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**Micro-Level Data Sets
Suitable for Investigation
of Macroeconomic Issues Extracted from Reports
of the State Bureaus of Labor Statistics, Circa 1890**

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July 1989

Key words: historical labor market statistics, labor markets, unemployment

Abstract

This paper describes a project underway at the University of California, Berkeley and Riverside campuses, and at Smith College. The project is intended to create a machine-readable data base of microeconomic data extracted from a selected subset of over 150 separate reports published between 1874 and 1920 by over 20 different state bureaus of labor statistics. The data available in these reports can be broadly classified into one of three categories: 1] Survey data collected from workers canvassed by bureau agents in studies seeking information on occupation, wages, working conditions, living standards, asset ownership, and many other diverse subjects. Altogether the complete data set would include information from over 100,000 respondents; 2] Data contained in "special reports" on a amazing variety of topics ranging from special investigations of the industrial depressions of 1893 and 1907, to the health of female college graduates, special investigations of the character and extent of unemployment, to the balance sheets of saving banks and building associations, union membership and strike success, to detailed industry studies of technology, labor practices, and industrial structure; 3] Survey data collected from firms canvassed by the states seeking information on output, employment, hours, wage rates, employment practices, and many other issues. For several states consistent information was collected on an annual basis.

The data collection project is part of a larger effort designed to explore the structure of late nineteenth-century labor markets and to trace the evolution of labor market structure into the 1920s. This project will make extensive use of all three types of data mentioned above. The paper describes the data and illustrates possible uses with reference to these labor market issues.

JEL Classification: O42, 229, 824

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The assistance of Brian A'Hearn in preparing this paper and the accompanying appendixes is appreciated. The project described is being undertaken in close collaboration with Roger Ransom and Charles Wetherall. We thank them for their support and encouragement. We have also benefited from discussions with Barry Eichengreen, Michael Haines, Joan Hannon, Thomas Weiss, and participants in the NBER-DAE/Berkeley Project on Macroeconomic history. Further advice and suggestions are welcome.

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INTRODUCTION

This note describes a project underway at the University of California, Berkeley and Riverside campuses, and at Smith College. The project is intended to create a machine-readable data base of microeconomic data extracted from a selected subset of over 150 separate reports published between 1874 and 1920 by over 20 different state bureaus of labor statistics. The data available in these reports can be broadly classified into one of three categories:

1] Survey data collected from workers canvassed by bureau agents in studies seeking information on occupation, wages, working conditions, living standards, asset ownership, and many other diverse subjects. Altogether the complete data set would include information from over 100,000 respondents.

2] Data contained in "special reports" on a amazing variety of topics ranging from special investigations of the industrial depressions of 1893 and 1907, to the health of female college graduates, special investigations of the character and extent of unemployment, to the balance sheets of saving banks and building associations, union membership and strike success, to detailed industry studies of technology, labor practices, and industrial structure.

3] Survey data collected from firms canvassed by the states seeking information on output, employment, hours, wage rates, employment practices, and many other issues. For several states consistent information was collected on an annual basis.

The existence of this rich source of data has been known to cognoscenti for some time. Data of the first type was called to the attention of economic historians by a classic paper of Jeffrey Williamson [1967]. However this data was not utilized until Williamson's student, Joan Hannon, analyzed a sample collected by the Michigan Bureau in her dissertation on ethnic discrimination [1978, 1982b]. Since then several other of these data sets have been used by

Hannon [1982a], Barry Eichengreen [1984, 1987], Eichengreen and Henry Gemery [1986], Steven Maddox and Eichengreen [1986], Roger Ransom and Richard Sutch [1986, 1989], Susan Carter and Peter Philips [1988], Carter [1988], Carter and Elizabeth Savoca [1989a, 1989b], Robert Whaples and David Buffum [1988], and others. Data of the third type are well known because they were exploited by pioneers in the creation of macroeconomic data on GNP, employment, wages, and hours [Berridge 1923; Jerome 1926; Douglas 1930; Frickey 1942; Rees 1961; Lebergott 1964]. They have also been used to study issues connected with racial and gender discrimination [Philips 1982]. The special reports have been virtually ignored until recently. The work of Alexander Keyssar [1986] has drawn attention to the value of the special investigations of unemployment. Hannon [1984] is analyzing reports on poor relief. Gerald Friedman [1988] is studying strike activity. William Sundstrom [1989] and Carter and Sutch [1989] are investigating the depression of 1893.

Despite these ongoing efforts, the rich volume of data contained in state labor bureau reports remains unexplored. Few of these data sets have been machine coded, much remains entirely unexamined, and even the quantitative data previously examined remain to be fully exploited. Virtually no attention has been given to data contained in the special reports.

The present authors are engaged in a project designed to explore the structure of late nineteenth-century labor markets and trace the evolution of labor market structure into the 1920s. This project will make extensive use of all three types of data mentioned above. Meanwhile Roger Ransom and Richard Sutch are continuing their investigation on the history of saving and they contemplate further use of these data, particularly surveys of the expenditures, budgets, and saving behavior of farmers and self-employed workers. To further these particular research agendas and, not incidentally, to make available a valuable source of data to other scholars working on these and other topics we propose to take a systematic approach to the identification, assessment, collection, and archiving of as much of the state report data as funds, time, and will

permit.¹ This report is intended to give a brief overview of the data available, suggest some of the many questions in macroeconomic and microeconomic history to which they might prove critical or insightful, and to describe some of the collection, distribution, and archiving procedures we propose. We wish to emphasize that the project has only begun and that a major purpose of presenting these comments to the National Bureau Conference is to elicit suggestions for the conduct of this effort. Nothing is yet fixed in procedure, format, or personnel. All comments, suggestions, and praise are welcome.

THE STATE BUREAU OF LABOR STATISTICS MOVEMENT

Massachusetts was the first state to establish a Labor Bureau. It was founded in 1869 as the Massachusetts Bureau of Statistics of Labor to collect and present statistical information on labor in the state to the Legislature. However, its first chief, Henry Oliver, apparently used his office to further the interests of organized labor and the Bureau soon fell into political trouble with the Great and General Court of the Commonwealth. A prominent state senator, Carroll D. Wright, was asked to take charge in 1873 to prevent the abolition of the unit by the legislature. Although Wright had no formal background as a statistician, he adopted the position of the German school of social statisticians which emphasized the collection of large samples of cross-section data obtained from carefully-designed "inquiries" into the facts. Questionnaires were administered to a large "representative" sample to obtain precise quantitative responses. By adopting the German methodology Wright was implicitly rejecting the alternative journalistic approach advocated by the

1. This proposal received a friendly reception and endorsement from the National Bureau of Economic Research Subcommittee on Macroeconomic History sponsored by the Development of the American Economy (DAE) Section when it met in Berkeley in March 1989. The project, if adequately funded and carried forward, would be in collaboration with Ransom and Charles Wetherall and perhaps others. Thomas Weiss has proposed holding a small conference at the University of Kansas in 1990 to discuss the value and use of state bureau of labor data. Interested parties are encourage to contact one of us for further information.

French social scientists of the "Le Play School." These scholars would arrange to live with and work along side a representative family to observe their situation "first hand." This approach was akin to anthropological field study and gathered largely qualitative information.

To avoid some of the political problems produced by his predecessor's advocacy, Wright pursued a "pure" approach to data collecting. Rather than attempt to interpret or even to summarize the information his agents collected, it was published "raw." In the Massachusetts Bureau of Statistics of Labor's Sixth Annual Report [1875], for example, Wright published the full responses to his questionnaire about the condition of workingmen in Massachusetts for each of the 397 respondents interviewed. As Jeffrey Williamson reported:

Never before had such a sample been collected on such a scale, with such detailed economic data, and with such care with regards to its representativeness of the population. With the appearance of the Sixth Annual Report, public criticism of the MBSL died down and Wright became a legend in his own time [Williamson 1967, p. 103].

The subsequent success of the Massachusetts Bureau produced successful legislation in other states creating similar agencies. Table 1 provides a list of states chronologically by date of first report issued. Wright became the informal leader of the state labor statistics movement. There were annual meetings of representatives of the various state bureaus and a concerted attempt was made to establish operating principles and quality control, to standardize methodology, and to deal with practical and political obstacles to their work with a united front. As a consequence, many of the individual state studies were similarly designed, asked identically-worded questions of their respondents, and were conducted using the established selection and interviewing techniques.

In 1885 Congress established the federal Bureau of Labor Statistics and Wright was appointed the first United States Commissioner of Labor. In his new position he worked with the superintendents of the state bureaus to promote data collection at the state level. One result was an outpouring of statistical surveys of working conditions undertaken in the early 1890s through

house-to-house surveys of workers. The United States Bureau of Labor conducted its own massive survey of workers in 1889 and 1890 [U.S. Commissioner of Labor, 1890 and 1891]. The family budget survey covered 8,544 working-class families; 6,809 in the United States, and 1,735 households in five European countries.² What makes these state and federal reports so valuable to the modern researcher (but made them almost useless to the contemporaries) was that the statistics bureaus followed a pattern of publishing lengthy volumes reproducing each individual's exact responses to the questions asked. Beyond a simple tabulation of the results, no systematic analysis of the data was undertaken.

Today it is possible at reasonable cost to transform the raw published data into machine-readable form and use computer-assisted statistical and data handling techniques to address a variety of exciting historical questions. To provide an idea of the volume and data available and the type of questions to which it might be directed we shall discuss in turn each of the three categories of data listed above beginning with the surveys of employment and living conditions.

2. This data has been used by Allen Kelley [1972], Peter Lindert [1978], and Michael Haines [1979, 1985]. Haines [1979] provides a detailed description of this data which is now available from the Interuniversity Consortium for Political and Social Research in machine-readable form.

Table 1
State Bureaus of Labor Statistics, March 1902

State	Year of First Report	Number of Reports Through 1901
Massachusetts	1870	44
Pennsylvania	1873	28
Ohio	1877	24
New Jersey	1878	23
Indiana	1879	14
Missouri	1879	23
Illinois	1879-80	21
New York	1883	18
Michigan	1883	18
California	1883-84	9
Wisconsin	1883-84	9
Iowa	1884-85	9
Maryland	1884-85	13
Kansas	1885	16
Connecticut	1885	17
Maine	1887	14
Rhode Island	1887	11
North Carolina	1887	14
Colorado	1887-88	9
Minnesota	1887-88	7
Nebraska	1887-88	7
West Virginia	1889-90	6
North Dakota	1889-90	6
Tennessee	1891	10
New Hampshire	1893	6
Montana	1893	7
Utah	1894	1
Washington	1897-98	2
Virginia	1898	3

Source: United States Bureau of Labor, Index of All Reports Issued by Bureaus of Labor Statistics in the United States Prior to March 1, 1902. (Washington: Government Printing Office, 1902).

WORKER SURVEYS

Table 2 lists ninety-seven working and living condition surveys with reliable data that we have identified in our search of the state reports. The list may be incomplete since our compilation is still in progress. We should note that all of the state reports published before 1900 are available at the University of California library in a microfiche format and that many of the published volumes are stored as part of the University's documents collection. Other volumes are available with varying ease on interlibrary loan from state archives and historical societies. Princeton University library has a particularly good collection. The Library of Congress may have a virtually complete set of reports available in Washington if no lendable copy can be located. A very helpful annotated guide to some of these reports was published by the Department of Agriculture [Williams and Zimmerman, 1935]. The U.S. Bureau of Labor published two indexes to the state reports. The first, published in 1893, covering all reports published up to 1892, is also annotated [U.S. Bureau of Labor 1893]. The second index issued in 1902 is not [U.S. Bureau of Labor, 1902].

The reports listed in Table 2 are in order of a preliminary priority for collection by the project. Those at the top have already been collected although they may require additional data cleaning and documentation before they can be widely used. These are followed by those that we propose to collect to further our own particular research agenda. Finally we list other reports that merit, we believe, inclusion in the eventual collection by virtue of their quality, size, and regional or topical interest to economic and social historians. We have excluded from Table 2 a number of surveys that we believe should have low priority. Some of these sets are very small, others are flawed by inadequate quality control, apparent bias, or a limited range of data. We again emphasize that these lists are incomplete and preliminary and the priorities for collection proposed are very tentative.

