

## LIST OF CONTRIBUTORS SHOWS WIDE INTEREST IN BUREAU

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## FIVE TITLES EMBRACED IN LIST OF PUBLICATIONS ISSUED UNDER AUSPICES OF BUREAU

With the addition of two volumes growing out of the Ur employment Investigation, the list of official reports published under the auspices of the National Bureau of Economic Research, Inc., is increased to five. A complete list of the titles, with specifications and prices, follows. The prices have been fixed at the lowest practicable figures, and are intended to cover publishing and distribution costs only.

*Volume I, Income in the United States.* A summary of an investigation of the Amount and Distribution of Income in the United States 1909-1919 intended for readers who are primarily interested in the results. Size 7½ by 5¼ inches, 152 pages, with preface, 29 tables, 31 charts and index. Bound in blue cloth with gold letters \$1.58 postpaid.

*Volume II, Income in the United States.* A volume giving in full the methods and estimates on which the results shown in the first volume are based. In addition it goes into many details concerning particular industries. It consists of three parts: (1) Estimate by sources of production; (2) Estimate by incomes received; (3) Personal distribution of income in the United States. Size 9¼ by 6¼ inches, 425 pages, 222 tables, 35 charts and index. Bound in blue cloth with gold letters \$5.15 postpaid.

*Distribution of Income by States in 1919.* A study of the share of each state in the national income with a special analysis of the amount and relative importance of farmers' income. Size 9¼ by 6¼ inches, 32 pages, with preface and 9 tables. Bound in blue cloth with gold letters \$1.30 postpaid.

*Business Cycles and Unemployment.* Results of an investigation made for the President's Conference on Unemployment. By the staff of the Bureau with 16 collaborators. Twenty-one topics covered. This report summarizes the known facts of unemployment and describes the various methods suggested to control the business cycle and alleviate cyclical unemployment. It was planned to furnish a basis for the recommendations of the Business Cycle Committee, and as a guide to executives who have an active interest in stabilizing employment within their own organizations. Many practical suggestions are also made for the avoidance of the business losses that result during periods of excessive business expansion and depression. Size 9 by 6 inches, 430 pages, illustrated with tables and charts. Bound in blue cloth with gold letters. \$4.10 postpaid.

*Employment Hours and Earnings in Prosperity and Depression.* Results of an inquiry conducted by the National Bureau of Economic Research, with the help of the U. S. Bureau of Markets and Crop Estimates and the Bureau of the Census, for the President's Conference on Unemployment. Designed to meet the special needs of all persons interested in the study of labor conditions. Gives full details of investigation summarized in Business Cycles and Unemployment to which it is companion volume. Size 9 x 6 inches, 150 pages, illustrated with tables and charts. Bound in blue cloth with gold letters. \$3.10 postpaid.

Persons who wish to receive early copies of all the publications of the Bureau as issued may enroll as contributing subscribers, paying a minimum of \$25 a year. In addition to receiving the publications, the contributing subscribers will be kept in touch with the work of the Bureau as it progresses, and with the work planned for the future.

# Centers of Stress in American Industry Revealed

## CONCERNS FARTHEST FROM ULTIMATE CONSUMER SHOW MOST MARKED FLUCTUATIONS

New light on the comparative ability of various industries to withstand the stresses of business cycles, is thrown by the National Bureau of Economic Research in a report on *Employment Hours and Earnings in Prosperity and Depression*, made public today.

Both strong and weak spots in the industrial fabric are revealed in this report which supplements *Business Cycles and Unemployment*, the first of the Bureau's publications dealing with business cycles. Detailed figures covering payments for wages and salaries in each industry are given for each quarter, thus permitting an examination of the progress of a complete business cycle.

These figures show that total payments for wages and salaries to all employees by all enterprises of whatever size, dropped from \$10,472,000,000 in the third quarter of 1920 (peak of boom) to \$7,743,000,000 in the first quarter of 1922 (trough of depression) or a maximum cyclical decline of 23.16 per cent.

### How Industries Are Affected

It has been tacitly assumed by many writers on the subject that in good times all industries boom and in bad times all are greatly depressed. That such is not the case is shown by the figures in *Employment Hours and Earnings in Prosperity and Depression*.

Large scale, medium, and small operations were affected in different degrees. The figures of the National Bureau regarding employment, hours, and earnings indicate that the depression caused the smallest sized enterprises to reduce their wage bills from the peak figure by only 5 per cent while concerns hiring over 100 workers each, cut their payments by over one-third.

The industries showing the most striking declines in amounts paid to employees were: first, factories making metals, metal products, vehicles and miscellaneous goods; second, steam railways; and third, concerns engaged in the extraction of minerals.

Apparently factories turning out staple necessities nearly ready for the consumer, suffered less. Producers of food, drink, and tobacco reduced their operating force by only one-seventh, and paper and printing establishments got along with a ten per cent cut.

