883.....	64.6	30.3	46.9	1913.....	69.8	45.9	65.8
1884.....	60.5	29.8	49.3	1914.....	68.1	46.3	68.0
1885.....	56.6	29.8	52.7	1915.....	69.5	47.2	67.9
1886.....	56.0	29.8	53.2	1916.....	85.5	51.4	60.1
1887.....	56.4	30.3	53.7	1917.....	117.5	57.8	49.2
1888.....	57.4	30.7	53.5	1918.....	131.3	70.2	53.5
1889.....	57.4	30.7	53.5	1919.....	138.6	81.2	58.6
1890.....	56.2	31.7	56.4	1920.....	154.4	95.9	62.1
1891.....	55.8	32.1	57.5	1921.....	97.6	89.0	91.2
1892.....	52.2	32.6	62.5	1922.....	96.7	87.2	90.2
1893.....	53.4	31.2	58.4	1923.....	100.6	94.0	93.4
1894.....	47.9	29.4	61.4	1924.....	98.1	95.9	97.8
1895.....	48.8	30.7	62.9	1925.....	103.5	97.7	94.4
1896.....	46.5	30.3	65.2	1926.....	100.0	100.0	100.0
1897.....	46.6	30.3	65.0	1927.....	95.4	100.9	105.8
1898.....	48.5	30.7	63.3	1928.....	96.7	101.8	105.3
1899.....	52.2	31.7	60.7	1929.....	95.3	103.2	108.3
1900.....	56.1	32.6	58.1	1930.....	86.4	101.4	117.4
1901.....	55.3	33.5	60.6	1931.....	73.0	103.7	142.1
1902.....	58.9	34.4	58.4	1932.....	64.8	83.9	129.5
1903.....	59.6	36.2	60.7				
1904.....	59.7	36.2	60.7				
1905.....	60.1	37.2	61.9				
1906.....	61.8	38.5	62.3				
1907.....	65.2	40.4	62.0				
1908.....	62.9	39.0	62.0				
1909.....	67.6	40.4	60.0				
1910.....	70.4	43.1	61.2				

Wages and Prices in Massachusetts, and other material supplied by R. G. Hurlin of the Russell Sage Foundation.

In determining the real wages, weekly instead of hourly wage rates were used because of the gradual reduction in the length of the working day. While hourly rates enter into the unit cost of the product, they give an inaccurate picture of the working man's income, even when employment is steady.

The index of real wages has been derived by simply dividing the index of money wages by the index of wholesale prices.

REAL WAGES IN MANUFACTURING, 1900-34

In the chart facing page 108 we showed the movement of hourly earnings, the cost of living, and hourly real earnings from 1900 to 1934. The indexes used in this chart are cited and explained below.

Cost-of-living index. For the period 1914 to 1934 the index used is that of the United States Bureau of Labor Statistics. From 1914 to 1918 this index was computed only once a year. To obtain a figure for the year as a whole the December index number of the given year was averaged with those of the preceding year. Beginning with 1919 the index was usually computed for both June and December of each year. When this was the case, the annual average was derived by weighting the index average for June as 2 and for the preceding and following Decembers as 1 each.

For the years 1909 to 1913 inclusive we have used the index computed by the National Bureau of Economic Research and published on page 22 of *Income in the United States*.

For the period from 1899 to 1908 inclusive use has been made of several price series. The cost-of-living index compiled by Paul Douglas included neither rent nor sundries. Since these excluded items were rising in price during the period much more slowly than the commodities which were included, this index has a decided upward bias. We have endeavored to correct this in the following manner.

For rents, we have used an index computed by the Russell Sage Foundation, published by Carl Snyder in *Business Cycles and Business Measurements*, page 291. For sundries, no index is available; but it would seem,

from the fact that the sundries index computed by the National Bureau of Economic Research for the years 1909 to 1916 showed no tendency to rise, that the miscellaneous items in the household budget included under "sundries" must have risen only moderately between 1899 and 1909. We have assumed that this rise was 10 per cent, which is regarded as a liberal estimate. In computing the index shown in the chart we have weighted the items in the Douglas index at 65 per cent, sundries at 20 per cent, and rent at 15 per cent. This has been spliced onto the National Bureau Index at 1909.

Hourly wages. For the years 1920 to 1934 the index is based on the data for average hourly earnings of labor as reported by the National Industrial Conference Board.

The index for the period 1914 to 1919 is based on the average real earnings for July 1914, as reported by the National Industrial Conference Board. These earnings were taken as representative of those for the entire year 1914. The index numbers between 1914 and 1919 have been interpolated by the use of hourly earnings reported by Paul Douglas for the "payroll" manufacturing industries (*Real Wages in the United States*, page 101).

For the period 1899 to 1914 the following method has been used. For the census years 1899, 1904, 1909, and 1914 the index has been based on Brissenden's estimates of average hourly earnings, given in *Earnings of Factory Workers, 1899-1927*, page 356. For the intercensal years interpolations have been derived from the Douglas data for "payroll" manufacturing industries mentioned above.

Hourly real wages. The index in this case has of course been derived simply by dividing the index of hourly earnings by the index of the cost of living.

The rough figures derived by the methods outlined are shown in the table on page 185.