Table 2
Worker Surveys

State	Title and Year of Report	Coverage
<u>Data Sets Already Collected</u>		
California	Fifth Biennial, 1893	3493 workers
Indiana	Fifth Biennial, 1893-94	500 women workers
Iowa	First Biennial, 1885	347 teachers
Kansas	First Annual, 1885	337 workers
Kansas	Second Annual, 1886	471 workers
Kansas	Third Annual, 1887	444 workers
Maine	First Annual, 1887	108 workers
Maine	Second Annual, 1888	118 workers
Maine	Fifth Annual, 1891	1084 workers
Michigan	Seventh Annual, 1890	5419 furniture workers
Michigan	Eighth Annual, 1891	4038 ag implements and iron workers
Missouri	Fourteenth Annual, 1893	259 workers
	TOTAL	16,618

--More--

Table 2 -- Continued
Worker Surveys

State	Title and Year of Report	Coverage
<u>Data Sets Proposed for Immediate Collection</u>		
Connecticut	Fourth Annual, 1888	693 farmers
Iowa	First Biennial, 1884-85	751 workers
Michigan	Sixth Annual, 1889	3191 copper and other workers
Michigan	Eleventh Annual, 1894	9204 railroad workers
Michigan	Twelfth Annual, 1895	5600 farm laborers
		2300 domestics
		935 farmers
Michigan	Thirteenth Annual, 1896	1250 self-employed hack drivers
		2000 employed hack drivers
		1865 street car workers
Michigan	Fourteenth Annual, 1897	4000 vehicle workers
New Hampshire	Second Annual, 1894	711 workers
New Jersey	Twenty-Sixth Annual, 1903	950 child workers
Ohio	Third Annual, 1879	367 workers
Ohio	Seventeenth Annual, 1893	8671 farmers
Pennsylvania	Seventh Annual, 1879-80	299 workers
Pennsylvania	Ninth Annual, 1880-81	167 workers
Pennsylvania	Twenty-Second Annual, 1894	1376 building trades
Rhode Island	Second Annual, 1888	600 workers
West Virginia	Second Biennial, 1892-93	236 miners, workers
Wisconsin	7th Biennial, 1895-96	555 farmers
		1488 mechanics
	TOTAL	47,209

--More--

Table 2 -- Continued
Worker Surveys

State	Title and Year of Report	Coverage
<u>Data Sets Proposed for Eventual Collection</u>		
California	Third Biennial, 1887-88	430 women
Colorado	First Biennial, 1887-88	458 workers
Illinois	First Biennial, 1879-80	529 workers
Illinois	Second Biennial, 1881-82	1191 workers
Illinois	Third Biennial, 1883-84	2129 families
Iowa	Third Biennial, 1888-89	2141 workers
Iowa	Sixth Biennial, 1894-95	3334 workers
Iowa	Ninth Biennial, 1899-1900	268 workers
Iowa	Tenth Biennial, 1901-02	395 workers
Iowa	Eleventh Biennial, 1903-04	333 workers
Iowa	Twelfth Report, 1905	407 workers
Iowa	Thirteenth Biennial, 1906-07	404 workers
Iowa	Fourteenth Biennial, 1908-09	507 workers
Iowa	Fifteenth Biennial, 1910-11	152 workers
Kansas	Fifth Annual, 1889	147 workers
Kansas	Seventh Annual, 1891	361 workers
Kansas	Ninth Annual, 1893	1058 workers
Kansas	Tenth Annual, 1894	1397 workers
Kansas	Eleventh Annual, 1895	519 workers
Kansas	Twelfth Annual, 1896	539 workers
Kansas	Fifteenth Annual, 1899	819 workers
Kansas	Sixteenth Annual, 1900	531 workers
Kansas	First Biennial, 1901-02	772 workers
Kansas	Second Biennial, 1903-04	741 workers
Kansas	Twenty-Second Annual, 1906	335 workers
Kansas	Twenty-Third Annual, 1907	390 workers
North Carolina	First Annual, 1887	779 heads of families
Ohio	Second Annual, 1878	101 workers
Oklahoma	First Annual, 1908	242 workers
Oklahoma	Second Annual, 1909	92 workers
Oklahoma	Third Annual, 1910	117 workers 320 families

-- More --

Table 2 -- Continued

State	Title and Year of Report	Coverage
<u>Data Sets Proposed for Eventual Collection -- Continued</u>		
Maine	Fourteenth Annual, 1900	175 workers
Michigan	Tenth Annual, 1893	9527 construction workers
Minnesota	Twelfth Biennial, 1909-10	212 families
Missouri	First Annual, 1879	475 workers earners
Missouri	Second Annual, 1880	147 workers
Missouri	Eleventh Annual, 1889	130 miners
Missouri	Twelfth Annual, 1890	438 car shop workers
Missouri	Thirteenth Annual, 1891	1230 workers
Missouri	Fifteenth Annual, 1893	1467 miners and workers
New Jersey	Second Annual, 1879	383 workers
New Jersey	Sixth Annual, 1883	550 workers
New Jersey	Seventh Annual, 1884	1300 workers
New Jersey	Eighth Annual, 1885	608 workers
New Jersey	Ninth Annual, 1886	330 families
New Jersey	Eleventh Annual, 1888	680 workers
Nebraska	Second Biennial, 1889-90	721 unskilled laborers
New Hampshire	First Annual, 1893	436 wage earners
New Hampshire	First Biennial, 1895-96	1815 shoe workers
Ohio	First Annual, 1877	145 mechanics and miners
Ohio	Fourth Annual, 1880	286 wage earners
Ohio	Fifth Annual, 1881	864 families
Ohio	Sixth Annual, 1882	299 workmen
Ohio	Seventh Annual, 1883	1013 workmen
Ohio	Eighth Annual, 1884	314 skilled laborers
Ohio	Ninth Annual, 1885	353 workers
Ohio	Tenth Annual, 1886	355 workers
Rhode Island	Sixth Annual, 1892	573 artisans
Rhode Island	Eighth Annual, 1894	2299 textile operatives
Washington	Third Biennial, 1901-02	100 wage earners
Washington	Fourth Biennial, 1903-04	100 wage earners
Wisconsin	Third Biennial, 1887-88	671 workers
	TOTAL	49,934
	GRAND TOTAL	113,761

Appendix A provides a guide to the topics and coverage of most of these reports.

Appendix B provides a sampler of pages photocopied from the original reports for several of the worker surveys. These should give an idea of the way the data is presented, the form in which the questions were asked, and -- we hope -- will pique the interest of individual researchers.

As an example of the type of issue that can be pursued with cross section data of this type we turn some attention to a problem of particular interest to us: the homogeneity of unemployment around the turn of the century.

An Example: Homogeneity of Unemployment

In modern labor markets the burden of unemployment falls on a relatively small proportion of the labor force who are out of work a long time [Clark and Summers 1979, p. 14; Murphy and Topel 1987, p. 13]. It has been suggested by historians, however, that in the late nineteenth century the "the burden of joblessness was widely shared among the working people" [Keyssar 1986, p. 77]. In particular, while there were differences in unemployment rates across industries, "the joblessness that occurred in any particular trade or industry was fairly evenly distributed among men who were born in the United States and men who were born abroad" [Keyssar 1986, p. 82; Sutch 1988]. It is also asserted that the unemployment rates experienced by young and old, men and women, and whites and blacks were all about the same during the major depressions of the late nineteenth century. Since the heterogeneity of unemployment in the modern era is commonly attributed to labor market structure, the homogeneity of turn-of-the century unemployment appears to imply that such structure was absent.

An alternative explanation suggested by our findings on the importance of suspensions of operations [Carter and Sutch, 1989] is that employers did favor some workers over others, but that their scope for expressing their preferences in terms of differential unemployment during depressions was limited by an all or none pattern of workforce reduction. Some cross-section evidence consistent with this interpretation was collected by the Maine Bureau of Labor Statistics [1891] and analyzed by Ransom and Sutch [1989]. The Maine survey gives the number of days lost due to sickness, unemployment, and personal reasons. Figures 1 through 4 illustrate the estimated age profiles of the number of days lost by cause.³ Illness, as expected, rises with age. It is interesting that the amount of time lost due to layoffs also rises with age. Perhaps this is an indication of some type of age-discrimination by employers.⁴ Whether such discrimination was induced by the reduced likelihood that an older worker would quit and seek alternative employment if laid off, by reluctance to hire older workers (despite their lower asking wage which is evident in the Maine data) thus lengthening the job search for older unemployed workers, or by a paternal regard by employers for the welfare of younger men with small children at home is a subject that awaits further investigation.

The fact that voluntary absences from work increase with age even as the worker experiences an increase in the number of days lost for involuntary reasons and a decline in the wage rates may be significant. If a worker wanted to resist the fall in income implied by these two factors that were out of his control, he might be expected to decrease voluntary time off. This is not

3. The profiles for layoffs and vacation time are estimated from the data on workers who reported a positive number for the number of days lost to these causes. Time lost because of a lack of work was reported by 572 workers (53 percent of those surveyed) and vacation time was reported by 584 (54 percent). The profile for days lost to illness, however, is based on all workers including those who reported no illness.

4. Our own preliminary analysis of individual-level data for Michigan furniture workers in 1889 also suggests that employers were not indifferent about which workers were laid off. We find that seniority had a strong influence on layoffs. Each year of tenure with the firm reduces the average annual number of days lost by two.

