

**PUBLICATIONS OF THE NATIONAL BUREAU OF  
ECONOMIC RESEARCH, INCORPORATED**

**No. 6**

**THE GROWTH OF AMERICAN TRADE UNIONS,  
1880-1923**

**A**LL reports of the National Bureau of Economic Research are critically examined in manuscript both by its scientific staff and by its Board of Directors. No report is published that has not been approved by a majority of the Board. A Director who dissents from any statement in a report approved by the majority may have his critical comments published in the report.

The present report has been reviewed in this manner and approved for publication.

The members of the Board of Directors are as follows:

### DIRECTORS AT LARGE

T. S. ADAMS, Professor of Political Economy, Yale University.  
JOHN R. COMMONS, Professor of Political Economy, University of Wisconsin.  
JOHN P. FREY, Editor, International Molders' Journal.  
EDWIN F. GAY, Professor of Economic History, Harvard University.  
HARRY W. LAIDLER, Secretary, The League for Industrial Democracy.  
ELWOOD MEAD, Commissioner of the Bureau of Reclamation.  
WESLEY C. MITCHELL, Professor of Economics, Columbia University.  
DWIGHT W. MORROW, Member of firm of J. P. Morgan and Company.  
GEORGE SOULE, Director, The Labor Bureau, Inc.  
GEORGE O. MAY, Member of firm of Price, Waterhouse and Company.  
N. I. STONE, General Manager, Hickey-Freeman Company.  
ALLYN A. YOUNG, Professor of Economics, Harvard University.

### DIRECTORS BY APPOINTMENT

HUGH FRAYNE, American Federation of Labor.  
DAVID FRIDAY, American Economic Association.  
WALTER R. INGALLS, American Engineering Council.  
LEE GALLOWAY, American Management Association.  
GEORGE E. ROBERTS, American Bankers' Association.  
M. C. RORTY, American Statistical Association.  
A. W. SHAW, Periodical Publishers' Association.  
GRAY SILVER, American Farm Bureau Federation.

### RESEARCH STAFF

WESLEY C. MITCHELL, Director.	EDWIN F. GAY, Director.
WILLFORD I. KING.	FREDERICK R. MACAULAY.
LEO WOLMAN.	HARRY JEROME.

WILLARD L. THORP.

# THE GROWTH OF AMERICAN TRADE UNIONS 1880-1923

*By*

LEO WOLMAN

OF THE STAFF OF THE  
NATIONAL BUREAU OF ECONOMIC RESEARCH, INCORPORATED

*With a Foreword by*

WESLEY C. MITCHELL

NEW YORK  
NATIONAL BUREAU OF ECONOMIC  
RESEARCH, INC.  
1924

Copyright, 1924, by  
NATIONAL BUREAU OF ECONOMIC RESEARCH, INC.

PRINTED IN THE U. S. A.

---

J. J. LITTLE & IVES COMPANY

## FOREWORD

The first task essayed by the National Bureau of Economic Research was to determine as accurately as might be the size and distribution of the income produced and consumed by the people of the United States. As our estimates neared completion, we realized that they involved us in a series of new problems. Among these problems one of the most obvious was the considerable fluctuations in the national income from year to year which our figures showed. What produces these fluctuations? How are they shared by the various classes of income receivers—farmers, wage earners, investors, business men? How does a rise or fall of money income one year react upon consumption and production—that is, upon the well-being of the population and the income of future years?

It seemed incumbent upon the National Bureau to answer these questions if it could. They grew out of its own work, they were of grave importance to the country, they could be attacked by quantitative methods—in short, they were questions of precisely the sort which the National Bureau had been organized to treat. Accordingly, after our first two reports had been published, giving estimates of the income of the country in 1909 to 1919, the Executive Committee of the Board of Directors authorized the staff to make a new series of investigations dealing with fluctuations in income. In these studies especial attention was to be given to those alternating expansions and contractions of activity which are known as business cycles.

Soon after this program had been adopted, Secretary Hoover asked the National Bureau to organize an investigation for a committee appointed by the President's Conference on Unemployment. This committee was charged to report upon methods of preventing the recurrence of such periods of widespread unemployment as had led President Harding to call the Conference of 1921. The National Bureau's task was to collect and present materials which might be of use, not only to the committee, but also to all

others interested in mitigating crises and depressions. Of course, changes in the number of men at work for wages are the chief immediate cause of fluctuations in the size and in the distribution of the national income. In responding to Secretary Hoover's call, the National Bureau was beginning to carry out the plans it had already laid.

The two reports which grew out of this connection—*Business Cycles and Unemployment* and *Employment, Hours, and Earnings in Prosperity and Depression*, published in 1923—presented our first results in this field of research.

A second venture in this field was undertaken in 1923 at the instance of the National Research Council. The Laura Spelman Rockefeller Memorial had enabled the Council to inaugurate a series of researches in the scientific problems of human migration. We were asked to participate by investigating the bearings of migration upon labor supply in the United States. A report upon this subject, prepared by Dr. Harry Jerome, is nearing completion and will soon be published under the title *Migration and the Business Cycle*.

