

This PDF is a selection from an out-of-print volume from the National Bureau of Economic Research

Volume Title: Recent Economic Changes in the United States, Volumes 1 and 2

Volume Author/Editor: Committee on Recent Economic Changes of the President's Conference on Unemployment

Volume Publisher: NBER

Volume ISBN: 0-87014-012-4

Volume URL: <http://www.nber.org/books/comm29-1>

Publication Date: 1929

Chapter Title: Report of the Committee on Recent Economic Changes of the President's Conference on Unemployment

Chapter Author: Committee on Recent Economic Changes of the President's Conference on Unemployment

Chapter URL: <http://www.nber.org/chapters/c4950>

Chapter pages in book: (p. -27 - 0)

REPORT OF
THE COMMITTEE ON RECENT ECONOMIC CHANGES
OF THE
PRESIDENT'S CONFERENCE ON UNEMPLOYMENT

SECTION I

CHARACTERISTICS OF THE YEARS 1922-1929

Acceleration rather than structural change is the key to an understanding of our recent economic developments. Gradually the fact emerged during the course of this survey that the distinctive character of the years from 1922 to 1929 owes less to fundamental change than to intensified activity.

Forty years ago David A. Wells wrote his "Recent Economic Changes," showing that the quarter century which ended in 1889 was a period of "profound economic changes," which he described as "unquestionably more important and varied than during any former corresponding period of the World's history."

Each generation believes itself to be on the verge of a new economic era, an era of fundamental change, but the longer the committee deliberated, the more evident it became that the novelty of the period covered by the present survey rested chiefly in the fact that developments such as formerly affected our old industries have been recurring in our new industries. The changes have not been in structure but in speed and spread.

Invention is not a new art. Transportation and communication are not new services. The facilitating function of finance is older than coined currency. Agriculture is as ancient as history. Competition is not a new phenomenon. None of the changes in distribution on which emphasis has been laid in the last few years is basically new. Hand-to-mouth buying is old; sudden changes in style and demand are familiar; there is no new principle in installment selling; cooperative marketing is no modern discovery; the chain store movement dates back at least 25 years.¹ But the breadth and scale and "tempo" of recent developments give them new importance.

The increased supply of power and its wider uses; the multiplication by man of his strength and skill through machinery, the expert division

¹ See Chap. V, Marketing.

and arrangement of work in mines and factories, on the farms, and in the trades, so that production per man hour of effort has risen to new heights; the quickening of these instrumentalities through capital provided from the surplus incomes of a constantly widening proportion of our people—all these represent an accumulation of forces which have long been at work.

The committee, like other observers, was early impressed by the degree of economic activity in these seven years. It was struck by the outpouring of energy which piled up skyscrapers in scores of cities; knit the 48 States together with 20,000 miles of airways; moved each year over railways and waterways more than a billion and a half tons of freight; thronged the highways with 25,000,000 motor cars; carried electricity to 17,000,000 homes; sent each year 3,750,000 children to high school and more than 1,000,000 young men and women to college; and fed, clothed, housed, and amused the 120,000,000 persons who occupy our twentieth of the habitable area of the earth.

But while the period from 1922 to 1929 has been one of intense activity, the committee noted that this activity has been "spotty." Certain groups have been more active than other groups; certain industries busier than their neighbor industries, and certain geographical areas more prosperous than other areas.²

While rayon manufacturers have worked at top speed, cotton mills have been on part time; while the silk hosiery industry, the women's shoe trade, and the fur business have been active, there has been depression in the woolen and worsted industry; while dairying has been prosperous, grain growers have been depressed. Coal mining has been in difficulties, and classes of wholesalers and retailers have been under grave economic pressure. Progress has been made toward more stable employment in seasonal industries, yet "technological" unemployment, resulting from the displacement of workers by improved machinery and methods, has attracted attention.³

Geographical differences also were noted. The Pacific States have made an extraordinary advance; the South has rapidly developed as a manufacturing area; the East North Central Division has grown; while the New England States and to some extent the Middle Atlantic section, have developed less rapidly and have experienced some difficulties in adapting their older industries to new conditions.

However, in spite of this variability, this difference in activity as between groups and areas and industries, the rising standard of living characteristic of this period was widespread, and has reached the highest level in our national history.

² See Chap. XII, The National Income and its Distribution.

³ See Chap. II, Industry; Chap. V, Marketing; Chap. VI, Labor; and Chap. VII, Agriculture.

Participation by the people as a whole in many of the benefits of increased productivity, which of itself varied as between different groups and geographical areas, has been one of the marked characteristics of the period. While industrial, agricultural, and commercial activity has been "spotty," the broad social advantages of our accelerated activity flowed out over the land. For example, the highway building programs throughout the nation were not limited to the intensely active areas; good roads were extended in all directions, serving the whole population. The same might be said for educational advantages, radio entertainment, personal mobility made possible by low-priced motor cars, swift and dependable transportation and communication, and numerous other facilities and services making for comfort and well-being, beyond the elemental requirements of food, clothing, and shelter.⁴

This spread of higher living standards has been characteristic of our national life practically throughout our history. As a phenomenon it is not new, but in its degree and scope it has taken on a new importance.

THE SPEED WHICH POWER HAS ADDED TO PRODUCTION

Characteristic also has been the rise in the use of power—three and three-quarters times faster than the growth in population—and the extent to which power has been made readily available not alone for driving tools of increasing size and capacity, but for a convenient diversity of purposes in the smallest business enterprise and on the farm and in the home.

Factories no longer need cluster about the sources of power. Wide-spread interconnection between power plants, arising out of an increasing appreciation of the value of flexibility in power, and made possible by technical advances during recent years, has created huge reservoirs of power so that abnormal conditions in one locality need not stop the wheels of industry.⁵

The increasing flexibility with which electricity can be delivered for power has enabled manufacturers and farmers to meet high labor costs by the application of power-driven specialized machines; and power in this flexible form has penetrated into every section of the United States, including many rural areas. The survey shows that as a nation we now use as much electrical energy as all the rest of the world combined.

Through the subdivision of power the unskilled worker has become a skilled operator, multiplying his effectiveness with specialized automatic machinery and processes. Thus the unit cost of production has been reduced, the drudgery eliminated from much unskilled work, and wages maintained or actually increased.

⁴ See Chap. I, Consumption and the Standard of Living; Chap. III, Construction; Chap. IV, Transportation.

⁵ See Chap. II, Parts 1, 2, and 3.

THE SPREAD IN THE SOURCE AND USE OF CREDIT

This acceleration of forces and its resultant rising standard of living have been facilitated by a continuing supply of funds.