Figure 1

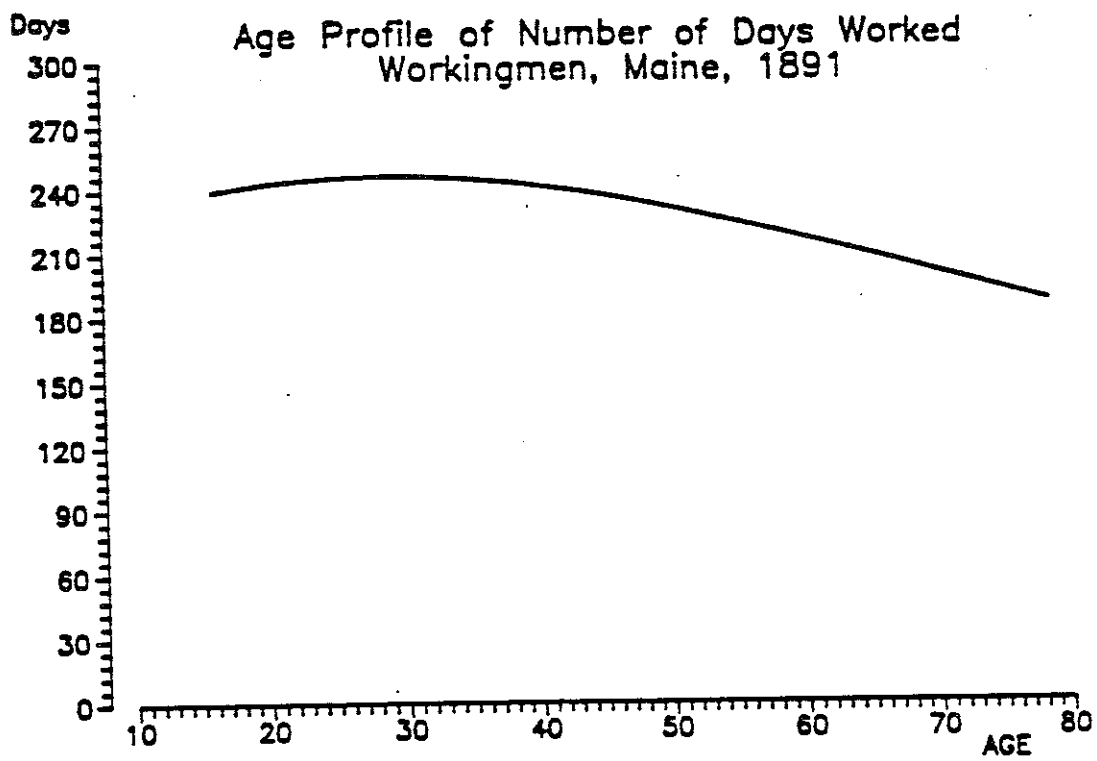


Figure 2

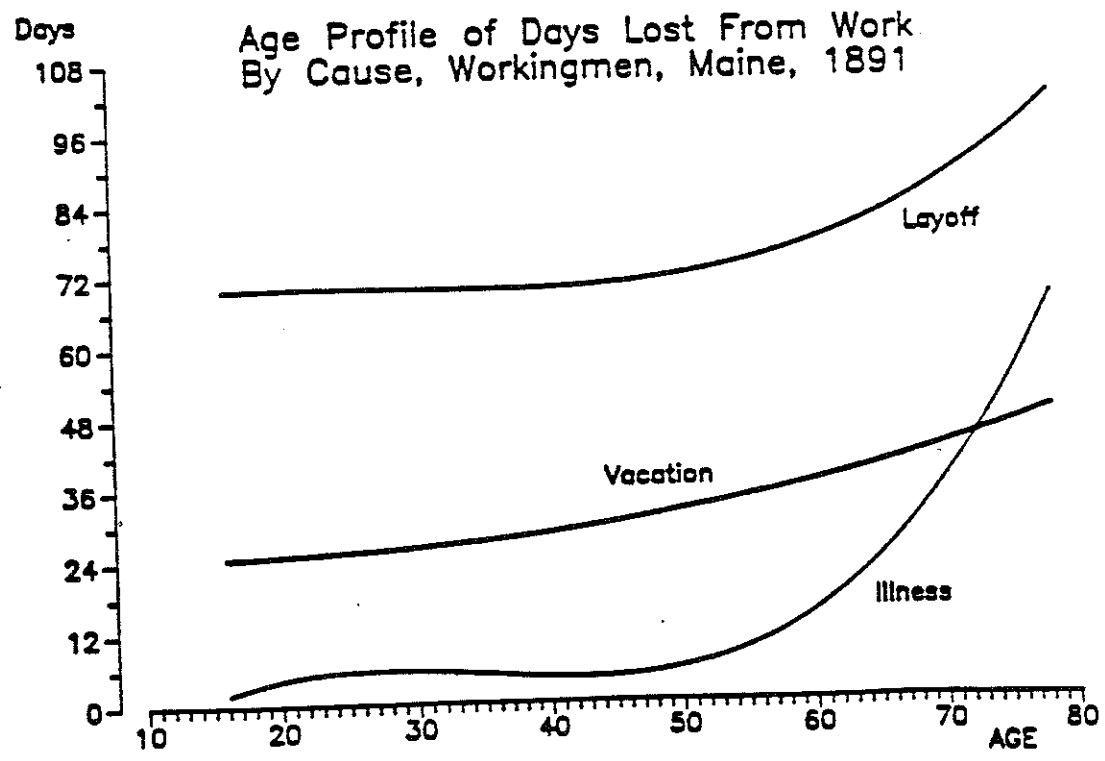


Figure 3

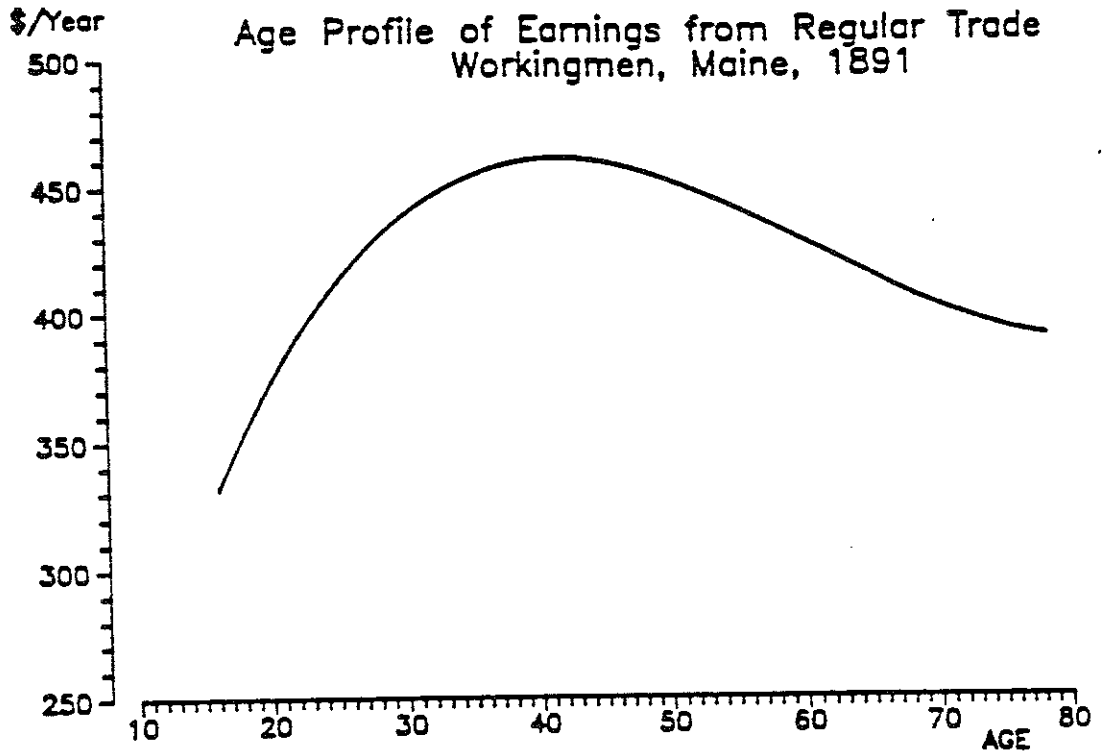
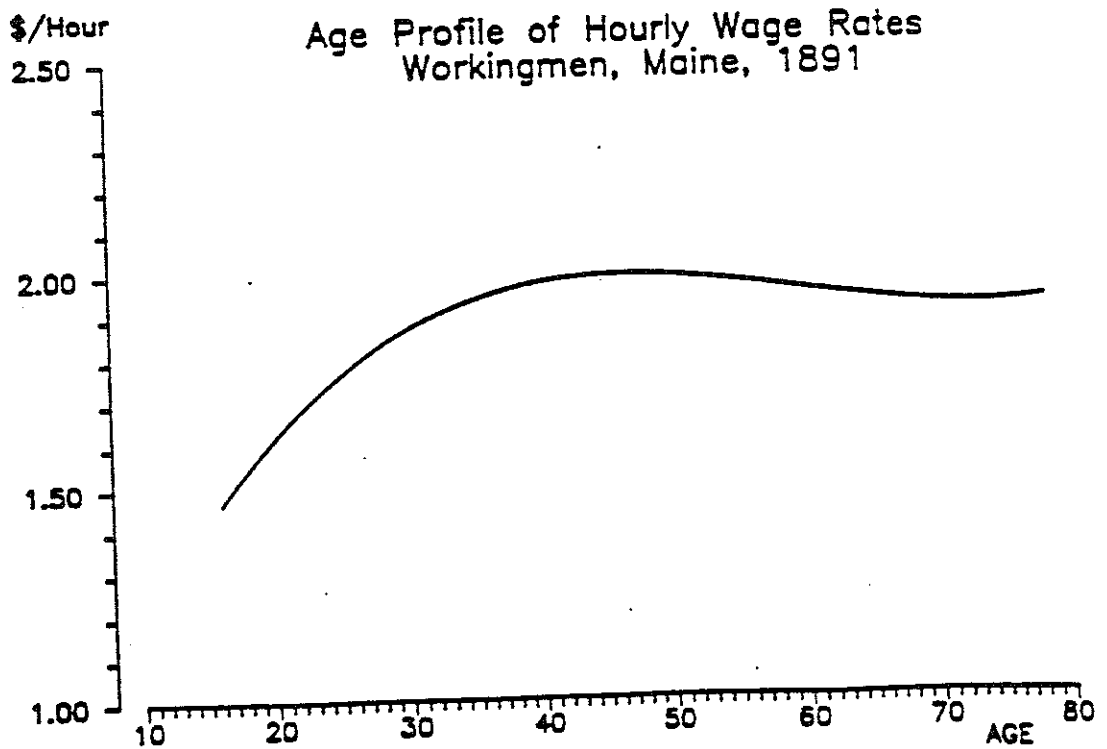


Figure 4



what the data shows. Instead workers not only do not resist the decline in income they actively accelerate it, perhaps because they have been successful in accumulating assets. If so, they could maintain consumption levels despite their declining income by reducing their rate of saving or even by dissaving if necessary.

The data on workers budgets contained in the various state reports can, we believe, help gain insight into these and other issues. Our point here is to illustrate some of the ways that microeconomic data extracted from these reports can be put to use.

SPECIAL REPORTS

In addition to surveying workers and firms, state labor bureaus conducted a variety of special investigations. Industrial and mining accidents; apprenticeships; property assessment; banks; benefit and insurance associations; building and loan associations; child labor; company stores; factory inspection; the homes, mortgages, and mortgage interest payments of wage laborers; labor laws; liquor; lost time; pauperism; wage payment practices; prices; the railroads; strikes; unemployment; and unions were among the major topics of study. The indexes to state reports prepared by the U.S. Bureau of Labor [1893, 1902] provide full references to these investigations. Table 3 lists some these special investigations which are of particular relevance to our study of labor market structure. Appendix C provides a sampler of pages from several of them, to give an idea of their possibilities. Here we illustrate possible uses of one special survey, the Connecticut investigation of the industrial depression of 1893.

Table 3
Special Surveys

State	Title and Year of Report	Subject
<u>Data Sets Already Collected</u>		
Connecticut	Tenth Annual, 1894	1893 depression
<u>Data Sets Proposed for Immediate Collection</u>		
Connecticut	Eleventh Annual, 1895	1893 depression
Maine	Eighth Annual, 1895	1893 depression
Massachusetts	Eighteenth Annual, 1887	unemployment
Massachusetts	Seventh Annual, 1893	manufacturing
Massachusetts	Eighth Annual,* 1893	manufacturing
Massachusetts	Nineth Annual,* 1894	manufacturing
New Jersey	Eighteenth Annual, 1895	1893 depression
New Jersey	Nineteenth Annual, 1896	1893 depression
New Jersey	Thirty-First Annual, 1908	1907 depression
New York	Eleventh Annual, 1894	1893 depression
Ohio	Eighteenth Annual, 1895	manufacturing
Pennsylvania	Twenty-Fourth Annual, 1896	manufacturing
Wisconsin	Fifth Biennial, 1891-92	longevity of firms
Wisconsin	Sixth Biennial, 1893-94	longevity of firms
Wisconsin	Eighth Biennial, 1897-98	longevity of firms

*Annual Statistics of Manufactures

An Example: The 1893 Depression in Connecticut

In 1894 the Connecticut Bureau of Labor Statistics conducted an investigation of the effects of the industrial depression on its state's economy. While acknowledging that "[s]ome results of such a depression cannot be told in figures even approximately" it felt that, "after a minute inquiry and a searching examination of accounts" effects such as "loss in working time, loss in wages and loss in product could be accurately tabulated...." [Connecticut BLS 1894, p. 167]. Monthly reports from manufacturers for the fifteen months between June 1, 1893 and August 31, 1894 were requested. Because accuracy was desired, "...the inquiry was limited to some 500 establishments which, because of their size, were presumed to have accounts which would facilitate the filling out of the schedule" [Connecticut 1894, p. 168]. One effect of this restriction is that surveyed firms are quite large. The average firm in the sample employed 195 workers, over nine times the state-wide average. An advantage of this focus on large firms is that the 378 firms which submitted usable responses accounted for a large fraction of the state's industries and industrial workers. The Bureau found that,

about three-fourths of the total of the more important industries in the State are represented in the figures obtained by the Bureau's agents. Many minor industries and many minor establishments were omitted, as also such important industries as the building trades and kindred employments, and yet the total of employes [sic] represented is 48.17 percent of the total number of employes in all industries as given in the census of 1890, and 47.12 percent of the total number of employes as ascertained in the very exhaustive inquiry of this Bureau for 1892 [Connecticut 1894, p. 169].

To establish a basis of comparison for depression conditions, the Bureau requested information on average number of employees, average monthly wage payments and value of production in 1892. It also requested the time or hours worked under "what may be termed an ideal condition of full time" [Connecticut 1894, p. 183]. For each of the fifteen months between June 1893 and August 1894 information on number of days entirely shut down, weekly hours of labor, average number employed, the total paid in wages and the value of output was obtained. Firms were also asked to report changes in wage rates between June 1, 1893 and August 31, 1894. Some of the responses were published at the firm level by industry, others were

aggregated and reported as industry averages. A reproduction of the data for the Boots, Shoes, and Leather Goods industry is included in Appendix C. Table 4 presents mean values of key variables.

Production: The production index shown in Table 4 indicates that the large Connecticut firms included in the survey experienced an extremely severe depression in 1893. The nominal value of production for fiscal 1893 fell more than 20 percent from its 1892 value. This is larger than the 15 percent drop at the national level. It is almost as severe as the 24 percent decline in the national figures between 1920 and 1921.

Unemployment, Days, and Hours: Table 4 indicates that total labor hours fell 29.6 percent between 1892 and the depression period. This overall decline was the result of a 15 percent reduction in employment and a 17.5 percent reduction in total hours per worker, a division similar to that in manufacturing today [Topel 1982]. Days per worker fell 13 percent as a result of a reduction in days in operation -- plant closing which idled the entire workforce. Hours per worker per day fell five percent.⁵

Suspensions of Operations: The most distinctive feature of turn-of-the-century business practice revealed in Table 4 is the heavy reliance on suspensions of operation as a method of reducing labor inputs. Almost half of the reduction in total hours was accomplished by plant closing which idled all workers. We have been unable to find data on suspensions of operations in the modern era but casual empiricism suggests that the routine use of complete plant shutdowns to effect reductions in labor inputs is rare. Except for some establishments supplying educational and recreational services, modern firms almost never close down completely. Even when they institute massive layoffs, firms retain some workers.

5. These figures probably overstate the actual decline in days and hours inputs since they compare conditions in the depression to a hypothetical "full time" in 1892. The overstatement does not appear to be very great, however.

Table 4
Percentage Change in Average Output,
Employment, Days, Hours and Wages;
Connecticut Investigation of the 1893 Depression

	Percentage Change
Total Hours	-29.48
Employment	-14.78
Days per Worker	-13.43
Hours per Day per Worker	-4.24
Total Wages	-23.11
Wages per Worker	-9.77
Wages per Hour	+9.03
Output	-20.58
Output per Worker	-6.81
Output per Worker Hour	+12.62
Proportion of firms instituting:	
General wage reductions	34.13%
Partial wage reductions	20.37
Both general and partial	1.58
General wage increases	0.53
Partial wage increases	3.17

Note: Unweighted means across firms in the survey of the percentage change in average monthly value between 1892 and the period June 1893 through August 1894. Partial wage reductions and wage increases mean that not all employees were affected.

Source: Connecticut [1894].