The present volume on *The Growth of American Trade Unions, 1880-1923*, is another outgrowth of the program framed in 1922. Its relevance is clear. The trade union movement affects productivity and affects wages—that is, it affects both the size and the distribution of the national income. The varying membership of trade unions from year to year, and the proportions of all wage earners who are thus organized—the leading subjects of the following chapters—concern the general public only less than they concern employers and employees. In determining the facts on these heads as accurately as the materials permit, the National Bureau is following its policy of providing men of all shades of opinion with objective knowledge of the conditions which confront them. As in all our work, so here: we confine ourselves to stating the facts as we find them. With opinions about the promise or the danger to American life from the growth of trade unions we have no concern as an organization of investigators.

While it is devoted to "fact finding," the National Bureau has done much of its work on the frontier of statistics. The growth of a science, like the growth of a nation on a new continent, involves

repeated rough explorations of territory which cannot be mapped with precision for years to come. We have not hesitated to meet the risks which all explorers take when we have thought the public interest would be served by venturing into territory that is but vaguely known. In the present volume we are making a fresh reconnaissance of ground most of which has already been traversed by others; but even our survey makes no claim to precision. The figures it gives are approximations rather than accurate determinations. That is all that figures can be in this territory now; for the statistics of membership in trade unions and still more the census tables of occupations are defective. The author, Dr. Leo Wolman, shows what the chief defects are, and how they leave a margin of uncertainty around many of his results. We believe, however, that these results are as dependable as can be reached in the present state of the original data. We believe further that knowledge is better served by publishing these carefully made approximations than by doing nothing until the data have become satisfactory. The wait might be a long one.

It should be added that the study of trade union membership is a necessary preliminary to further work which Dr. Wolman is carrying on for the National Bureau. Our volumes on *Income in the United States* show that wage earners are much the most numerous class of income receivers, and that wages is much the largest of the income streams. In treating fluctuations of income, we therefore wish to learn all we can about this crucially important factor. Dr. Wolman, whose experience has given him especial competence in such inquiries, is studying wages at large. One of his themes is the fluctuations of labor costs to employers, a difficult problem which involves joint consideration of wage rates and of efficiency. A second theme is the fluctuations in the retail demand for consumers' goods, also a difficult problem involving joint consideration of wage rates and volume of employment. A third theme is the fluctuations in real wages, which involves joint consideration not merely of money earnings and cost of living, but also of leisure.

What results Dr. Wolman will succeed in getting out of the voluminous yet fragmentary data cannot be foretold. If his efforts prosper as we hope, the present volume will be followed at intervals by two or three others, which will make use of the figures of

trade union membership here presented in connection with larger bodies of fresh materials. All these labor studies, together with Dr. Harry Jerome's work on migration, Dr. F. R. Macaulay's investigation of bond yields and discount rates which is nearing completion, and Mr. Willard L. Thorp's collection of business annals and statistics will contribute toward the preparation of the general treatise upon business cycles which the National Bureau has under way.

WESLEY C. MITCHELL.

## ACKNOWLEDGMENTS

This study would not have been possible without the coöperation of the many officials of trade unions, who opened their records to the National Bureau of Economic Research and patiently replied to innumerable requests for further information. Miss Florence Thorne, Secretary to Mr. Samuel Gompers, was of great assistance in pointing out defects in the data and in making available unused sources of new data. The burdensome and skilled task of constructing the tables and the charts, checking the statistics, and seeing the book through the press was accomplished by Miss Elizabeth W. Putnam, of the Staff of the National Bureau. Mr. H. K. Herwitz and Mrs. Dorothy J. Orchard, of the Research Department of the Amalgamated Clothing Workers of America, were from the beginning helpful with criticism and suggestion. The author wishes particularly to acknowledge his indebtedness to Professor George E. Barnett, of Johns Hopkins University, under whose direction he completed, in 1915, his first study of the statistics of American trade unions.

LEO WOLMAN.



## CONTENTS

	PAGE
FOREWORD.....	5
ACKNOWLEDGMENTS.....	9
CHAPTER I. Introduction.....	19
CHAPTER II. Changes in Union Membership, 1880-1923.....	29
CHAPTER III. The Working Population in the United States, 1910 and 1920.....	67
CHAPTER IV. The Extent of Labor Organization in 1910 and 1920.	82
CHAPTER V. Women in Trade Unions in 1910 and 1920.....	97
APPENDIX.....	110
INDEX.....	163