In the breadth of the sources from which capital and credit have been available and in the quickening method of their use, may be observed again the changes in speed and spread of our recent economic activity.

In former periods the savings funds of the American people were not alone adequate for our capital requirements. In periods of business expansion the demand for funds pressed heavily upon the supply.

The reverse has been found to be true in the period under review. For the larger part of this period not only the earnings and savings of the people supplied the additional capital for financing the rapid development of industry, but in addition they furnished several billions of dollars for loans to foreign countries.⁶

Stimulated by the urge for funds to finance the vast production program of the United States during the World War, the number of share holders in the country's business enterprises has, it is estimated, grown from about two million to more than seventeen million; and out of increasing incomes these investors have continued to pour their savings into the stream of credit.

During the later months of the period covered by the survey a new tendency has been observed. Investors, as well as a large body of speculators, have invested through the Stock Exchanges not only their savings, but the proceeds of loans secured through banks and brokers, until the credit structure of the country has been sufficiently weighted to indicate a credit stringency, resulting in an abnormally high rate for call money and an appreciable increase in the rate of interest for business purposes. The consequences of this process can not be measured at this time, but they are factors in the problem of maintaining economic balance which will be touched on later in this report.

Meanwhile industry has been able to reduce its requirements for short-term credits from the banks through issuance of securities. The preference for permanent methods of financing business is reflected in the relatively small increase in commercial loans of banks in recent years, as contrasted with the increase in security holdings and collateral loans.

Imports of gold early in the period covered by the survey which tended to make credit easier; the growth of savings in spite of increased spending; the popular confidence in the financial structure, especially in the Federal Reserve System, and the power of the System to move available credit to the places where it is needed, mark a great advance during these seven years.

⁶ See Chap. X, Money and Credit and their Effect on Business, and Chap. XI, Foreign Markets and Foreign Credits.

There has also been an increase in the velocity of the turnover of credit, due to improved transportation and communication, scientific control of inventories, the continuation of the simplification movement, and our accelerated turnover of commodities. Business has thus developed a new degree of economy in the use of credit, which may be set down as another characteristic of the period.

SECTION II

PRICE RELATIONSHIPS, WAGES, AND THE COST OF LIVING

The period under review is perhaps too brief for a definite judgment, and we are as yet too close in point of time to get an accurate perspective, but the committee feels that in the field of price relationships, wages, and the cost of living is to be found one of the striking and significant developments revealed by the survey, and one which more than any other gives these years their distinctive character.

Contrasting two periods of our comparatively recent economic history will perhaps serve to make clear the significance of these factors.

According to the best available statistics, in the period between 1896 and 1913, the wholesale price level rose on the average 2.3 per cent a year, but wages rose only a little more; so that their purchasing power advanced only 0.5 per cent a year. In the period from 1922 to 1927, prices declined on the average 0.1 per cent a year, while the purchasing power of wages rose 2.1 per cent a year.⁷

In this latter period the fortunate synchronizing of a high wage level and a stationary cost of living created a phenomenon, new in degree, which had widespread influence on the economic situation, and which will bear close study in its details.

RELATIVE PRICE STABILITY

The increasing tendency toward price stability, both as between classes of commodities and in the price experience of individual commodities, was a characteristic of the period under review, tending toward a more equitable basis of exchange of products among the various groups. Price fluctuations seem to have been held within narrow limits during this period by a combination of factors; a more complete background of statistical information making possible better judgment regarding supply and demand on the part both of producers and consumers; prudence on the part of management; cost reductions by technicians, skill on the part of bankers, an enlightened attitude on the part of labor, and the expansion of foreign markets.

Relative price stability has involved a change in the direction in which business men look for profits. Profits made from the fluctuations

⁷ See Chap. IX, Price Movements and Related Industrial Changes.

of individual commodity prices, and from changes in the relation among prices, have tended to diminish.

Whether the price relationships of recent years prove to be transitory or permanent, they represent to-day a huge gain which is reflected in all parts of the economic organism. It is a development too new to permit of dogmatic interpretation but the committee believes that this decreasing variability in prices at a time when the productivity per hour of labor has been greatly increased, and the demand for goods has been greatly stimulated, is one of the most significant factors disclosed by the survey.

The widening gap between wages and the cost of living—wages increasing while the cost of living was stationary—may be assumed to have contributed definitely to the degree of prosperity which has characterized the period as a whole. With rising wages and relatively stable prices we have become consumers of what we produce to an extent never before realized.

The factors in this situation appear in part to be accidental and in part the consequences of an advanced economic point of view.

In the early postwar period much of the press and many employers demanded a "liquidation" of labor. It was freely declared that business could not settle down until wages were brought back to prewar levels. Labor had enjoyed a higher standard of living and naturally opposed wage cuts.

This might have precipitated a period of serious strife, had it not been that leaders of industrial thought, watching the trend of affairs, noted that the result of the continuance of high wages was that the dammed-up purchasing desires which had been held back during the war on account of the national economic program, burst forth and not only the high wages which were being currently earned but accumulated savings as well were poured into the channels of commerce.

They were quick to grasp the significance of the power of the consumer with money to spend to create an accelerated cycle of productivity.

They began consciously to propound the principle of high wages and low costs as a policy of enlightened industrial practice. This principle has since attracted the attention of economists all over the world, and while it is in no sense new, its application on a broad scale is so novel as to impress the committee as being a fundamental development.⁸

PRODUCTION INCREASE AND THE EXPANSION OF HUMAN WANTS

Partly as a result of this newly sensed principle of an accelerated cycle of production-consumption, and partly by reason of the development of a stream of credit and an abundance of flexible power made broadly available, the years 1922 to 1929 witnessed a marked increase

⁸ See Chap. VII, Management.

in the physical volume of production. Some years stand out more conspicuously than others; two—1924 and 1927—show minor recessions; but the period as a whole has been notably consistent.

Since 1922 primary production has been increasing 2.5 per cent a year; manufacturing, 4 per cent; and transportation, 4 per cent. Taking 1919—a year of fair harvests—as a base, crop production in 1922 was 102; in 1925, 104; in 1927, 106.

There have been prosperous periods in the past which may have surpassed these rates of increase, but none so far as the committee can learn which has shown such a striking increase in productivity per man-hour. Notwithstanding the reductions in hours of labor, per capita productivity is nearly 60 per cent greater than it was toward the close of the nineteenth century; the increase in per capita productivity in manufacturing from 1922 to 1925 was 35 per cent; the productivity of farm workers has increased at a rate probably never before equaled.