Figure 5

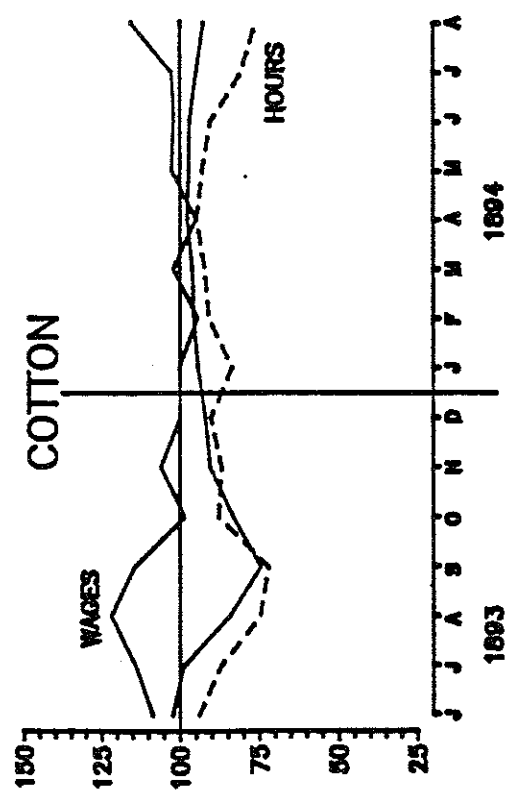


Figure 6

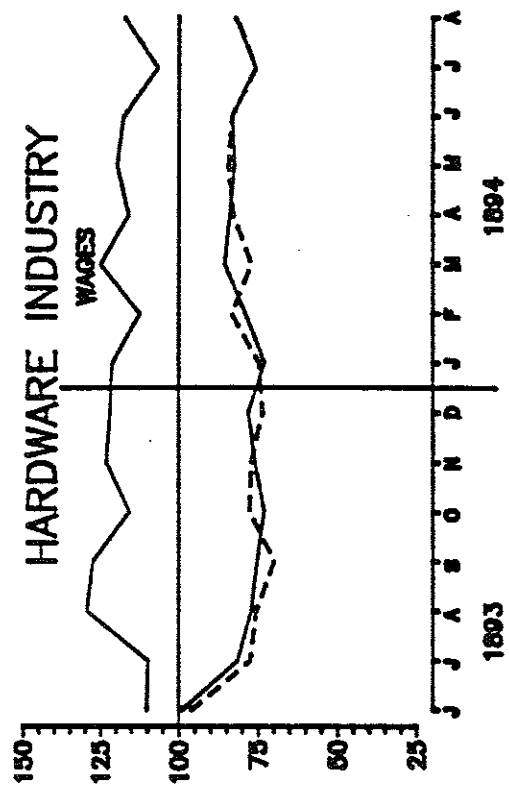


Figure 7

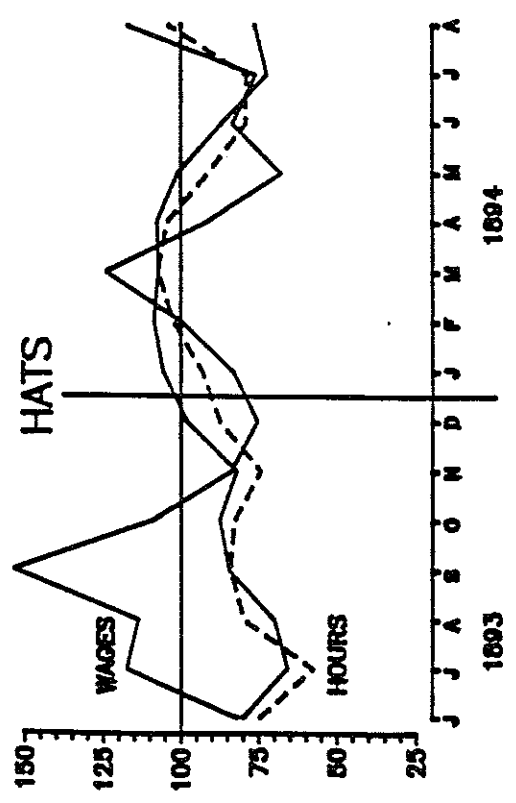


Figure 8

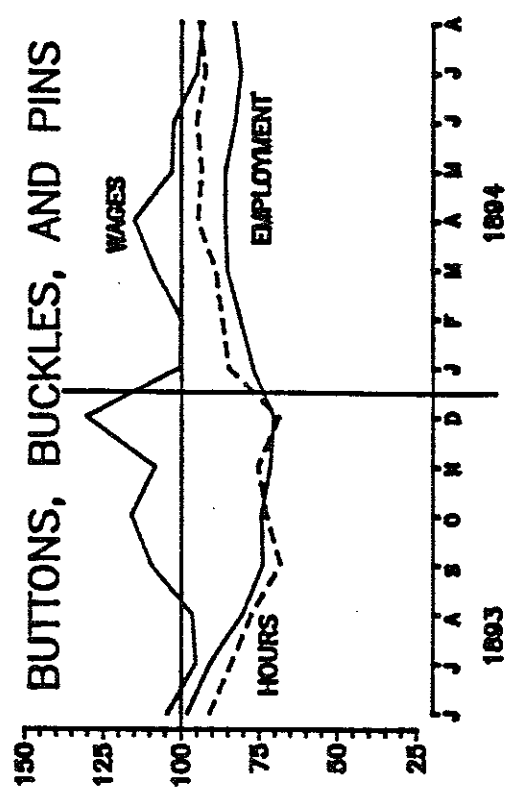


Figure 10

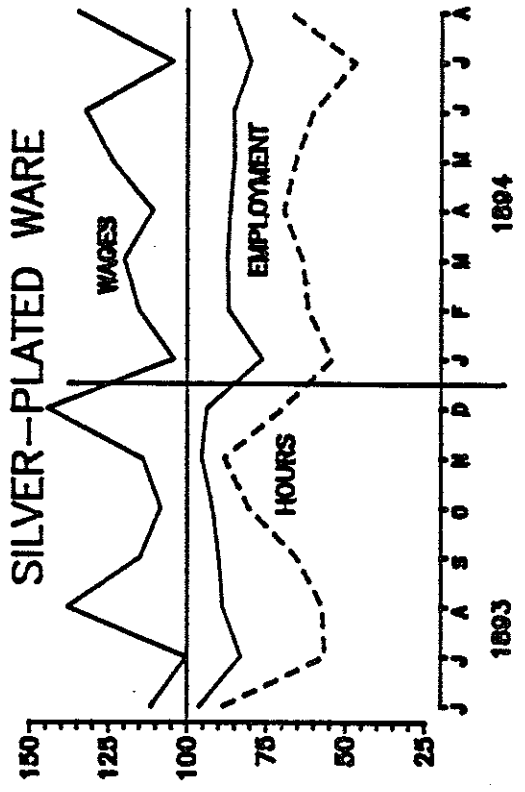


Figure 12

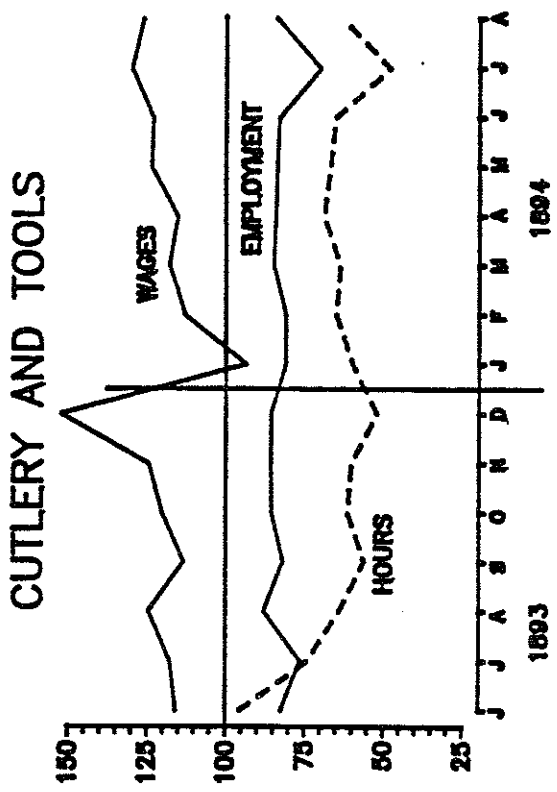


Figure 9

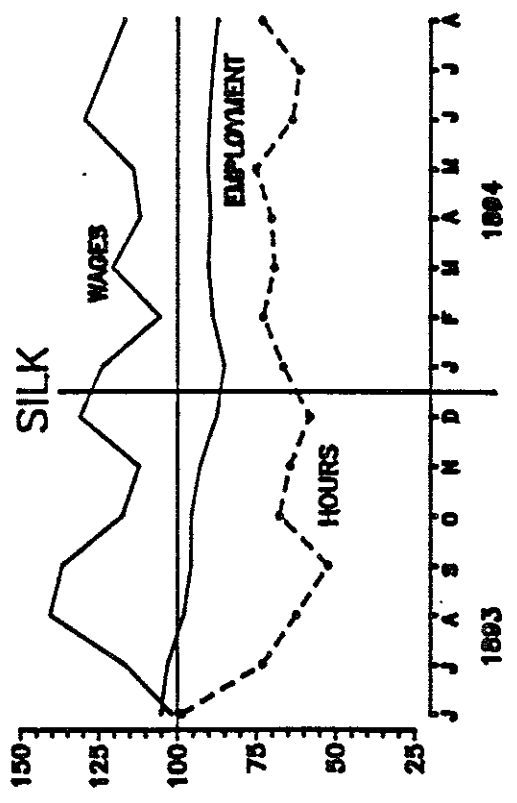


Figure 11

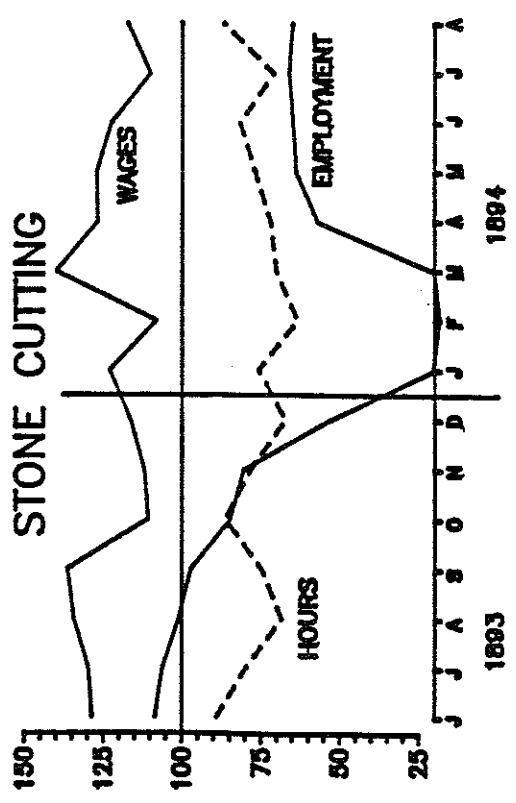


Figure 14

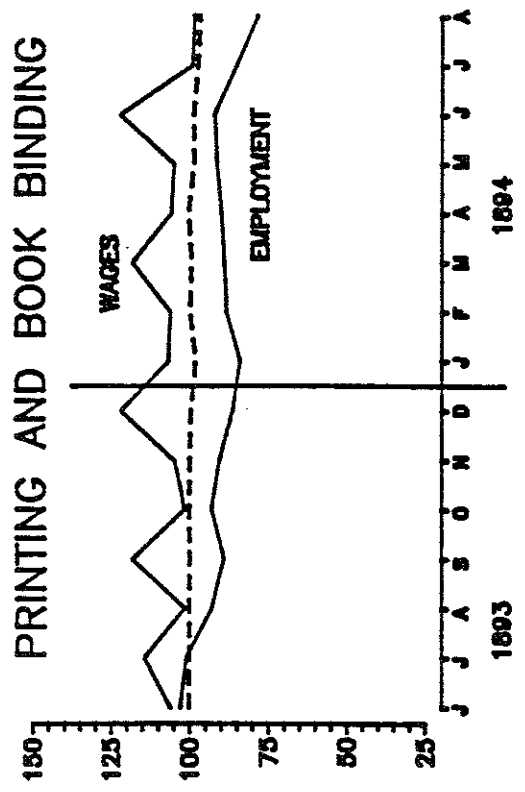


Figure 16

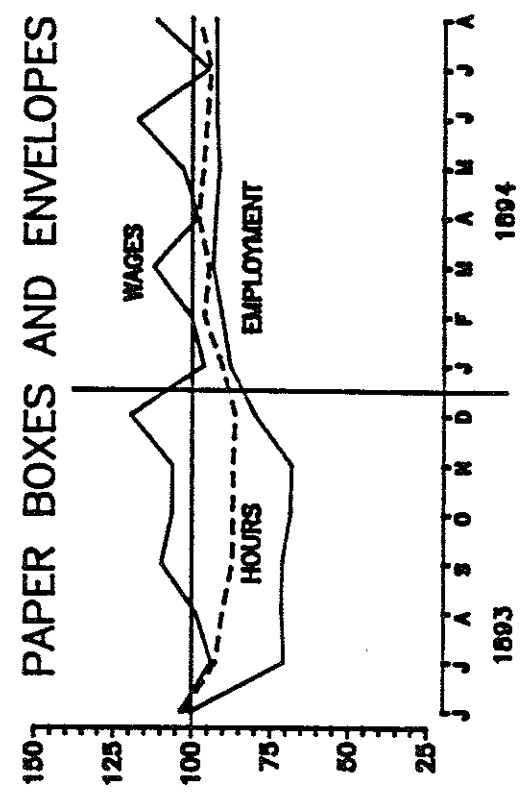


Figure 13

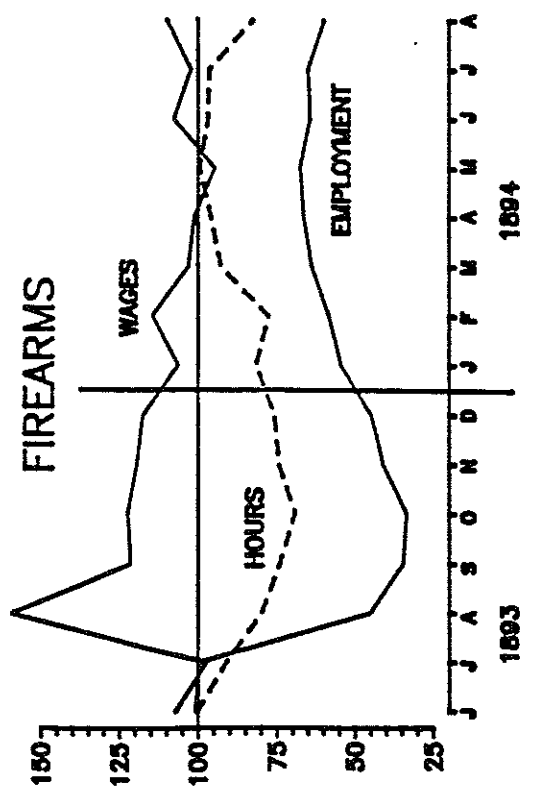


Figure 15

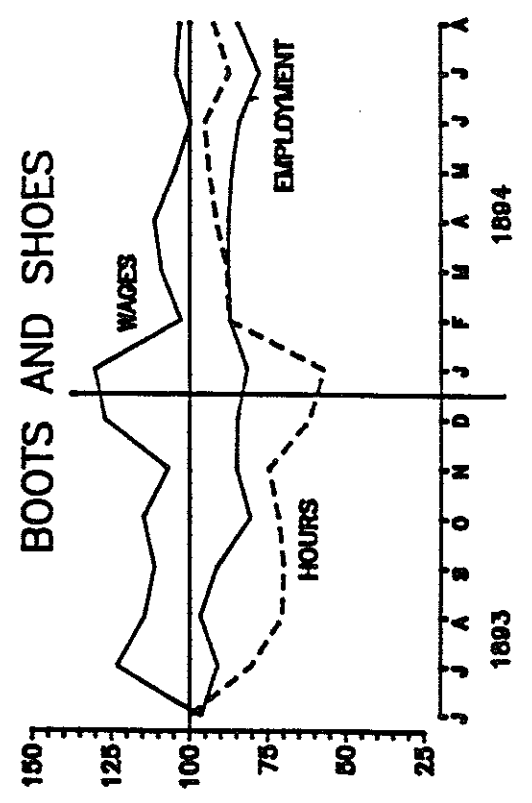


Figure 17

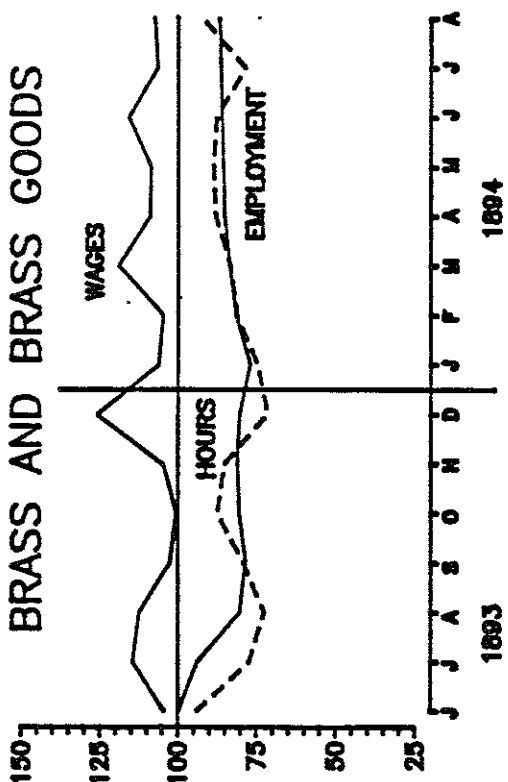


Figure 18

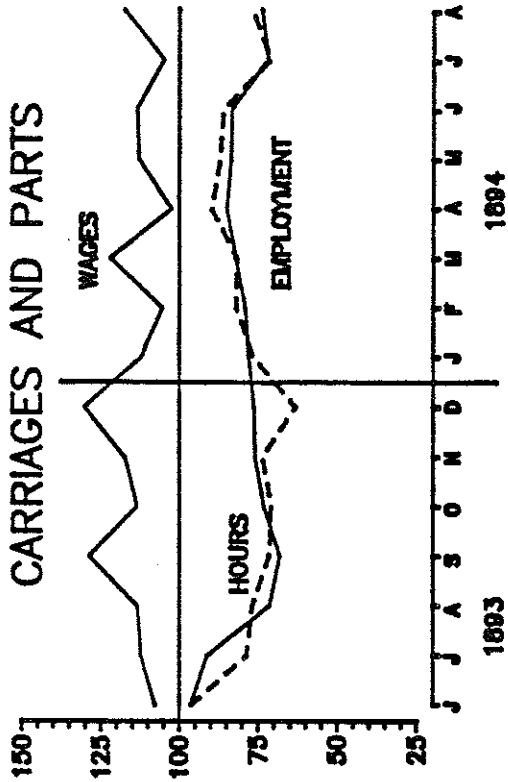


Figure 19

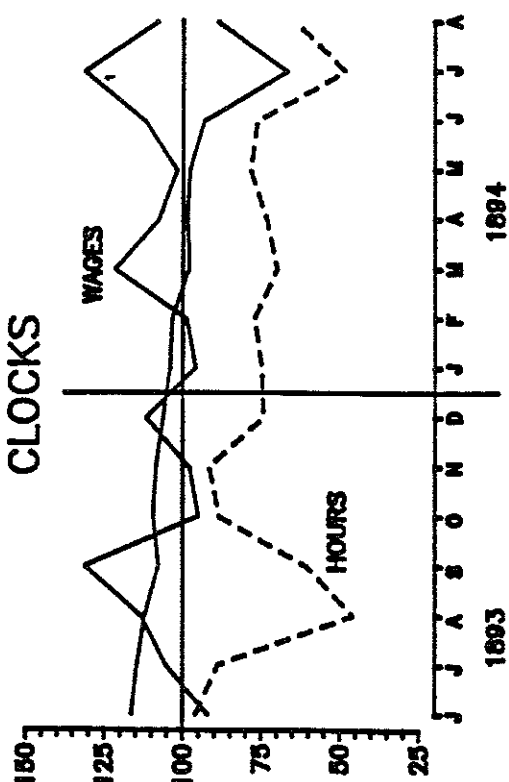