PRICE AND WAGE MOVEMENTS 185

**2. INDEX NUMBERS OF THE MOVEMENT OF REAL WAGES IN MANUFACTURING,
1900-34
(1926=100)**

Year	Cost of Living	Average Hourly Earnings	Average Real Earnings
1900.....	47.4	30.6	64.5
1901.....	48.3	31.4	65.5
1902.....	49.4	33.1	67.0
1903.....	51.2	34.1	66.6
1904.....	50.9	34.0	66.6
1905.....	51.2	35.0	68.5
1906.....	52.5	36.6	69.7
1907.....	54.8	38.6	70.4
1908.....	53.4	36.8	68.8
1909.....	53.6	37.7	70.3
1910.....	54.9	39.1	71.2
1911.....	55.2	39.6	71.8
1912.....	55.8	41.2	73.8
1913.....	56.1	43.1	76.8
1914.....	57.5	43.5	75.6
1915.....	59.3	43.5	73.4
1916.....	63.6	50.7	79.7
1917.....	74.2	59.7	80.4
1918.....	90.2	73.2	81.2
1919.....	103.6	86.6	83.5
1920.....	118.5	106.9	90.2
1921.....	103.4	92.4	89.3
1922.....	96.0	87.1	90.8
1923.....	97.2	95.2	98.0
1924.....	97.5	98.9	101.4
1925.....	99.3	98.7	99.8
1926.....	100.0	100.0	100.0
1927.....	98.6	101.4	102.8
1928.....	97.2	101.9	104.8
1929.....	97.2	103.7	106.7
1930.....	94.7	103.7	109.5
1931.....	86.2	99.4	115.4
1932.....	78.2	87.3	111.6
1933.....	74.7	86.4	115.7
1934.....	77.8	102.3	131.4

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3. PRICES OF STAPLE COMMODITIES, 1870-1900

Year	No. 1 Foundry Pig Iron, per Ton (Dollars)	Open-hearth Steel Rails, per Ton (Dollars)	Standard Sheetings, per Yard (Cents)	Standard Prints, per Yard (Cents)
1870.....	33.23	106.79	14.58	12.41
1871.....	35.08	102.52	13.00	11.62
1872.....	48.94	111.94	14.27	12.00
1873.....	42.79	120.58	13.31	11.37
1874.....	30.19	94.28	11.42	9.75
1875.....	25.53	68.75	10.41	8.71
1876.....	22.19	59.25	8.85	7.06
1877.....	18.92	45.58	8.46	6.77
1878.....	17.67	42.21	7.80	6.09
1879.....	21.72	48.21	7.97	6.25
1880.....	28.48	67.52	8.51	7.41
1881.....	25.17	61.08	8.51	7.00
1882.....	25.77	48.50	8.45	6.50
1883.....	22.42	37.75	8.32	6.00
1884.....	19.81	30.75	7.28	6.00
1885.....	17.99	28.52	6.75	6.00
1886.....	18.71	34.52	6.75	6.00
1887.....	20.93	37.08	7.15	6.00
1888.....	18.88	29.83	7.25	6.50
1889.....	17.76	29.25	7.00	6.50
1890.....	18.41	31.78	7.00	6.00
1891.....	17.52	29.92	6.83	6.00
1892.....	15.75	30.00	6.50	6.25
1893.....	14.52	28.12	5.90	5.25
1894.....	12.66	24.00	5.11	4.90
1895.....	13.10	24.33	5.74	5.25
1896.....	12.95	28.00	5.45	4.66
1897.....	12.10	18.75	4.73	4.70
1898.....	11.66	17.62	4.20	3.96
1899.....	19.36	28.12	5.28	4.25
1900.....	19.98	32.29	6.05	5.00

* *Statistical Abstract of the United States*, Department of Commerce, 1922, p. 698.

4. INCREASE IN TOTAL NATIONAL PRODUCT PER GAINFULLY EMPLOYED PERSON, 1922-29

Year	Index of Product per Capita ^a (1900=100)	Index of Proportion of Population Gainfully Employed ^b (1900=100)	Index of Product per Gainfully Employed Person	
			(1900=100)	(1922=100)
1922.....	118.0	102.8	115.0	100.0
1923.....	128.0	102.6	124.8	108.2
1924.....	128.4	102.3	125.2	108.9
1925.....	133.2	102.1	130.2	113.2
1926.....	134.9	101.8	132.6	115.0
1927.....	134.6	101.5	132.7	115.0
1928.....	135.6	101.3	133.8	116.0
1929.....	137.7	101.0	136.1	117.5
<i>Annual percentage rate of increase 1922-29</i>	1.8	1.8	2.0	2.9

^a *America's Capacity to Consume*, Table 3, p. 150.

^b Based on census; see table referred to in footnote above.

^c Least-squares trend.

A PROFIT-SHARING PLAN

(Suggested by Harry B. Wallace, President, Cupples Company, St. Louis)

For the purpose of helping to effect a wider distribution of newly created wealth and bringing about better relations between capital and labor, the following profit-sharing plan is suggested for consideration.

1. Increase the federal income tax on corporations from 15 to 25 per cent.
2. Allow any corporation which (a) pays as extra compensation to all of its employees, in proportion to their salaries or wages, an amount equal to 10 per cent of its profits, up to but not in excess of 50 per cent of the salaries or wages paid, (b) maintains minimum wages and maximum hours and child labor regulations satisfactory to the federal government, and (c) pays to the federal government a tax of $1\frac{3}{4}$ per cent, an exemption from the remaining $1\frac{1}{4}$ per cent of federal tax.

Higher corporation income taxes are inevitable. Would it not be better for corporations to pay part of their profits to

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those who have helped create them than all of the amount taxed to the government?

A 10 per cent distribution of corporation profits would have been (for the year ending in June):

1928	\$1,061,600,000
1929	1,165,300,000
1930	642,800,000
1931	368,300,000
1932	215,100,000
1933	286,495,400

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