And these increases in productivity have been joined to a corresponding increase in the consuming power of the American people. Here has been demonstrated on a grand scale the expansibility of human wants and desires.

Economists have long declared that consumption, the satisfaction of wants, would expand with little evidence of satiation if we could so adjust our economic processes as to make dormant demands effective. Such an expansion has been going on since the beginning of the Industrial Revolution. It is not a phenomenon of the postwar period, except in degree. But it is this degree of economic activity, this almost insatiable appetite for goods and services, this abounding production of all things which almost any man can want, which is so striking a characteristic of the period covered by the survey.

OPTIONAL CONSUMPTION

The committee finds, from study of the fact-finding survey on which this report is based, that as a people we have become steadily less concerned about the primary needs—food, clothing, and shelter. We have long since lost all fear concerning our food supply, and so we no longer look on food as a luxury or as a primary source of pleasure. American food standards have risen, but we hear little of the “high cost of living,” and the slogan of the “full dinner pail,” is obsolete. We wear less clothing; more rayon and silks, less cotton and wool. Our wants have ranged more widely and we now demand a broad list of goods and services which come under the category of “optional purchases.”⁹

The rapidly increasing number of families in the United States having a considerable margin of earnings available for “optional consumption”—optional in the sense that this portion of the income may be

⁹ See Chap. I, Consumption and the Standard of Living.

saved or spent, and if spent the manner of its spending may be determined by the tastes of the consumer or the nature of the appeals made to him by the industries competing for his patronage—presents one of the marked characteristics of the recent economic situation. It is the personal or individual expression of the gap between rising wages and the relatively stable cost of living, referred to at the beginning of this section.

CONSUMPTION AND LEISURE

Closely related to the increased rate of production-consumption of products is the consumption of leisure.

It was during the period covered by the survey that the conception of leisure as "consumable" began to be realized upon in business in a practical way and on a broad scale. It began to be recognized, not only that leisure is "consumable," but that people can not "consume" leisure without consuming goods and services, and that leisure which results from an increasing man-hour productivity helps to create new needs and new and broader markets.

The increasing interest in the fine arts and in science; the increased sales of books and magazines; the increase in foreign travel; the growing interest and participation in sports of all kinds; the domestic pilgrimages of some 40,000,000 motor tourists who use more than 2,000 tourist camps; the greatly increased enrollment in our high schools and colleges; the motion picture theaters and the radio—all these reflect the uses of increasing leisure.

During the period covered by the survey the trend toward increased leisure received a considerable impetus. The work week was shortened in the factory by better planning and modern machinery, and the work day was shortened in the home by the increased use of time-and-labor-saving appliances and services.¹⁰

Few of the current economic developments have made such widespread changes in our national life or promise so much for the future as the utilization of our increasing leisure.

"MASS SERVICES"

The service functions are not new, but few of the developments revealed by the survey are of greater potential significance than the accelerated growth of our service industries—travel, entertainment, education, insurance, communication; the facilities of hotels, restaurants, delicatessen stores, steam laundries, and public libraries, to mention but a few.

An evolution which has been going on for centuries has only recently been revealed as a mass movement. We now apply to many kinds of

¹⁰ See Chap. VI, Labor.

services the philosophy of large-scale production. We have integrated these services and organized them, and we have developed the new philosophy to such a degree in recent years that we now have what might be termed "mass services." These have helped to create a new standard of comfortable living in the United States, and have afforded employment for millions of workers crowded out of agriculture and the extractive and fabricating industries.

It was, in fact, the timely development of "mass services" which saved our country from a critical unemployment problem during recent years.

No serious cyclical fluctuations have characterized the period under review,¹¹ so that the unemployment due to the business cycle has not been marked; but it has become evident that unemployment can arise as a result of industrial efficiency as well as of inefficiency. In the latter case we have seasonal or intermittent unemployment; in the former case what has come to be known as "technological" unemployment resulting from the introduction of new machinery and processes. The survey seems to indicate that the time has come to devote continuing attention not only to the problems of cyclical unemployment but also to this newer problem of "technological" unemployment if we are to forestall hardship and uncertainty in the lives of the workers.¹²

Where progress may be working an advantage to the people as a whole, it inevitably works temporary hardship upon certain classes—those skilled workers in a trade, for example, whose work is taken over by machines. This is a serious aspect of the problem of unemployment. It involves, in many instances, learning new trades, and, in most instances, the loss of time in securing other jobs. Yet from a broad social point of view, while it works hardship on those workers displaced by the introduction of machinery or improved processes, the social gain is real and permanent.

Such economic transformations are not so much changes as readjustments, due to the progressive needs of modern society, and to the necessity of taking advantage of the modern developments in science. They have arisen in agriculture as well as manufacturing and transportation, and they have affected employers as well as employees. There is nothing new about these problems; the accelerated rate of readjustment is what has recently engaged the attention of wage earners and management.

As has already been intimated, the acceleration of technological shifts in production and consumption would have resulted in much more serious unemployment if workers had not been absorbed in the newly expanded service industries which both create and serve leisure.

¹¹ See a Review.

¹² See Chap. VI, Labor; Chap. VII, Management; and Addenda, Unemployment.

OUR NATURAL ADVANTAGES

It is obvious, of course, that the economic position of this nation is in no slight degree due to our possession of abundant raw materials and sources of power, to the fact that our domestic market is so large, and that there are no trade barriers between the States of our Union. We can exchange goods without stopping them for inspection or the payment of duties between States. We can effect their transfer without the barriers of differing languages or customs. Advertising is peculiarly effective because we have so great an area with a common language which enables us to talk to all the people and to develop national consumption habits, which in turn make possible large-scale production.

This fortuitous situation should be borne in mind as an important factor in both the speed and the spread which have characterized our recent economic development.

The balance which has been maintained between consumption and production is nowhere better shown than in the fact that wages have been rising, and that there has been no striking increase of unemployment in a period marked by the broadest technological advancement which we have yet known.

Perhaps the deepest economic significance of the new situation lies, not in the rapidity with which the service industries have grown and have become integrated, nor in the universality of their spread, but in the fact that the situation which they have created is reciprocal. Our increasing standard of living is not participated in only by those who produce our food, clothing, and shelter, but has flowed back to those in the service industries. The population as a whole can enjoy the rising standard of living—the music which comes in over the radio, the press, the automobile and good roads, the schools, the colleges, parks, playgrounds, and the myriad other facilities for comfortable existence and cultural development.

Our ancestors came to these shores with few tools and little organization to fight nature for a livelihood. Their descendants have developed a new and peculiarly American type of civilization in which services have come to rank with other forms of production as a major economic factor.