Figure 20

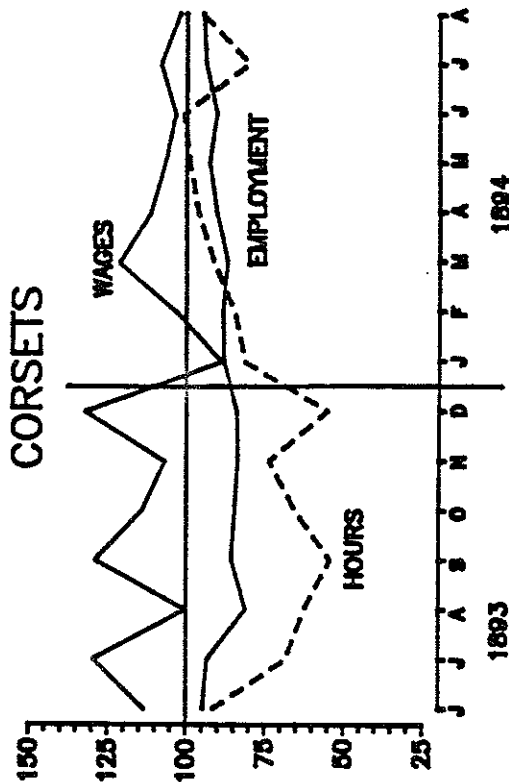


Figure 21

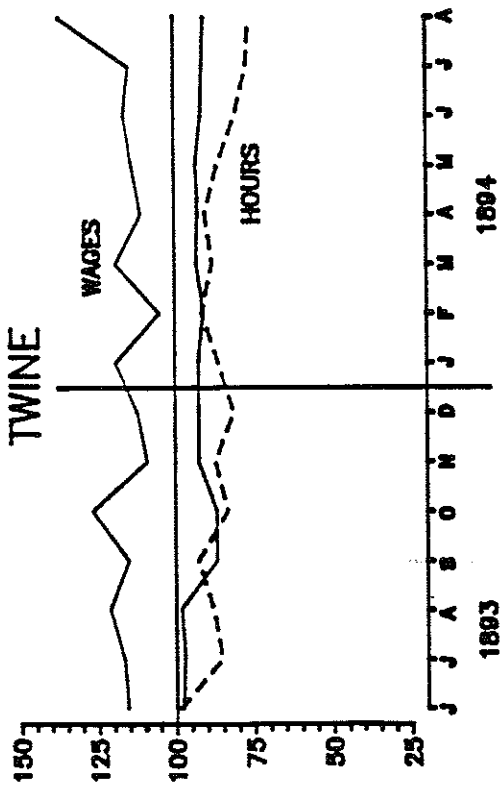


Figure 22

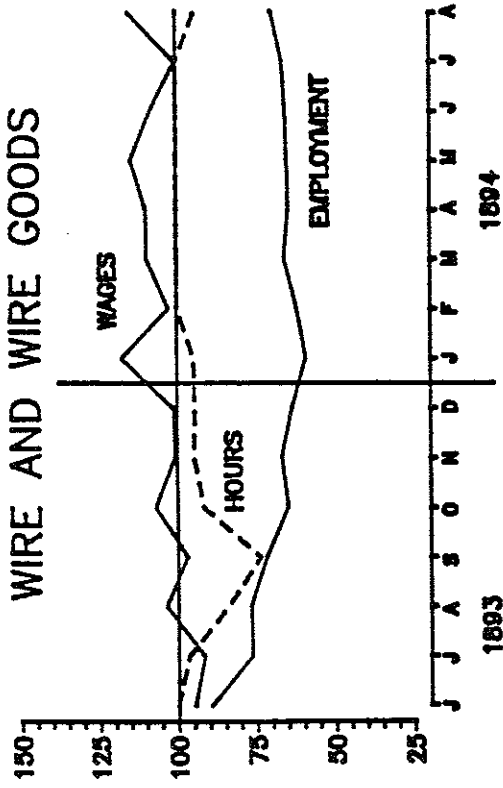


Figure 23

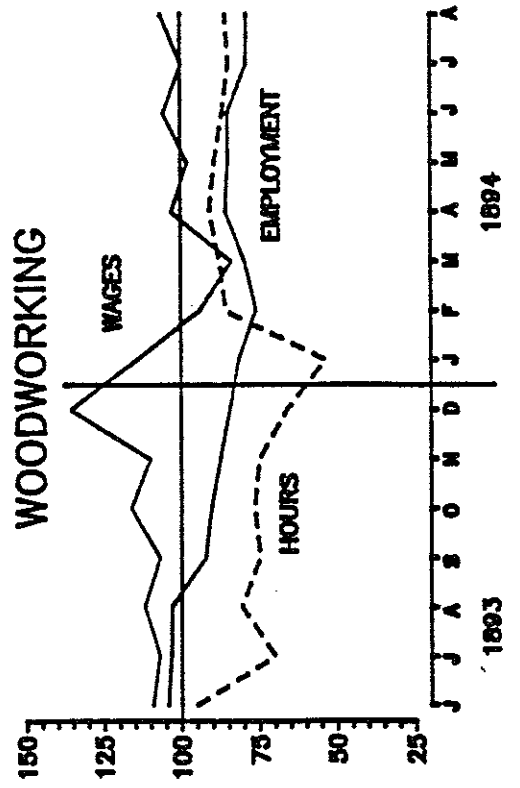
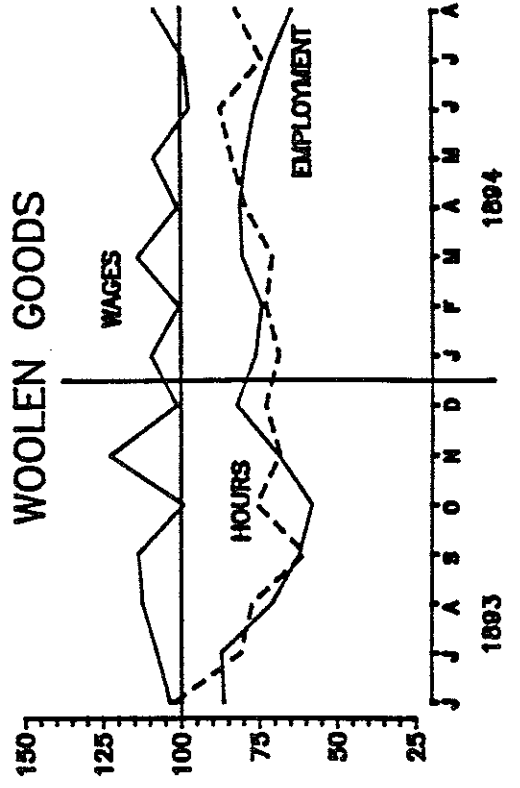


Figure 24



Suspensions of operation were like modern temporary layoffs, however, in that they appear to have been a work sharing arrangement. As the Connecticut report makes clear, workers names remained on the payroll when the plant shut down. It comments, "It will be noted that the large majority of the industries retained on the pay-rolls a large percentage of the ordinary number of employees. The reduction made necessary by the depression was largely in the working time" [Connecticut BLS 1894, p. 186].