## LIST OF TABLES IN THE TEXT

	PAGE
Table 1. Membership of Selected American Labor Unions, 1880-1896.....	32
Table 2. Total Membership of American Trade Unions, 1897-1923.....	33
Table 3. Changes in Total Membership, 1897-1923.....	34
Table 4. Per Cent of Gain or Loss in Membership, 1915-1923.....	35
Table 5. Decrease in Number of Wage Earners in Selected Group of Industries, 1919-1921.....	41
Table 6. General Index of Employment in Manufacturing Industries, 1920-1923.....	43
Table 7. Per Cent of Total Membership in Each Group of Unions in the Years 1897, 1900, 1910, 1914, 1920, and 1923.....	62
Table 8. Membership of Trade Unions in Selected Countries, 1914-1923..	65
Table 9. Industrial Distribution of Persons Engaged in Gainful Occupations, 1920 and 1910.....	73
Table 10. Changes in Number Engaged in Gainful Occupations, 1910 to 1920.....	74
Table 11. Distribution of Working Population into Employer, Salaried and Wage-Earning Classes, 1920 and 1910.....	77
Table 12. Comparison of Classifications of the Working Population of the United States, 1920.....	79
Table 13. Comparison of Two Classifications of United States Census of Occupations, 1920.....	80
Table 14. Per Cent of Wage Earners Organized in Major Divisions of Industry, 1920 and 1910.....	86
Table 15. Per Cent of Organization among Divisions of Manufacturing Industries, 1920 and 1910.....	88
Table 16. Per Cent of Organization among Divisions of the Transportation Industry, 1920 and 1910.....	90
Table 17. Per Cent of Organization among Selected Occupations in the Building Trades, 1920 and 1910.....	92
Table 18. Per Cent of Organization among Compositors, Linotypers, and Typesetters in Selected Cities, 1920.....	94
Table 19. Per Cent of Organization among Brick and Stone Masons, in Selected Cities, 1920.....	95
Table 20. Female Membership of American Unions, 1910 and 1920.....	98

	PAGE
Table 21. Women 10 Years of Age and Over Engaged in Gainful Occupations, Distributed by General Divisions of Occupations, 1920 and 1910.....	101
Table 22. Per Cent Distribution by Sex of Persons 10 Years of Age and Over in Each General Division of Occupations, 1920 and 1910.	102
Table 23. Changes in Number of Gainfully Employed Women, 1910 to 1920	103
Table 24. Classification of Women into Employer, Salaried and Wage-Earning Classes, 1920 and 1910.....	104
Table 25. Per Cent of Organization among Female Wage Earners in Major Divisions of Industry, 1920 and 1910.....	105
Table 26. Per Cent of Organization among Female Wage Earners in Manufacturing Industries, 1920 and 1910.....	106
Table 27. Number and Percentage of Women Trade Union Members in New York State in Cities of over 50,000, 1920.....	108

## LIST OF CHARTS

	PAGE
Chart 1. Trade Union Membership: Mining and Quarrying; and United Mine Workers, 1897-1923.....	45
Chart 2. Trade Union Membership: Building Trades; United Carpenters; and Bricklayers and Masons, 1897-1923.....	47
Chart 3. Trade Union Membership: Metal, Machinery and Shipbuilding; and Machinists, Boilermakers and Railway Carmen, 1897-1923.....	48
Chart 4. Trade Union Membership: Boilermakers, Machinists and Railway Carmen; Machinists; and Railway Carmen, 1897-1923...	49
Chart 5. Trade Union Membership: Textiles, 1897-1923.....	50
Chart 6. Trade Union Membership: Clothing; Amalgamated Clothing Workers; and Ladies' Garment Workers, 1897-1923.....	51
Chart 7. Trade Union Membership: Leather; United Shoe Workers; and Shoe Workers' Protective, 1897-1923.....	52
Chart 8. Trade Union Membership: Transportation; Steam Railroads; and Water Transportation, 1897-1923.....	53
Chart 9. Trade Union Membership: Steam Railroads; and Train Service, 1897-1923.....	55
Chart 10. Trade Union Membership: Paper, Printing and Bookbinding; Printing Pressmen; and the Typographical Union, 1897-1923..	56
Chart 11. Trade Union Membership: Chemical, Clay, Glass and Stone; Glass Unions; and Stone Unions, 1897-1923.....	57
Chart 12. Trade Union Membership: Food, Liquor and Tobacco; Cigar-makers; and Brewery Workmen, 1897-1923.....	58
Chart 13. Trade Union Membership: Restaurant and Trade, 1897-1923..	59
Chart 14. Trade Union Membership: Theatres and Music, 1897-1923.....	60
Chart 15. Trade Union Membership: Public Service, 1897-1923.....	61
Chart 16. Trade Union Membership: All Unions; Unions Affiliated with American Federation of Labor, and Independent Unions, 1897-1923.....	63



## LIST OF TABLES IN APPENDIX

	PAGE
Table I. Membership of American Trade Unions, 1897-1923.....	110
Table II. Membership of Affiliated and Independent National Trade Unions, 1897-1923.....	120
Table III. Membership of Trade Unions in Selected Countries, 1910-1920	124
Table IV. The Working Population of the United States, 1920 and 1910.	125
Table V. Membership of American Trade Unions in the United States and Canada, 1920.....	133
Table VI. Extent of Organization among Persons Engaged in Each In- dustry, 1920.....	137
Table VII. Extent of Organization among Persons Engaged in Each In- dustry, 1910.....	146
Table VIII. Extent of Organization among Persons Engaged in Selected Occupations, 1920.....	156
Table IX. Extent of Organization among Persons Engaged in Selected Occupations, 1910.....	158