REMOTE SATURATION POINTS

The survey has proved conclusively what has long been held theoretically to be true, that wants are almost insatiable; that one want satisfied makes way for another. The conclusion is that economically we have a boundless field before us; that there are new wants which will make way endlessly for newer wants, as fast as they are satisfied.

We have the power to produce and the capital to bring about exchange

between the producing and consuming groups. We have communication to speed and spread the influence of ideas. We have swift and dependable transportation. We have an educational system which is steadily raising standards and improving tastes. We have the sciences and arts to help us. We have a great national opportunity.

Important as is the development of the economic side of our national life, through invention and discovery of new industries and new callings, an illustration of the potentialities of further lifting the national standard of living, without developing another invention or discovery and without creating a new want, can be drawn from a single industry—that of electrical appliances.

A home or farm wired for electricity is a different economic unit from one which is not wired. Each such home, whether in city or country, can take advantage of electricity for lighting, and on the farm an automatic water supply system makes available water at convenient spots for domestic and farm uses.

A survey of city and village homes indicates the use of electricity for many additional applications of highly specialized devices. In 1928 apparently a large percentage of the homes wired for electricity had electric flatirons; less than one-third of them had washing machines; slightly over one-third of them had vacuum cleaners; less than 5 per cent had electrical refrigerators. We are far from the saturation point in connection with any of these devices.

To take one other example, there is, perhaps, no more dramatic illustration of a rising standard of living than the growth and development of radio in recent years. This newest application of electricity has found its way into millions of homes. On January 1, 1928, there were 7,500,000 sets in use. Yet about 70 per cent of American homes are still without the radio.¹³

We seem only to have touched the fringe of our potentialities.

SECTION III

ECONOMIC BALANCE

Many influences have been at work during the period covered by the survey, welding the people of the United States into a new solidarity of thought and action. The telephone and telegraph, the automobile, the radio, and the railroads form lines of communication which have brought together East and West, South and North.

Other and less tangible influences reaching back farther into the past, but accelerated and strengthened by the experiences of the World War, have also contributed to our solidarity. Economic reorganization; the cooperation of business leaders, economic experts, and the Government;

¹³ See Chap. I, Consumption and the Standard of Living.

the general spread of information; the growth of trade associations; the cooperation of labor to increase productivity; the restriction of immigration—all of these have grown in importance in peace after their stimulation by the war.

Making for solidarity has been popular education which has increased amazingly. We are spending two and one-half billions of dollars each year on public and private education—an increase of 250 per cent in a decade. Expenditures for free college and university education have increased nearly 350 per cent in little more than 10 years.

And there is another factor which has contributed to the welding process, and to the economic advancement of the nation: The broadening influence of America's creative minds—the minds of the leaders in Government and in education, in research, in management and in labor, in the press, and in the professions. To their influence we have come to look in large measure for the maintenance of our economic balance.

While ours has been a period of great economic activity and industrial productivity, and of a degree of economic stability which must be rated as high when we consider the readjustments in every department of economic life made necessary by the postwar crisis and by the transition from war economy to peace economy, and while America has a promising future, the outstanding fact which is illuminated by this survey is that we can not maintain our economic advantage, or hope fully to realize on our economic future, unless we consciously accept the principle of equilibrium and apply it skillfully in every economic relation.

The forces that bear upon our economic relationships have always been sensitive. All parts of our economic structure from the prime processes of making and of marketing to the facilitating functions of finance, are and have been interdependent and easily affected. And therein lies the danger: That through ignorance of economic principles, or through selfish greed, or inadequate leadership, the steady balance will be disturbed, to our economic detriment.

If natural resources, especially the land, are wastefully used; if money in quantity is taken out of production and employed for speculation; if any group develops a method of artificial price advancement which puts one commodity out of balance with other commodities; if either management or labor disregards the common interest—to this extent equilibrium will be destroyed, and destroyed for all.

To maintain the dynamic equilibrium of recent years is, indeed, a problem of leadership which more and more demands deliberate public attention and control. Research and study, the orderly classification of knowledge, joined to increasing skill, well may make complete control of the economic system a possibility. The problems are many and difficult, but the degree of progress in recent years inspires us with high hopes.

In the marked balance of consumption and production, for example, the control of the economic organism is increasingly evident. With the development of a stream of credit to facilitate business operations, and with flexible power to energize industry and to increase the effectiveness of the workers, has come an increasing evenness in the flow of production. Once an intermittent starting and stopping of production-consumption was characteristic of the economic situation. It was jerky and unpredictable, and overproduction was followed by a pause for consumption to catch up. For the seven years under survey, a more marked balance of production-consumption is evident.

With greater knowledge of consuming habits, with more accurate records of the goods consumed, a sensitive contact has been established between the factors of production and consumption which formerly were so often out of balance.

Where pools of goods once were accumulated by the manufacturer, the wholesaler, the jobber, and the retailer; where high inventories once meant distress, shutdowns, failures, and unemployment whenever the demand subsided, there is now a more even flow from producer to consumer.

Increasing skill and scientific data have made the anticipation of demand far more accurate, and by accurate anticipation the deliberate balance between production and consumption has in a measure been maintained. By advertising and other promotional devices, by scientific fact finding, by a carefully predeveloped consumption, a measurable pull on production has been created which releases capital otherwise tied up in immobile goods and furthers the organic balance of economic forces. In many cases the rate of production-consumption seems to be fairly well under control.

To maintain this balance, and to extend it into fields which are not now in balance with the more prosperous elements of the nation, is clearly an important problem of leadership. With certain natural resources still wastefully exploited, with great industries, such as agriculture and coal mining, still below the general level of prosperity, with certain regions retarded, there remains much to do. To bring these more fully into the stream of successful economic forces is a problem of the first order.

Our complex and intricate economic machine can produce, but to keep it producing continuously it must be maintained in balance. During the past few years equilibrium has been fairly well maintained. We have not wasted the hours of labor by strikes or lockouts. Until recently we have not diverted savings from productive business to speculation. There has been balance between the economic forces—not perfect balance, but a degree of balance which has enabled the intricate machine to produce and to serve our people.