Short Run Increasing Returns to Labor: Although total worker hours fell almost 30 percent, the nominal value of output fell only 20 percent. Since output prices were falling, real output per worker hour must have risen even more than the 12 percent indicated in Table 4. This pattern is the opposite of that characteristic of the modern economy where output per worker hour falls in contractions as firms hoard excess labor [Hultgren 1960; Fair 1969].

Average Hourly Wages: Wage payments fell less than total hours so that the average nominal hourly wage rose 9 percent. Since prices were falling, the average real hourly wage increased even more. Figures 5 through 24 present monthly data on the nominal average hourly wage in the depression as a percentage of the 1892 average together with similar monthly ratios for employment and hours per worker, by industry, for the 15 months for which data is available. In general, the nominal average hourly wage rate is above its pre-depression value when employment and hours per worker are below. The average hourly wage falls when employment and hours begin to recover.

This counter-cyclical behavior of the nominal wage in the 1893 depression is also evident in the aggregated data which serve as the basis for discussions of relative wage flexibility in this era. The annual nominal wage series developed by Albert Rees [1961] and analyzed by Jeffrey Sachs [1980], Robert Gordon [1982] and John Taylor [1986], increases 4 percent between 1892 and 1893 while the annual output series falls by over 10 percent. The nominal average hourly wage rate falls almost 10 percent between 1893 and 1895 when the output index increases 15

percent. This phase relationship is different than the post-World War II period when industrial output and wages were nearly perfectly in phase.⁶ Failure to appreciate the nearly countercyclical behavior of wages in the 1890s may mean that the flexibility of wages in this period have been overestimated. Jeffrey Sachs, for example, gauges the amplitude of cycles with reference to peaks and troughs of the *wage* series [Sachs 1980, p. 80]. This method understates the magnitude of early production cycles.

Our data do not allow us to say why the nominal hourly wage rises in the downturn. One possibility, consistent with our earlier evidence that output per worker also rises, is that firings are concentrated among the unskilled and poorly paid workers while the skilled and/or industrious are retained.

Wage Rate Cuts: Approximately half of all firms cut wage rates during the depression. Two-thirds of these cut the wage rates of all their employees, with the vast majority of workers receiving a wage cut of exactly 10 percent. Sundstrom reports a similar pattern in Ohio data from this period [Sundstrom 1989]. Our preliminary probit analysis of these wage cuts shows the probability of a wage cut to be closely related to reductions in output and in employment. Firms experiencing a 50 percent reduction in output have a 50 percent probability of cutting wage rates [Carter and Sutch 1989]. It is difficult to say whether these results support the notion that wages were flexible in the nineteenth century. Looked at one way, half of all firms experiencing a 50 percent reduction in output maintained wage rates at their pre-depression level! We are currently engaged in an effort to develop modern evidence which will help us to put these findings into perspective.

6. Wages in the 1890s are also more out of phase than in the interwar period when, according to Daniel Creamer's analysis of the National Industrial Conference Board's monthly series on average hourly earnings in 25 industries, nominal wages lagged business activity and factory employment by about nine months [Creamer 1950, p. 17]. Ben Bernanke and James Powell find that real wages were also "half-out of phase" in the interwar era [Bernanke and Powell 1986, p. 600].

TIME SERIES

Perhaps best known to modern researchers are the consistent, annual data on output, employment, wages, and days in operation collected by state bureaus of labor statistics. These data form the basis for Rees' annual average hourly wage series for the period 1890 to 1914 [Rees 1961] and for Stanley Lebergott's interpolating series for manufacturing employment between census benchmarks from 1890 through 1909 [Lebergott 1964, p. 436]. Rees [1961, Appendix A] provides a useful state-by-state guide to these data for the years 1890 through 1914. Examples are shown in Appendix D.

While these data have received considerable attention, they were last analyzed using hand methods of tabulation and calculation, before the widespread availability of high speed computers and computer-assisted data management and statistical analysis [Berridge 1923; Jerome 1926; Douglas 1930; Frickey 1942; Rees 1961; Lebergott 1964]. Few of these data sets have been machine coded. Computers permit us to supplement and extend the pioneering work which led to the creation of the existing series in ways which were far too expensive to be practicable in the past. For example, the widely-used series on employment and wages are all based on data from the small number of states which collected consistent information for a long run of years. Rees' annual hourly wage series for the years 1889 through 1914 is based on data from just three states, Massachusetts, New Jersey and Pennsylvania [Rees 1961, p. 31]. We may be able to develop ways to make more systematic use of data from the many other states which were collecting comparable information in this period. Computers may also permit us to better exploit the rich industry and demographic detail in these reports. Finally, since our analysis of the Connecticut investigation of the depression of 1893 suggested a large role was played by suspensions of operation as a method of reducing labor inputs, we may want to rethink some of the inferences of earlier studies. As an illustration we offer the following comments on the volatility of unemployment.

An Example: The Volatility of Unemployment

Estimates of the volatility of unemployment for this era depend in large part on the volatility of the time series, "Average Number of Persons Employed." However, this measure appears to ignore employment variation caused by temporary suspensions of operations. We say "appears to" because we can find no explicit definition of the term "Average Number of Persons Employed" in the state reports from which intercensal employment interpolations are constructed. All we know for certain is that the "Average" is computed by adding monthly totals of "Aggregate Number of Persons Employed in the Month of ---" and dividing by 12. We believe that the "Aggregate" monthly figures are totals of names on firms' payrolls in a given month.

This interpretation of "Aggregate" would make the state definition consistent with that in the federal census of 1890 where "Average Number of Persons Employed" is "the number necessary to be continually employed during the time the establishment is reported as being in operation in the census year to perform the work of a varying number employed" [U. S. Census Office 1895, p. 14]. It would also be consistent with the definition of the term "Number of Persons Employed" in the Massachusetts Census of 1885 as implied by its discussion of the decline in yearly earnings between 1875 and 1885. The Census reports,

This average decline in yearly earnings should be looked at in its true significance.... Owing to various causes business was dull, and suspensions were numerous and long continued. This swelled the number of unemployed to an abnormal extent, and yet every person who was employed for any length of time during the year became one of the "divisor" by which the total wages paid during the year were divided, and it being a statistical as well as arithmetical rule that "the larger the divisor the smaller the quotient," consequently the average annual earnings were correspondingly reduced [Census of Massachusetts 1888, p. ccxii].

Finally, Rees appears to interpret "Average Number of Persons Employed" as the average number on the payrolls each month. When generating his estimates of daily wages, he deflates state bureau of labor statistics data on annual wages by "Days of Operation" in addition to

"Average Number of Persons Employed" [Rees 1961, p.23]. He notes that he was motivated to make this adjustment in order to reconcile discrepancies between Paul Douglas' estimates of annual earnings and full-time weekly and hourly earnings.

The differences between Douglas's annual earnings series and his full-time weekly series multiplied by 52 seem, in many cases, too large to be explained by the conceptual differences between the two measures.... In every industry except slaughtering and meat packing, full-time weekly earnings times 52 exceeds average annual earnings. In most industries the difference is large, and in the union industries, ... it is extremely large.... The state establishment data on days in operation permit us to get consistent annual and hourly earnings estimates" [Rees 1961, p. 24].

Clearly, Rees feels that "Average Number of Persons Employed" does not already reflect variations in days in operation. If this interpretation is correct then the payroll employment measure falls in response to firings, but not to suspensions. Since all of the annual manufacturing employment series for the period prior to 1920 are based on this payroll measure they may miss a substantial fraction of the unemployment of this era.

DATA DISTRIBUTION

The data sets described in this report are all relatively small. They can be distributed on floppy disks and, in most cases, easily manipulated within the standard confines of a desktop computer. As an illustration of the documentation standards and distribution format we have brought to the Mini-Conference an example of a IBM-PC standard software binder with the 1890 data from the worker survey for the State of Maine. Suggestions on alternative data distribution vehicles and comments on our documentation standards are welcome.

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APPENDIX A
GUIDE TO COVERAGE IN SELECTED WORKER SURVEYS

APPENDIX A

Guide to Coverage in Selected Worker Surveys

State Report Year	Calif 3rd Bi 1887-88	Calif 5th Bi 1893	Colo 1st Bi 1887-88	Conn 2nd An 1886	Conn 4th An 1888	Ill 1st Bi 1879-80	Ill 2nd Bi 1881-82	Ill 3rd Bi 1883-84
No. Respondents	430	3493	138	69	693	529	1191	2129
Personal								
Age	1	1						
Sex	4	1	3	1			5	5
Family	6	7	8	9	10	10	11	12
Nativity	19	1		1				1
Residence		23			1			1
Housing	30	32	33	34	35	30	32	31
Savings	50		51	50	52	53	53	53
Other Assets					1			
Insurance		59	58					
Labor Union		1	1					
Health	1	1		1				
Opinions			1					
Employment								
Industry	1	1		1	1			
Occupation	1	1	1	1	1	1	1	1
Wage Rate	1	1	1	1				
Change in Wage Rate							1	
Piece Rate	1							
Yearly Earnings		1	1	1	1	1	1	1
Change in Earnings								
Family Earnings			1	1		1	1	1
Hours per Day	1	1	1					
Pay Period			1					
Time Lost		1	1	1				
Cause of Time Lost		1	1					
Work Experience	63	64						
Skills								
Expenditures								
Total	1		1		1	1	1	1
Detail	1				1	1	1	1
Farmers' Statistics								

Note: "1" indicates that the named variable is included in the survey. A key to other codes appears on page 41.

APPENDIX A -- Continued

State Report Year	Ind 5th Bi 1893-94	Iowa 1st Bi 1884-5	Iowa 6th Bi 1894-5	Iowa 9th Bi 99-1900	Iowa 10th Bi 1901-02	Iowa 11th Bi 1903-04	Iowa 12th Bi 1905	Iowa 13th Bi 1906-07
No. Respondents	500	347	3334	268	395	333	407	404
Personal								
Age	1	1	1					
Sex	4		1					
Family	12	7	8			13	13	13
Nativity	20	1	1	1				
Residence	1		1	1	1	1	1	1
Housing	30	26	36	34	37	37	37	37
Savings	50	50	54		50	50	50	50
Other Assets								
Insurance		58		1	1	1	1	1
Labor Union			1	1				
Health	1							
Opinions		1	1		1	1	1	1
Employment								
Industry								
Occupation	1	1	1	1	1	1	1	1
Wage Rate	1	1	1	1	1	1	1	1
Change in Wage Rate					1	1	1	1
Piece Rate			1					
Yearly Earnings	1	1	1	1	1	1	1	1
Change in Earnings								
Family Earnings								
Hours per Day	1		1	1	1	1	1	1
Pay period		1	1					
Time Lost	1		1					
Cause of Time Lost	1							
Work Experience	65	66						
Skills		71	70					
Expenditures								
Total		1						
Detail	1							
Farmers' Statistics								

APPENDIX A -- Continued

State Report Year	Iowa 14th Bi 1908-09	Iowa 15th Bi 1910-11	Kan 1st An 1885	Kan 2nd An 1886	Kan 3rd An 1887	Kan 5th An 1889	Kan 10th An 1894	Kan 11th An 1895
No. Respondents	519	152	337	471 famil	444	147	est. 300	519
Personal								
Age			1	1	1	1	1	1
Sex	1	3	3	3	3	4	1	3
Family	13	13	14	9	9	6	13	9
Nativity			1	1	1	19		19
Residence	1	1	1	1	1			
Housing	37	37	38	39	32	30	30	28
Savings	50	50	55	55	55	53	50	53
Other Assets								
Insurance	1	1	60	60	60			58
Labor Union			1	1	1			1
Health			1	1	1			
Opinions	1	1	1					1
Employment								
Industry								
Occupation	1	1	1	1		1	1	1
Wage Rate	1	1	1	1	1		1	1
Change in Wage Rate	1	1		1	1			1
Piece Rate								
Yearly Earnings	1	1	1	1	1	1		
Change in Earnings								
Family Earnings			1	1	1			1
Hours per Day	1	1	1	1		1	1	1
Pay period			1	1	1			1
Time Lost		1		1	1	1	1	1
Cause of Time Lost				1	1	1		1
Work Experience						63	65	66
Skills						72	71	
Expenditures								
Total		1		1	1	1	1	
Detail				1		1	1	
Farmers' Statistics								