### Where Employment Is Stable

When we leave the manufacturing field and consider concerns dealing still more directly with the consumer, we find

## HOW EMPLOYMENT VARIES IN BOOM AND DEPRESSION

A Comparison of the Volume of Employment at the Peak and in the Trough for Leading Industrial Groups.\*

INDUSTRY	EMPLOYEES PER CONCERN	HOURS ACTUALLY WORKED (Millions)			Per Cent Decline
		Peak	Trough		
ALL INDUSTRIES	0- 20 21- 100 Over 100	6,956 2,926 9,181	6,742 2,521 6,589	3.08 13.84 28.23	
AGRICULTURE	0- 20 21-100 Over 100	1,488 98 27	1,456 81 20	2.15 <sup>a</sup> 17.35 25.93	
EXTRACTION OF MINERALS	0- 20 21-100 Over 100	23 92 593	23 54 414	0.00 41.31 30.18	
FACTORIES	0- 20 21-100 Over 100	901 1,171 5,327	827 946 3,273	8.21 19.21 38.56	
BUILDING AND CONSTRUCTION	0- 20 21-100 Over 100	307 311 228	262 264 121	14.66 15.11 46.93	
TRANSPORTATION	0- 20 21-100 Over 100	323 153 1,889	311 138 1,262	3.72 9.80 33.19	
COMMERCE AND TRADE	0- 20 21-100 Over 100	1,180 258 352	1,165 243 317	1.27 5.81 9.94	
ALL OTHER INDUSTRIES	0- 20 21-100 Over 100	2,767 894 1,045	2,573 836 926	7.01 6.49 11.39	

\* Based upon the third quarters—the periods between which the proportionate change in the number of employees was greatest.

\* Table copyright 1923 by the National Bureau of Economic Research, Inc., reproduced from *Employment, Hours, and Earnings, in Prosperity and Depression*.

employment much more stable. Retail dealers managed to keep 97 per cent of their force busy. Public, professional, domestic, and personal service continued during the depression to employ more than 95 per cent of their peak forces. Hand trades such as tailoring, millinery, and other custom work establishments recorded no reduction whatever in their volume of employment.

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## National Bureau of Economic Research, Inc.

The National Bureau of Economic Research, Inc., was incorporated in 1920 for the purpose of making impartial investigations in the field of economic, social, and industrial science.

No report of the Research staff may be published without the approval of the Board of Directors. Rigid provisions guard the Bureau from becoming a source of profit to its members, directors or officers, and from becoming an agency for propaganda. The Bureau assumes no obligation to present or future contributors, except to determine and publish facts.

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## FARM SERVANTS CONSTITUTE RARE SPECIES, SURVEY SHOWS

The farm of the novel, with its inevitable "hired girl" seems to be anything but typical in the United States today, according to figures given in the report *Employment Hours and Earnings in Prosperity and Depression* just issued by the National Bureau of Economic Research.

Even in the busy third quarter of 1921 there was only one hired girl to every eight farms owned by Crop Reporters. But this was at the busy season and some hired more than one girl. On the average, not more than one Crop Reporter's wife in sixteen has such an assistant and there is every reason to believe that hired girls are decidedly more rare on other farms.

The farmers of the South are somewhat more prone than those in other sections to secure household help, there being a hired girl on every eighth farm in that region.

In New England, the average is one for four farms. At the other extreme, lies the North Central and Rocky Mountain region where there is but one household servant for fourteen Crop Reporters' families.

The North Central region shows the greatest seasonal swing, indicating that the hired girl is there somewhat more closely connected with the rush of summer work than is the case in other sections.

An extremely small proportion of farmers' wives employ on the average as many as two hired girls, even in the rush season. Among Crop Reporters' wives in the entire United States, not even one in sixty had as many as two female assistants hired by the week. It appears that whether or not farm servants ever have been numerous, at the present time they constitute a rare species.

## PRESIDENT RORTY TO VISIT SOUTH AMERICAN ECONOMISTS

President M. C. Rorty of the National Bureau of Economic Research left New York June 27 for South America via Europe on a trip of four months. Incidentally, he will visit economists of the principal South American countries. He is hopeful of establishing a closer contact of the research workers of the two Americas and of increasing the sphere of interest in the development of economic science by means of impartial investigations along the lines pursued by the National Bureau of Economic Research.

### Directors Deliver College Addresses

Dr. Edwin F. Gay, one of the founders of the National Bureau of Economic Research, delivered the Phi Beta Kappa oration at Harvard, June 22, 1923. The title was "The Rhythm of History." It will be published in the September issue of the Harvard Graduates' Magazine.

Mr. George E. Roberts, a director of the Bureau representing the American Bankers Association, delivered the Commencement Day Address at the Iowa State College of Agriculture at Ames, Iowa, June 11, speaking on "The Unity of Social Interests." This address has been published in pamphlet form by the National City Bank of New York.