As long as the appetite for goods and services is practically insatiable, as it appears to be, and as long as productivity can be consistently increased, it would seem that we can go on with increasing activity. But we can do this only if we develop a technique of balance. Toward such a technique the committee believes the skillful work of the economists, engineers, and statisticians who prepared the survey on which we have based the facts and interpretations expressed in this brief report, will contribute. Our effort has been to suggest a pattern by which their work may be appraised; to set up an orderly plan by which the facts may be articulated and against which later and better information may be more accurately judged. We recommend a study of the fact finding survey as a whole to all who are faced with the problems of business administration and public leadership.¹⁴

Informed leadership is vital to the maintenance of equilibrium. It depends upon a general knowledge of the relations of the parts each to the other. Only through incessant observation and adjustment of our economy, can we learn to maintain the economic balance.¹⁵

Underlying recent developments is an attitude of mind which seems to be characteristically American. Our nation is accustomed to rapid movement, to quick shifts in status; it is receptive to new ideas, ingenious in devices, adaptable. Our economy is in large measure the embodiment of those who have made it.

Our situation is fortunate, our momentum is remarkable. Yet the organic balance of our economic structure can be maintained only by hard, persistent, intelligent effort; by consideration and sympathy; by mutual confidence, and by a disposition in the several human parts to work in harmony together.

Herbert Hoover	John S. Lawrence	John J. Raskob
Walter F. Brown	Max Mason	Arch W. Shaw
Renick W. Dunlap	George McFadden	Louis J. Taber
William Green	Adolph C. Miller	Daniel Willard
Julius Klein	Lewis E. Pierson	Clarence M. Woolley
Owen D. Young		Edward Eyre Hunt

¹⁴ See Addenda, Statistics.

¹⁵ See Addenda, Periodic Surveys and Appraisals.

ADDENDA

Unemployment.—Rather than to recapitulate the findings of its predecessors, the committee refers the reader to the report of the President's Conference on Unemployment of 1921, and to the reports of its two committees dealing with cyclical and seasonal unemployment: *Business Cycles and Unemployment*, published in 1923 by a committee of the conference, together with a fact-finding survey of the National Bureau of Economic Research, Inc., and *Seasonal Operation in the construction Industries*, published in 1924 by another committee of the conference, dealing with seasonal employment.

The report on *Business Cycles*, as the present survey shows, has exerted an important influence toward reducing the extremes of cyclical fluctuations. The report on *Seasonal Construction* has stimulated an increase in offseason building and has thereby lengthened the building year.

The report recently published by the Senate Committee on Education and Labor, pursuant to Senate Resolution 219 of the Seventieth Congress, is further evidence of the continuing interest in more stable employment.

Statistics.—The complexity of American economic activities and the rapid changes in them call for more statistical data. Without attempting exhaustive enumeration, the more conspicuous gaps and deficiencies may be briefly mentioned:

1. Little statistical material is now collected regarding several important branches of economic activity, particularly those which render services. The recent shift of workers from farms and factories into the service fields makes statistical data concerning those fields particularly essential at this time. To that end the classification and analysis of the statistics of occupations of the census of 1930 should be given special attention. A census of distribution is another major need. Data should also be obtained regarding the construction industry, automobile repair shops, hotels and restaurants, and similar enterprises, and establishments providing recreation, instruction, and amusement.

2. There is need of more complete statistical information regarding labor. In addition to more adequate occupation statistics, current annual and monthly returns of employment and pay rolls should be extended to the major fields of activity not now covered. Wage and earning statistics should be more comprehensive and in addition to averages the number of workers should be classified according to the amounts received. Similar information is needed concerning hours of labor.

3. Although improvement has recently been made in price statistics further expansion and more thorough analysis are desirable. The great and growing importance of elaborate, often nonstandardized, commodities

makes it difficult to compute general price indexes which correctly measure changes in the buying power of money. The most pressing immediate need is for a revision of the indexes of cost of living as a means of interpreting changes in the buying power of money wages and other incomes. There is call also for more complete analysis of the price levels of groups of commodities based on a number of different principles of classification, as well as for more detailed statistics of the prices of individual articles. Special price statistics for different sections of the country would serve a useful purpose.

4. We need more statistical information regarding the values, gross and net, of the products and services of different branches of industry, both as a basis for ascertaining aggregate national income, and as a means of comparing the productivity of different branches and determining the trends in them. In the census of manufactures it would be useful to distinguish the cost of raw materials furnished by nonmanufacturing industries from the cost of semimanufactured goods supplied by other factories; among other advantages this would facilitate comparisons between production and export of manufactures.

5. In many cases the utility of statistics would be greatly increased by publishing them for smaller areas than are now distinguished.

6. As regards many classes of statistics greater accuracy and representativeness should be sought. Statistical series are often based on the principle of sampling and the samples are not always truly representative. There is reason to believe, for example, that most series relating to employment and amount of pay roll and some relating to production have a downward bias due to inadequate covering of new plants. Current series of this character should be adjusted on the basis of more comprehensive statistics collected at intervals such as those of the biennial census of manufactures.

7. Even where the original statistical data are adequate the analysis of them is often unsatisfactory and comparisons with other series difficult or impossible. For example, index numbers are computed with reference to different base periods, and averages for groups of years are made up for incomparable periods of time. Certain monthly series are adjusted for variations in the length of the month or for seasonal factors while such adjustment is not made for other series. Commodities and groups of commodities, industries and groups of industries, are differently defined by the several statistical authorities. Standardization and coordination of methods of analysis would add greatly to the value of economic statistics and will become still more essential as their scope is further expanded.

The needs in the field of statistics, above set forth, and others not specifically mentioned, suggest that there should be organized cooperation among the producers of statistics and organized consultation with the

users of statistics. A multiplicity of agencies, governmental and private, are engaged in collecting statistical data. The work of the Federal Government alone in this field is divided among numerous bureaus and organizations.

There are weighty arguments against the proposal sometimes put forward that the bulk of the government's statistical work should be concentrated in a single bureau. On the other hand, the committee believes that the time has come to consider setting up a Central Statistical Committee to act as a coordinating agency. Such a committee might include representatives of the major statistical organizations of the Federal Government together with members and consultative advisors from the outside, representing the statistical profession as such, business men, farmers, wage earners, and others concerned with the results of statistical inquiry. The committee would consider such questions as the new statistics needed from time to time, the organization by which they should be handled, and the methods of collecting, analyzing, and presenting statistical data. Its recommendations, made directly to the several statistical organizations of the Government, or where necessary to the heads of departments, the President, or the Congress, would carry weight even should it be deemed best to give to the committee no final authority in these matters.

Periodic Surveys and Appraisals.—Various problems have not been treated at any length in the survey made for our committee by the National Bureau of Economic Research, Inc. Air transport is in its infancy, new methods of financing have been only sketched, mergers can not yet be appraised with any degree of satisfaction, the future of gold and of credit is just touched upon, the growth of stock exchange operations can not yet be judged with finality, investment trusts are rapidly growing, forest depletion is only mentioned, and the exhaustion of the soil in certain localities is once alluded to. Immigration, prohibition, taxation, and similar topics deserve separate volumes rather than incidental reference.