APPENDIX A -- Continued

State Report Year	Kan 12th An 1896	Kan 15th An 1899	Kan 16th An 1900	Maine 1st An 1887	Maine 2nd An 1888	Maine 2nd An 1888	Maine 3rd An 1889	Maine 5th An 1891
No. Respondents	539	1058	531	108	222	118	116	1082
Personal								
Age	1	1	1	1		1	1	1
Sex				3	4	3		1
Family	15	7	7	10	12	10	10	10
Nativity	19	1		1	1	1	1	1
Residence	1	1	1	1	1	1	1	1
Housing	28	28	28	28		28	28	28
Savings	53	53	53	55	56	51	51	51
Other Assets		1	1					
Insurance	58	1	1	59		60	61	61
Labor Union	1	1	1	1		1	1	1
Health								
Opinions	1	1	1	1	1	1	1	1
Employment								
Industry		1	1		1		1	1
Occupation	1	1	1	1	1	1	1	1
Wage Rate	1	1	1	1	1	1	1	1
Change in Wage Rate	1	1	1				1	1
Piece Rate		1	1		1			
Yearly Earnings	1	1	1	1	1	1	1	
Change in Earnings								
Family Earnings	1			1		1	1	1
Hours per Day	1	1	1	1	1	1	1	1
Pay period		1		1		1	1	
Time Lost	1	1	1	1	1	1	1	1
Cause of Time Lost	1	1	1	1	1	1	1	1
Work Experience	66	67	67					
Skills								
Expenditures								
Total	1	1	1	1		1	1	1
Detail		1	1				1	1
Farmers' Statistics								

APPENDIX A -- Continued

State Report Year	Maine 14th An 1900	Mass 6th An 1875	Mich 6th An 1889	Mich 7th An 1890	Mich 8th An 1891	Mich 10th An 1893	Mich 11th An 1894	Mich 12th An 1895
No. Respondents	175	397	319	5419	4038	13757	9204	935
Personal								
Age	1		1	1	1		1	
Sex		3	3				3	
Family	10	14	9	16	9	11	12	
Nativity	1	1	19	19	19	1	1	
Residence					24	1	1	1
Housing	28	40	41	34	28	42	43	
Savings	51		57	57	50	55	50	
Other Assets		1	1	1	1			
Insurance	61		61	61	61	1	60	
Labor Union	1					1	1	
Health			1				1	
Opinions			62			62	62	1
Employment								
Industry	1	1	1	1			1	1
Occupation	1	1	1	1		1	1	1
Wage Rate	1		1	1	1	1	1	
Change in Wage Rate	1					1	1	
Piece Rate						1		
Yearly Earnings	1	1	1	1	1	1	1	
Change in Earnings								
Family Earnings	1					1		
Hours per Day	1		1			1	1	
Pay period	1		1			1	1	
Time Lost	1		1	1	1	1	1	
Cause of Time Lost	1		0	1	1	1	1	
Work Experience			64	64				66
Skills			70			72	69	
Expenditures								
Total	1			1	1			
Detail	1	1		1				
Farmers' Statistics								1

APPENDIX A -- Continued

State Report Year	Mich 12th An 1895	Mich 12th An 1895	Mich 13th An 1896	Mich 13th An 1896	Mich 14th An 1897	Mo 1st An 1879	Mo 2nd An 1880	Mo 11th An 1889
No. Respondents	2300	5600	4992	1943	4000?	575		3117
Personal								
Age	1	1	1	1	1			
Sex	4	3			3			3
Family	6	12	8	8	12	11	11	
Nativity	1	1	1	1	1			
Residence	1	1	1	1	24		1	
Housing			43	43	44		30	
Savings	50	50	50	53	50		55	50
Other Assets				1				
Insurance	61	61	1	1	60			
Labor Union	1	1			1			
Health								
Opinions	62	62		62	1			
Employment								
Industry	1	1	1	1	1			1
Occupation	1	1	1	1	1	1	1	1
Wage Rate	1	1	1		1	1		1
Change in Wage Rate	1	1	1			1		
Piece Rate					1	1		
Yearly Earnings	1	1		1	1	1	1	1
Change in Earnings				1				
Family Earnings							1	
Hours per Day				1	1			
Pay period	1	1	1		1			
Time Lost	1	1	1	1	1	1		
Cause of Time Lost	1	1	1	1	1			
Work Experience								
Skills								
Expenditures								
Total						1	1	
Detail							1	
Farmers' Statistics								

APPENDIX A -- Continued

State Report Year	Mo 12th An 1890	Mo 13th An 1891	Mo 14th An 1892	Mo 15th An 1893	NC 1st An 1887	Neb 2nd Bi 1889-90	Neb 2nd Bi 1889-90	NH 2nd An 1894
No. Respondents		120	600	1467	311	159	22	711
Personal								
Age			1	1		1		
Sex	1	3		3	3	3		3
Family			9	11	15	7	11	16
Nativity			19			1	1	19
Residence			22		1	1	1	
Housing			45	26	40	46	30	47
Savings				53	50		54	57
Other Assets			1					
Insurance			61		1			61
Labor Union			1					1
Health								1
Opinions			1		62			1
Employment								
Industry	1	1		1				
Occupation	1	1	1	1	1	1	1	1
Wage Rate	1	1	1	1	1	1		1
Change in Wage Rate					1			1
Piece Rate								
Yearly Earnings	1	1	1	1			1	1
Change in Earnings								1
Family Earnings			1					1
Hours per Day					1			1
Pay period				1	1			1
Time Lost			1		1		1	1
Cause of Time Lost			1		1		1	1
Work Experience								64
Skills								
Expenditures								
Total			1		1		1	1
Detail							1	
Farmers' Statistics								

APPENDIX A -- Continued

State Report Year	NJ 2nd An 1879	NJ 6th An 1883	NJ 7th An 1884	NJ 8th An 1885	NJ 9th An 1886	NJ 11th An 1888	NJ 11th An 1888	NJ 26th An 1903
No. Respondents	383	550	1300	608	376	680	est. 225	943
Personal								
Age							1	2
Sex	5				3		4	1
Family	17	11	10	10	10	15	6	
Nativity	1			1	1	1		21
Residence		1	1	1	1	1	1	1
Housing	32	30	30	31	31			
Savings	53	55	55	55	53	52		
Other Assets								
Insurance						58		
Labor Union						1		
Health		1	1	1			1	1
Opinions	1	1	1	1			1	1
Employment								
Industry		1	1	1	1	1		
Occupation	1	1	1	1	1	1	1	1
Wage Rate	1	1	1	1	1	1	1	1
Change in Wage Rate					1	1		
Piece Rate		1	1	1			1	
Yearly Earnings	1	1	1	1	1	1		
Change in Earnings								
Family Earnings	1	1	1	1	1	1		
Hours per Day	1	1	1	1	1	1	1	1
Pay period	1					1		
Time Lost	1	1	1	1	1	1		
Cause of Time Lost	1	1	1	1	1	1		
Work Experience	67							63
Skills							71	72
Expenditures								
Total	1	1	1	1	1	1		
Detail	1	1		1	1			
Farmers' Statistics								

APPENDIX A -- Continued

State Report Year	Ohio 1st An 1877	Ohio 1st An 1877	Ohio 1st An 1877	Ohio 2nd An 1878	Ohio 3rd An 1878	Ohio 4th An 1880	Ohio 5th An 1881	Ohio 6th An 1882
No. Respondents	65	84	61	101	367	286	est. 500	299
Personal								
Age		3	5	3			3	3
Sex								
Family	11	11	11	12	10	11	11	11
Nativity							1	
Residence	1	1						
Housing		30	30	30	30	30	31	46
Savings			53	55	55	53	53	53
Other Assets					1			
Insurance								
Labor Union								
Health								
Opinions							1	1
Employment								
Industry	1	1						
Occupation	1	1	1	1	1	1	1	1
Wage Rate	1			1	1	1	1	1
Change in Wage Rate	1			1	1	1	1	1
Piece Rate		1		1	1	1	1	1
Yearly Earnings	1	1	1	1	1	1	1	1
Change in Earnings								
Family Earnings			1	1	1	1	1	1
Hours per Day	1			1		1	1	1
Pay period		1		1		1	1	1
Time Lost	1			1	1	1	1	1
Cause of Time Lost								
Work Experience	66				68			
Skills								
Expenditures								
Total			1	1	1	1	1	1
Detail			1	1	1	1		
Farmers' Statistics								

APPENDIX A -- Continued

State Report Year	Ohio 6th An 1882	Ohio 7th An 1883	Ohio 7th An 1883	Ohio 9th An 1885	Ohio 10th An 1886	Ohio 17th An 1893	Ohio 17th An 1893	Penn 7th An 1878-79
No. Respondents	74	1013	212	353	355	8671	?	299
Personal								
Age								1
Sex		3	3	3				3
Family	11	11	11	10	11	11	11	11
Nativity					1			
Residence			1	1		1	1	1
Housing		31		31	48			
Savings	53	53	53	55	53	50	50	50
Other Assets								
Insurance				1				
Labor Union				1	1			
Health					1			
Opinions		1		1	1			
Employment								
Industry	1	1	1			1		
Occupation	1	1	1	1	1	1		1
Wage Rate	1	1	1					1
Change in Wage Rate	1							
Piece Rate	1	1	1	1				1
Yearly Earnings	1	1	1	1	1			1
Change in Earnings								
Family Earnings	1	1	1	1	1			1
Hours per Day		1		1				1
Pay period	1	1	1					1
Time Lost	1	1	1	1	1			1
Cause of Time Lost		1		1	1			
Work Experience								66
Skills								
Expenditures								
Total	1	1	1	1	1		1	1
Detail				1	1	1	1	
Farmers' Statistics								
							1	

APPENDIX A -- Continued

State Report Year	Penn 9th An 1880-81	Penn 22nd An 1894	RI 2nd An 1888	RI 2nd An 1888	RI 6th An 1893	RI 8th An 1894	WV 2nd Rpt 1892	WV 2nd Rpt 1892
No. Respondents	167	1378	600	600	573	2299	100	136
Personal								
Age	1		1	1			1	1
Sex	3	3						
Family	11		15	15	10	9	18	
Nativity		1	19	19		19	19	19
Residence	1	1			1	1	1	1
Housing		26	32	32	32	49		
Savings	53		53	53	55			
Other Assets								
Insurance			58	58	58			
Labor Union			1	1	1		1	
Health								
Opinions								1
Employment								
Industry		1			1	1		1
Occupation	1	1	1	1	1	1	1	1
Wage Rate	1	1	1	1	1	1	1	1
Change in Wage Rate		1	1	1		1	1	1
Piece Rate	1	1						
Yearly Earnings	1	1	1	1	1		1	
Change in Earnings		1						
Family Earnings	1		1	1	1			1
Hours per Day	1	1			1		1	1
Pay period	1	1	1	1	1		1	1
Time Lost	1	1	1	1	1	1	1	1
Cause of Time Lost			1	1				1
Work Experience	66							
Skills		72	69	69	69			
Expenditures								
Total	1		1	1	1		1	1
Detail								
Farmers' Statistics								

APPENDIX A -- Continued

State Report Year	Wisc 3rd Bi 1887-88	Wisc 7th An 1895-96	Wisc 7th An 1895-96
No. Respondents	est. 900	1488	555
Personal			
Age	1	1	
Sex	3	3	
Family	6	13	14
Nativity	1	1	1
Residence	25	1	
Housing	26	29	
Savings		50	55
Other Assets			
Insurance		1	58
Labor Union			1
Health	1		
Opinions	1		1
Employment			
Industry			1
Occupation	1	1	1
Wage Rate	1	1	
Change in Wage Rate	1		
Piece Rate	1		
Yearly Earnings	1	1	
Change in Earnings			
Family Earnings			
Hours per Day	1	1	
Pay period	1	1	
Time Lost			
Cause of Time Lost			
Work Experience	63		66
Skills	69		
Expenditures			
Total		1	
Detail		1	
Farmers' Statistics			1