## LENGTH OF WORKING WEEK CUT 36 MINUTES IN 2 YEARS; NOW AVERAGE IS 50.3 HOURS

That the length of the working week of the average American employee declined 36 minutes during the last two years is indicated by the report *Employment, Hours, and Earnings, in Prosperity and Depression* which gives in detail the results of a survey made by the National Bureau of Economic Research for President Harding's Conference.

According to some historians, our great-grandfathers thought 12 hours a reasonable day's work. For more than a hundred years, however, the length of the working day has been declining steadily until, as the report "*Employment, Hours, and Earnings, in Prosperity and Depression*" shows, the average American in the first quarter of 1922 was expected by his employer to work only 50.3 hours per week, just a trifle more than the eight hours for six days set forth as an ideal by reformers of a generation or two ago. The detailed figures covering all industries in the United States show that the lengths of the working week declined 36 minutes during the two years covered by the study.

### How Hours Compare in Industries

Of all classes of employers reporting, those engaged in rendering domestic and personal service record the longest full-time hours for those working under their direction, the average being slightly more than eight hours daily for a seven-day week. Farmers and retail merchants each require over 53 hours of work per week from their employees.

Employers in a considerable group of industries usually call for less than 48 hours per week from their workers. This group includes building and construction, finance, public and professional service, paper and printing establishments, and factories making textiles, clothing, leather, and leather goods.

The figures presented in the report indicate that the man who is anxious to have a steady job in dull times as well as in good times should seek a position with a small employer. However, if he followed this course during the last few years, he may have discovered that he gained less than he expected by the choice, for the tables show that in the last quarter for which reports are available he was asked to work 53 hours each week in the small enterprise instead of 47.8 that the large establishment on the average required him to serve. This difference is partly accounted for by the fact that farmers form so large a portion of small employers. However, the farmers are not the only ones of this class that call for longer hours than the average.

### Shorter Work Day in Big Houses

In 9 out of 17 industries, employers hiring fewer than 21 workers required their employees to work over fifty hours per week in the first quarter of 1922.

In the group employing 21 to 100 workers, long hours for employees proved to be even more common than in the smaller enterprises at the same date, for 12 out of the 17 industrial groups had full time hours of more than 50 per week. Only in concerns employing over 100 men were shorter hours the rule. In that group, only 7 of the 17 industries expected their men to work as much as 50 hours per week.

## LABOR DIRECTOR HONORED FOR SERVICE DURING WAR

Mr. Hugh Frayne, Director-by-appointment, representing the American Federation of Labor, on the Board of Directors of the National Bureau of Economic Research, was decorated at Governors Island, New York, May 17, with the Distinguished Service Medal.

The medal was bestowed for "exceptionally meritorious and distinguished services in a position of great responsibility in connection with the operations of the War Industries Board during the World War." The citation notes "his broad vision, distinguished capacity and organizing ability, services of inestimable value in marshalling the industrial forces of the nation and mobilizing its economic resources,—marked factors in assisting to make military success attainable."

## CENTERS OF STRESS IN INDUSTRY ARE REVEALED

(continued from page 1)

Although there are numerous exceptions, the average employee, when working for a large concern puts in fewer hours at higher pay per hour, but in return for this extra compensation, he sacrifices much of the security of employment which he would have if he worked for a small enterprise.

The average earnings in 1920 of persons who, in that year, worked in plants employing over 100 workers, was \$1,544. In 1921, because of unemployment, their earnings had fallen to \$1,112, a loss of \$432. Those persons employed in enterprises having fewer than 21 employees received only \$1,121 each in 1920, but in 1921 their earnings had declined to only \$1,077, a diminution of \$44. Workers employed in concerns of intermediate size earned on the average \$1,354 in 1920 and \$1,222 in 1921.

Female employees in general earn about three-fourths as much as males.

### Rates of Pay Affected

The business depression of 1921 caused a material decline in rates of pay per hour actually worked only in the fields of agriculture, manufacturing, mining, and steam railways.

The average rates of pay per hour in various industries cover a wide range—the highest figure in 1921 being 76 cents per hour in finance, and the lowest rate being 25 cents per hour in agriculture. The average for all industries at the close of 1921 was 51 cents per hour.

"If the 1921 depression was typical," said Dr. Willford I. King, who was in charge of this inquiry for the National Bureau of Economic Research, "it follows that the relative steadiness of employment given by a concern depends largely upon the relations of the enterprise to its ultimate market; in other words, how closely in touch it is with the consumer of its products."

Copies of this report which contains 147 pages, 6 x 9 inches in size, fully illustrated with charts and tables, may be obtained from the National Bureau of Economic Research, 474 West 24th St., New York City.