Developments in connection with each of these topics have important economic significance. Most of them are already the subject of widespread interest, and some of them of investigation by governmental or private agencies. Noteworthy among these is the recent report and recommendations of the National Association of Securities Commissioners representing the regulatory authorities of 37 States on the regulation of investment trusts.

We are impressed with the need of continuing impartial fact-finding as to these and similar subjects as they arise, and with the desirability of their periodic interpretation for public use.

ACKNOWLEDGMENTS

In carrying out its program, the committee has received generous cooperation and advice from governmental and private agencies, organizations, groups, and individuals to a degree never before equaled in an undertaking of this sort. It is probable that valuable assistance was rendered by many whose names are unknown to the committee. To these, then, as well as to those whose names are known, the committee expresses its deep appreciation.

To the Carnegie Corporation of New York and the Laura Spelman Rockefeller Memorial Foundation for the funds which have made the investigations possible.

To the National Bureau of Economic Research, Inc., for the surveys and data prepared for the use of the committee.

To the United States Departments of Commerce, Agriculture, and Labor, the Treasury and Post Office Departments, The Federal Reserve Board and Federal Reserve Banks of various districts, the Federal Trade Commission, the Interstate Commerce Commission, the United States Shipping Board, and the executives of the many bureaus and divisions of these official agencies for making available a wide range of material germane to the studies. To the officials of several States and municipalities for similar cooperation.

To officers and educators of Harvard University, Leland Stanford University, Cornell University, the Universities of Pennsylvania, Buffalo, New York, and Akron, Ohio; Amherst, Bowdoin, and Massachusetts Agricultural Colleges, and a score of other educational institutions for cooperation in research and field work.

To the following organizations:

- American Council on Education.
- American Engineering Council.
- American Engineering Standards Committee.
- American Federation of Labor.
- American Institute of Architects.
- American Institute of Steel Construction.
- American Iron and Steel Institute.
- American Newspaper Publishers Association.
- American Railway Association.
- American Society of Agricultural Engineers.
- Associated General Contractors of America, Inc.
- Audit Bureau of Circulation.
- Building Officials Conference.
- Bureau of Railway Economics.
- Chamber of Commerce of the United States, Domestic Distribution Department.
- Food Research Institute.
- General Federation of Women's Clubs.
- Illuminating Engineering Society.
- Industrial Survey and Research Service.

Institute of Economics of the Brookings Institution.

Labor Bureau, Inc.

National Automobile Chamber of Commerce.

National Electric Light Association.

National Industrial Conference Board.

National Research Council.

Russell Sage Foundation.

Social Science Research Council.

To the following who collaborated in preparation of the survey data:

Albert Abrahamson, Instructor of Economics, Bowdoin College.

S. L. Andrew, Chief Statistician, American Telephone and Telegraph Co.

Prof. William S. Ayars.

Miss Rose M. Berg, Ronald Press.

W. A. Berridge, Metropolitan Life Insurance Co.

Harry H. Blew, Bureau of Aeronautics, United States Department of Commerce.

W. W. Brush, Chief Engineer, New York City Bureau of Water Supply.

Miss Ruth Budinoff, The Labor Bureau, Inc.

Ernest R. Burton, National Civic Federation.

William H. Carter, Jr., Instructor of Economics, Amherst College.

Miss Florence M. Clark, University of Buffalo.

Joseph S. Davis, Director, Food Research Institute.

Mrs. Catherine M. Dickinson, Washington, D. C.

E. Dana Durand, Chief, Statistical Research Division, Bureau of Foreign and Domestic Commerce, United States Department of Commerce.

Ralph C. Epstein, University of Buffalo.

John P. Frey, American Federation of Labor.

C. J. Galpin, Economist, Bureau of Agricultural Economics, United States Department of Agriculture.

Meredith B. Givens, Social Science Research Council.

Joshua E. Hannum, Editor, Engineering Index, New York.

Charles Hardy, Institute of Economics of the Brookings Institution.

Thomas S. Holder, Statistician, F. W. Dodge, Corporation.

Dudley F. Holtman, National Committee on Wood Utilization.

Gorton James, Chief, Domestic Commerce Division, Bureau of Foreign and Domestic Commerce, United States Department of Commerce.

Harry Jerome, National Bureau of Economic Research, Inc.

Frank Johnson, Editorial Division, Bureau of Foreign and Domestic Commerce, United States Department of Commerce.

Grosvenor M. Jones, Chief, Finance Division, Bureau of Foreign and Domestic Commerce, United States Department of Commerce.

Mrs. C. H. Kardell, Statistical Section, Foodstuffs Division, Bureau of Foreign and Domestic Commerce, United States Department of Commerce.

John S. Keir, Economist, Dennison Manufacturing Co.

Mortimer K. Lane, former Editor, Survey of Current Business, Census Bureau, United States Department of Commerce.

Karl G. Lautenstein, Amherst, Mass.

Prof. Richard H. Lansburg, Wharton School of Finance and Commerce, University of Pennsylvania.

Maurice Leven, New York State Board of Housing.

Prof. Samuel McCune Lindsay, Columbia University.

Isador Lubin, Institute of Economics.

William P. MacCracken, Jr., Assistant Secretary of Commerce for Aeronautics.

Lawrence B. Mann, Assistant Chief, Statistical Research Division, Bureau of Foreign and Domestic Commerce, United States Department of Commerce.

H. G. Moulton, Institute of Economics.

Leroy Piser, Federal Reserve Bank of New York.

Ernest L. Priest, Washington, D. C.

Erwin H. Schell, Associate Professor of Business Management, Massachusetts Institute of Technology.

Ben M. Selekman, New York.

Miss Elizabeth Steele, Metropolitan Life Insurance Co.

S. A. Stephens, University of Buffalo.

Frank M. Surface, Assistant Director, Bureau of Foreign and Domestic Commerce, United States Department of Commerce.

Alonzo B. Taylor, Leland Stanford University.

Jas. S. Taylor, Assistant Chief, Division of Building and Housing, United States Department of Commerce.

Thomas Taylor, Assistant Director, Bureau of Foreign and Domestic Commerce, United States Department of Commerce.

Woodlief Thomas, formerly of the Division of Research and Statistics, Federal Reserve Bank of New York.

F. G. Tryon, Bureau of Mines, United States Department of Commerce.

Prof. Donald S. Tucker, Massachusetts Institute of Technology.

Robert R. Updegraff, Scarsdale, New York.

Prof. Jacob Viner, University of Chicago.

Rudolf von Huhn, Statistical Research Division, Bureau of Foreign and Domestic Commerce, United States Department of Commerce.

L. W. Wallace, Executive Secretary, American Engineering Council.

Prof. Walter F. Willcox, Cornell University.

Abel Wolman, Chief Engineer, Maryland State Department of Health.

To the following who rendered assistance in research:

Prof. A. H. Benton, Department of Agricultural Economics, North Dakota Agricultural College.

Prof. Neil H. Borden, Harvard Graduate School of Business Administration.

Andrew Boss, Chief, Division of Farm Management, Department of Agriculture, University of Minnesota.

William Boss, Chief, Division of Agricultural Engineering, Department of Agriculture, University of Minnesota.

R. B. Brownlee, Standard Statistics Co.

George K. Burgess, Director, United States Bureau of Standards.

A. J. County, Vice President, Pennsylvania Railroad.

J. B. Davidson, Department of Agricultural Engineering, Iowa State College.

Curtis Publishing Co., Research Department.

Samuel O. Dunn, Editor, Railway Age.

George R. Fain, Department of Farm Management, Georgia Agricultural College.

W. B. Ferguson, Newport News Shipbuilding & Dry Dock Co.

Col. J. H. Finney, Curator, Washington Cathedral.

L. J. Fletcher, Caterpillar Tractor Co.

William S. Ford, William S. Ford & Co.

G. W. Forster, Head, Department of Agricultural Economics, North Carolina State College.

L. P. Gabbard, Chief, Division of Farm and Ranch Economics, Agricultural and Mechanical College of Texas.

E. A. Gastrock, The Celotex Co.

- A. A. Giese, Newport News Shipbuilding & Dry Dock Co.
 John W. Harriman, Harvard Graduate School of Business Administration.
 W. H. Heinrich, Assistant Superintendent of Inspection, Travelers Insurance Co.
 C. L. Holmes, Head, Department of Agricultural Economics, Iowa State College.
 Maurice Holland, Director, Division of Engineering and Industrial Research,
 National Research Council.
 R. M. Hudson, Assistant Director, United States Bureau of Standards.
 Arthur Huntington, Iowa Railway and Light Corporation.
 H. W. Jeffers, President, Walker-Gordon Laboratory Co.
 W. C. Jensen, Head, Division of Agricultural Economics, Clemson Agricultural
 College, South Carolina.
 G. W. Kable, Head, Department of Agricultural Engineering, Oregon Agricultural
 College.
 George W. Koiner, Commissioner of Agriculture, Richmond, Va.
 V. P. Lee, Head, Division of Marketing and Finance, Agricultural and Mechanical
 College of Texas.
 Miss Mabel Lewis, New York City.
 M. O. Lorenz, Director, Bureau of Statistics, Interstate Commerce Commission.
 A. J. Lotka, Metropolitan Life Insurance Co.
 Prof. O. G. Lloyd, Purdue University.
 McGraw-Hill Publishing Co.
 P. V. Maris, Director, Extension Division, Oregon Agricultural College.
 Prof. R. C. Miller, Department of Agricultural Engineering, North Dakota
 Agricultural College.
 New York Evening Post Statistical Department.
 J. H. Parmelee, Director, Bureau of Railway Economics.
 Homer F. Sanger, American Medical Association Council on Medical Education
 and Hospitals.
 D. Scoates, Head, Department of Agricultural Engineering, Agricultural and
 Mechanical College of Texas.
 George Severence, Head, Department of Farm Management and Economics,
 State College of Washington.
 Prof. H. P. Smith, Department of Agricultural Engineering, Agricultural and
 Mechanical College of Texas.
 Standard Statistics Co.
 William M. Steuart, Director, United States Census Bureau.
 Alfred H. Stone, Dunleith, Mississippi.
 Henry A. Wallace, Editor, Wallace's Farmer.
 Miss Zora P. Wilkins, Boston, Mass.
 M. L. Wilson, Head, Department of Agricultural Economics, Montana State
 College of Agriculture.
 F. A. Wirt, J. I. Case Threshing Machine Co.
 Prof. A. J. Wood, Department of Mechanical Engineering, Pennsylvania State
 College.
 A. P. Yerkes, Editor, Tractor Farming.
 O. B. Zimmerman, Past President, American Society of Agricultural Engineers.

To the following for assistance in field work:

- H. F. Browne, National Industrial Conference Board.
 Prof. J. Douglas Brown, Princeton University.
 Prof. Baker Brownell, Northwestern University.
 Prof. Norman L. Burton, University of Buffalo.

E. F. Du Brul, Executive Secretary, National Machine Tool Association, Cincinnati, Ohio.

Prof. D. J. Duncan, University of Colorado.

Prof. D. R. Fellows, University of Wisconsin.

Frederick M. Feiker, Associated Business Papers, Inc.

W. E. Hotchkiss, Leland Stanford University.

Mrs. Margaret A. James, Washington, D. C.

Victor Karabasz, University of Pennsylvania.

Prof. W. W. Leigh, University of Akron.

Prof. M. P. McNair, Harvard University.

Thomas H. Ormsbee, Associated Business Papers, Inc.

Philip M. Reilley, Retail Research Association.

Prof. W. A. Silver, New York University.

Prof. R. G. H. Smails, Queens University, Kingston, Canada.

Prof. William C. Wales, New York University.

Prof. J. D. Weinland, New York University.

Prof. C. E. Walker, Queens University, Kingston, Canada.

R. G. Wells, College of Business Administration, Boston University.

INVESTIGATION MADE UNDER
THE AUSPICES OF THE NATIONAL
BUREAU OF ECONOMIC RESEARCH, INC.

EDITOR'S NOTE

Plans for the study of Recent Economic Changes were first discussed in August, 1927. Detailed plans were made in September of that year and were approved by the Executive Committee of the National Bureau of Economic Research, Inc., on October 17. The recruiting of the staff of collaborators was begun in December, and the first meeting of those who were to conduct the several parts of the survey was held on February 21, 1928.

In addition to numerous staff meetings for consultation among themselves, the collaborators met on various occasions with members of the Committee on Recent Economic Changes to report progress and to discuss the results of their surveys.

The first of the chapters in tentative form was submitted to the editor on August 20, 1928, and the last on February 28, 1929. Between these two dates fruitful discussion between the collaborators and the members of the Committee on Recent Economic Changes continued at intervals, and the final drafts of the chapters, with one exception, were completed by February 1, 1929. Following the procedure of the National Bureau, which is a scientific body dealing only with topics of national importance which are susceptible of quantitative treatment, the findings are issued in the form of fact reports, and are published with the approval of its Board of Directors.

In my dual role as secretary of the Committee on Recent Economic Changes and editor of the report prepared under the auspices of the National Bureau, I have been particularly indebted to Dr. Wesley C. Mitchell and Dr. Edwin F. Gay, directors of research, and to Mr. Gustav R. Stahl, executive secretary. Thanks are also due to the authors of the chapters for their skill and promptness and to the members of the Board of Directors who passed upon the voluminous manuscripts.

In the list of general acknowledgments the committee expresses its gratitude to a large number of organizations and individuals for exceptional services. I desire to mention here the service rendered by Mr. Frank Johnson, of the Department of Commerce, who prepared the manuscripts for the printers and that of Mr. Rudolf von Huhn, also of the Department of Commerce, who acted as editor of graphs and charts. My thanks are also due to Dr. Gay who kindly assumed the responsibility for reading and correcting the proofs.

EDWARD EYRE HUNT.

WASHINGTON, D. C.,
May 1, 1929.

RESOLUTION

ON THE RELATION OF THE DIRECTORS TO THE ECONOMIC WORK OF THE BUREAU

- 1—The object of the Bureau is to ascertain and to present to the public important economic facts and the interpretation thereof in a scientific and impartial manner, free from bias and propaganda. The Board of Directors is charged with the responsibility of ensuring and guaranteeing to the public that the work of the Bureau is carried out in strict conformity with this object.
- 2—The Directors shall appoint one or more directors of research chosen upon considerations of integrity, ability, character, and freedom from prejudice, who shall undertake to conduct economic researches in conformity with the principles of the Bureau.
- 3—The director or directors of research shall submit to the members of the Board, or to its executive committee when such is constituted and to which authority has been delegated by the Board, proposals in respect to researches to be instituted; and no research shall be instituted without the approval of the Board, or of its executive committee.
- 4—Following approval by the Board, or its executive committee, of a research proposed, the director or directors of research shall as soon as possible submit to the members of the Board, by written communication, a statement of the principles to be pursued in the study of the problem and the methods to be employed; and the director or directors of research shall not proceed to investigate, study, and report in detail, until the plan so outlined has been approved by the board or the executive committee thereof.
- 5—Before the publication of the results of any inquiry the director or directors of research shall submit to the Board a synopsis of such results, drawing attention to the main conclusions reached, the major problems encountered, and the solutions adopted, the nature of the sources from which the basic facts have been derived, and such other information as in their opinion shall have a material bearing on the validity of the conclusions and their suitability for publication in accordance with the principles of the Bureau.
- 6—A copy of any manuscript proposed to be published shall also be submitted to each member of the Board, and every member shall be entitled, if publication be approved, to have published also a memorandum of any dissent or reservation he may express, together with a brief statement of his reasons therefore, should he so desire. The publication of a volume does not, however, imply that each member of the Board of Directors has read the manuscript and passed upon its validity in every detail.
- 7—The results of any inquiry shall not be published except with the approval of at least a majority of the entire Board and a two-thirds majority of all those members of the Board who shall have voted on the proposal within the time fixed for the receipt of votes on the publication proposed; such limit shall be 45 days from the date of the submission of the synopsis and manuscript of the proposed publication, except that the Board may extend the limit in its absolute discretion, and shall upon the request of any member extend the limit for a period not exceeding 30 days.
- 8—A copy of this memorandum shall, unless otherwise determined by the Board, be printed in each copy of every work published by the Bureau.

NATIONAL BUREAU OF ECONOMIC RESEARCH, INC.

Incorporated under the Membership Corporation Laws of the State of New York, January 29, 1920

ITS ORGANIZATION AND PURPOSES

The National Bureau of Economic Research was organized in 1920 in response to a growing demand for exact and impartial determinations of facts bearing on economic, social, and industrial problems.

It seeks not only to find facts and make them known, but to determine them in such manner and under such supervision as to make its findings carry conviction to Liberal and Conservative alike.

Entire control of the Bureau is vested in a Board of twenty-one directors, representing universities, learned and scientific societies, financial, industrial, agricultural, commercial, labor, and technical organizations.

Rigid provisions in the Charter and By-Laws guard the Bureau from becoming a source of profit to its members, directors, or officers, and from becoming an agency for propaganda. No report of the Research Staff may be published without the approval of the Directors and any Director who dissents from any finding approved by a majority of the Board may have such dissent published with the majority report.

The members of the Board of Directors are as follows:

DIRECTORS AT LARGE

Matthew Woll, American Federation of Labor, Washington, D. C.
Harry W. Laidler, Executive Director, The League for Industrial Democracy.
George O. May, Senior Partner, Price, Waterhouse & Co., New York, *President*.
Elwood Mead, Commissioner of Reclamation, Washington, D. C.
Thomas W. Lamont, Member of firm of J. P. Morgan & Co., New York.
George Soule, Director, The Labor Bureau, Inc.
N. I. Stone, Industrial and Financial Consultant, New York.

DIRECTORS BY UNIVERSITY APPOINTMENT

T. S. Adams, Professor of Political Economy, Yale University, *Vice President*.
John R. Commons, Professor of Political Economy, University of Wisconsin.
Edwin F. Gay, Professor of Economic History, Harvard University, *Director of Research*.
Wesley C. Mitchell, Professor of Economics, Columbia University, *Director of Research*.
L. C. Marshall, Institute for the Study of Law, Johns Hopkins University.
Joseph H. Willits, Professor of Industry and Director of Industrial Research, Wharton School of Finance and Commerce, University of Pennsylvania.

DIRECTORS BY APPOINTMENT OF OTHER REPRESENTATIVE
ORGANIZATIONS

Hugh Frayne, American Federation of Labor.
David Friday, American Economic Association.
Lee Galloway, American Management Association.
George E. Roberts, American Bankers Association, *Treasurer*.
Malcolm C. Rorty, American Statistical Association.
A. W. Shaw, National Publishers' Association.
Gray Silver, American Farm Bureau Federation.
Robert B. Wolf, American Engineering Council.

Oswald W. Knauth, *Recording Secretary*. Gustav R. Stahl, *Executive Secretary*.

RESEARCH STAFF

Edwin F. Gay, <i>Director</i> .	Wesley C. Mitchell, <i>Director</i> .	
Willford I. King	Frederick C. Mills	Frederick R. Macaulay
Leo Wolman	Willard L. Thorp	Walter F. Willcox
	Harry Jerome	
	Simon Kuznets	