Key

- 1 Variable available.
- 2 Children only.
- 3 Men only.
- 4 Women only.
- 5 Heads of household.
- 6 Marital status.
- 7 Marital status, dependents.
- 8 Marital status, dependents, family size.
- 9 Marital status, dependents, family size, children in school.
- 10 Dependents, family size.
- 11 Family size.
- 12 Marital status, family size.
- 13 Dependents.
- 14 Marital status, family size, children in school.
- 15 Dependents, family size, children in school.
- 16 Marital status, dependents, children in school.
- 17 Marital status, children in school.
- 18 Family size, children in school.
- 19 Nativity, parents' nativity.
- 20 Nativity, parents' nativity, father's occupation.
- 21 Parents' nativity, father's occupation.
- 22 Years in U.S.
- 23 Years in U.S., years in state.
- 24 Current residence, years in U.S.
- 25 Current residence, years in state.
- 26 Home ownership.
- 27 Home ownership, mortgage.
- 28 Home ownership, mortgage, value of home.
- 29 Home ownership, mortgage, home value, mortgage interest rate.
- 30 Rent.
- 31 Rent, number of rooms.
- 32 Home ownership, rent, number of rooms.
- 33 Home ownership, mortgage, home value, mortgage interest rate, number of rooms.
- 34 Home ownership, mortgage, rent.
- 35 Home ownership, mortgage interest rate.
- 36 Home ownership, mortgage, number of rooms.
- 37 Home ownership, value of home.
- 38 Home ownership, number of rooms.
- 39 Home ownership, mortgage interest rate, rent.
- 40 Home ownership, rent.
- 41 Home ownership, mortgage, value of home, mortgage interest rate, rent.
- 42 Home ownership, mortgage, mortgage interest rate, rent, number of rooms.
- 43 Home ownership, mortgage, mortgage interest rate, rent.
- 44 Home ownership, mortgage, mortgage interest rate.
- 45 Home ownership, mortgage, value of home, rent.
- 46 Home ownership, rent, number of rooms.
- 47 Home ownership, mortgage, value of home, rent, number of rooms.
- 48 Home ownership, mortgage, value of home, mortgage interest rate, rent, number of rooms.
- 49 Home ownership, mortgage, rent, number of rooms.
- 50 Savings this year.
- 51 Savings this year, dissavings, savings in past years, has savings account.
- 52 Savings this year, dissavings, has savings account.
- 53 Savings this year, dissavings.
- 54 Savings this year, savings in past years.
- 55 Savings this year, dissavings, savings in past years.
- 56 Savings in past years.
- 57 Savings this year, has savings account.
- 58 Insurance, benefit society.
- 59 Benefit society, weekly benefits.
- 60 Insurance, weekly benefits.
- 61 Insurance, benefit society, weekly benefits.
- 62 "Better off now than in the past?"
- 63 Age began work.
- 64 Age began work, years in present occupation, years with present employer.
- 65 Age began work, years in present occupation.
- 66 Years in present occupation.
- 67 Years with present employer.
- 68 Years in present occupation, years with present employer.
- 69 Apprenticeship.
- 70 Training in old country.
- 71 Years of schooling.
- 72 Apprenticeship, training in old country.

SAMPLE PAGES FROM STATE BUREAU OF LABOR STATISTICS REPORTS

APPENDIX B
SAMPLE PAGES FROM STATE BUREAU OF LABOR STATISTICS
WORKER SURVEYS

WORKER SURVEY

Source: Michigan Bureau of Labor and Industrial Statistics, Sixth Annual Report. (Lansing: Thorp and Godfrey, State Printers and Binders, 1888).

Short Description: Individual responses from 54 employees in the fire clay, 20 in slate, 69 in coal, 124 in grindstone, 193 in gypsum, 234 in stone, and 2,497 in the copper industry of Michigan in 1887.

Noteworthy Attributes: Wages in old country together with wages in Michigan; value of remittances to the old country; savings; asset ownership; regularity of employment.

Comments of Workers: Summaries of worker comments are reported verbatim without comment.

LABOR AND INDUSTRIAL STATISTICS.

TABLE NO. 1.—Statistics of the Fire Clay Industry.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Bricklayer.....	1 16	Ireland.....	Ireland.....	Ireland.....	18	m	8	4	0	2	2 yrs	12	10	\$1 75 pr d	\$546 00	o	s m	.....	not answered	not answered	not answered
Fireman at kiln.....	2 43	U. S.....	U. S.....	U. S.....	26	m	6	5	1	10	5 "	12	12	1 75 "	420 00	o	s m	\$200	not so good	not answered	not answered
Kiln setter.....	3 35	U. S.....	U. S.....	U. S.....	.....	m	3	2	1	6	6 "	12	10	1 75 "	546 00	o	s m	50	same	not answered	not answered
Clay molder.....	4 30	U. S.....	France.....	France.....	.....	m	3	2	1	6	10	12	10	1 50 "	468 00	o	s m	.....	about same	not answered	not answered
Runs clay press.....	5 51	U. S.....	U. S.....	U. S.....	.....	m	2	1	2	9	15	12	10	1 50 "	468 00	o	s m	.....	about same	not answered	not answered
Laborer.....	6 31	Poland.....	Poland.....	Poland.....	7	m	4	.....	5	.....	9	12	10	1 25 "	390 00	o	s m	100	same	farmer	\$50 per year †
"	7 24	England.....	England.....	England.....	17	s	.....	.....	.....	.....	2	12	10	1 25 "	300 00	o	s m	.....	same	not answered	not answered
"	8 18	"	"	"	14	s	.....	.....	.....	4	2	12	10	60 "	187 20	o	s m	.....	not answered	not answered	not answered
"	9 77	"	"	"	23	m	.....	.....	.....	.....	3	12	10	1 25 "	300 00	o	s m	100	not so good	laborer	\$2 40 per week
"	10 49	"	"	"	14	m	3	1	.....	.....	3	12	10	1 25 "	390 00	o	s m	.....	poorer	not answered	not answered
"	11 19	U. S.....	U. S.....	U. S.....	.....	s	.....	.....	.....	.....	3	12	10	1 10 "	843 20	o	s m	.....	not answered	butcher	2 00 per week
"	12 12	Germany.....	Germany.....	Germany.....	6	m	.....	.....	.....	.....	5	11	10	1 25 "	857 50	o	s m	50	not so good	farmer	48 per day
"	13 32	"	"	"	13	m	9	4	5	.....	6	12	10	1 25 "	890 00	o	s m	.....	not so good	stone cutter	8 65 per week
"	14 56	"	"	"	12	m	2	1	.....	.....	12	10	1 25 "	293 50	o	s m	.....	about same	farmer	36 50 per year †	
"	15 32	"	"	"	12	m	4	.....	5	.....	4	12	10	1 25 "	390 00	o	s m	.....	about same	not answered	not answered
"	16 30	Russia.....	Russia.....	Russia.....	6	m	2	.....	3	.....	4	12	10	1 25 "	390 00	o	s m	100	same	farmer	w'k'd at home
"	17 50	U. S.....	U. S.....	U. S.....	.....	m	3	.....	1	.....	10	12	12	1 10 "	843 20	o	s m	160	not so good	not answered	not answered
"	18 20	"	"	"	.....	m	.....	.....	.....	.....	7	12	10	1 25 "	890 00	o	s m	.....	same	not answered	not answered
"	19 32	"	"	Germany.....	.....	m	1	.....	2	.....	7	12	10	1 25 "	825 00	o	s m	.....	same	not answered	not answered
"	20 30	"	"	U. S.....	.....	m	.....	.....	1	.....	6	10	10	1 25 "	825 00	o	s m	.....	same	not answered	not answered
"	21 49	"	"	"	.....	m	8	1	2	.....	17	12	10	1 40 "	426 80	o	s m	.....	a little bet'r	not answered	not answered
"	22 15	"	"	Denmark.....	.....	s	.....	.....	.....	.....	15	12	10	1 50 "	166 00	o	s m	.....	not answered	not answered	not answered
"	23 20	"	"	England.....	.....	s	.....	.....	.....	.....	7	12	10	1 25 "	890 00	o	s m	.....	better	not answered	not answered
"	24 31	"	"	U. S.....	.....	m	3	.....	4	.....	2	10	10	1 25 "	825 00	o	s m	.....	poorer	not answered	not answered
"	25 31	"	"	"	.....	s	.....	.....	.....	.....	1	12	10	1 25 "	300 00	o	s m	.....	not answered	not answered	not answered
"	26 33	"	"	"	.....	s	4	2	5	.....	7	12	10	1 25 "	390 00	o	s m	.....	not so good	not answered	not answered
Engineer.....	27 26	Canada.....	Canada.....	Canada.....	8	m	5	8	6	.....	4	12	12	2 33 "	726 96	o	s m	200	about same	engineer	1 35 per day
Brickmaker.....	28 19	U. S.....	U. S.....	U. S.....	.....	m	5	3	3	.....	8	10	10	1 25 "	825 00	o	w'y	.....	not so good	brick mak'g	48 per day
Bricklayer.....	29 55	England.....	England.....	England.....	63	s	.....	.....	.....	.....	8	6	10	1 60 "	275 00	o	w'y	.....	poorer	not answered	not answered
Potter.....	30 20	Germany.....	Germany.....	Germany.....	84	m	3	2	3	.....	17	12	10	1 75 "	546 00	o	w'y	60	not so good	clay molder	1 75 per day
Clay molder.....	31 23	England.....	England.....	England.....	.....	s	.....	.....	.....	.....	9	10	10	2 00 "	624 00	o	w'y	.....	the same	farmer	1 50 per w'k †
Engineer.....	32 26	"	"	"	.....	m	8	.....	4	.....	6	12	10	2 00 "	640 00	o	w'y	55	same	not answered	not answered

LABOR AND INDUSTRIAL STATISTICS.

TABLE NO. 1.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benevolent society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness—(Days.)	Inability to obtain work—(Days.)	Causes not stated—(Days.)									Daily.	Weekly.	Monthly.				
Bricklayer	1	10			\$1,000	\$600	7	yes		\$8 00										yes	yes	no	14	good		
Fireman at kiln	2		\$400		no			no													yes	no	15	good		
Kiln setter	3				2,000																yes	no	15	not good		
Clay molder	4																				yes	no	18	good		
Runs clay press	5																				yes	no	18	fair		
Laborer	6	10			300																yes	no	15	good	\$15 00	
"	7				250						\$3 00										yes	no	10	"		
"	8									7 00											yes	no	20	"		
"	9									6 00											yes	no	10	"		
"	10	10																			yes	no	10	"		
"	11					650	7			3 50											yes	no	10	"		
"	12	10		\$300	no	250				6 00											no	yes	15	"		
"	13	12		400	1,000			no				\$1,500									yes	no	13	"		
"	14	12		200	no			yes		4 00											no	yes	13	"		
"	15	11			no					4 00											yes	no	16	not good		
"	16	11		200	550							yes									yes	yes	12	"		
"	17		2,000		800																no	no	15	"		
"	18				no		7			4 00											yes	no	8	"		
"	19				500					7 50											yes	no	16	"		
"	20				no																yes	no	15	"		
"	21				1,000																yes	no	14	"		
"	22				no																no	yes	12	"		
"	23									3 50											yes	no	12	"		
"	24									4 00											no	no	10	"		
"	25									8 00											yes	no	19	"		
"	26				800		4														yes	no	16	"		
Engineer	27	11			1,000																yes	yes	13	"		
Brickmaker	28				1,500																yes	no	12	"		
Bricklayer	29	14			no			no		8 00											yes	no	14	"		
Potter	30				1,700			yes													no	yes	14	"		\$50 00
Clay molder	31	10		100	no					4 50											yes	no	14	"		
Engineer	32	12			no					4 50											yes	no	12	"		

WORKER SURVEY

Source: Michigan Bureau of Labor and Industrial Statistics, Seventh Annual Report, 1890.
(Lansing: Darius D. Thorp, State Printers and Binders, 1890).

Short Description: Individual responses from 5,419 furniture workers by firm.

Noteworthy Attributes: Earnings, savings, experience with firm, and regularity of employment.
Also, amount of money on arrival in the U.S.

Comments of Commissioners:

In preparing this report, an effort has been made to obtain reliable information relating to the social and industrial conditions surrounding the employees in one of the leading industries of the State.... The answers to the questions enumerated in the tables are therefore the personal testimony of the men employed, and are entitled to credit [p. xi].

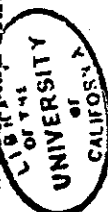


TABLE No. 1.—Showing the individual reports of the employes.

In the Furniture Manufacturing Industry in Grand Rapids.

Table with columns: Occupation, Age, Where born (State or Country), Marital status, No. of children in family, No. of children attending school, How many depend on you for support, No. of years at present occ., No. of years with present employer, Cases for loss of time, Wages received, Annual earnings of present and family, Amount of money on arrival in U.S., Annual family expenses, Amount saved during the year, Amount at interest or in bank, Do you own your home, its value, If mortgaged, for what amount, If renting home, weekly rental, Have you a sewing machine, What medical instruments have you, Daily papers, Weekly papers, Magazines, No. of newspapers and magazines taken, If boarding, cost per week, including room, How much life insurance have you, How many months inactive as you belong to, Weekly benefits in case of sickness or accident, Age began work.

* Ulcer wages to parents and lives at home.

WORKER SURVEY

Source: Michigan Bureau of Labor and Industrial Statistics, Thirteenth Annual Report for the Year Ending February 1, 1896. (Lansing: Robert Smith and Co., State Printers and Binders, 1896).

Brief Description: Individual-level data for 3,134 employees of hack and bus lines and 1,943 individuals who own their own hack, bus, dray or team.

Noteworthy Features: Earnings, time lost by cause, savings, home ownership, insurance.

Comment of the Commissioners: "In making the canvass, care was taken in selecting canvassers, to employ those from whom, by their general intelligence and standing with employers and employes, satisfactory service might be expected" (p. 1).

WORKER SURVEY

Source: Kansas Bureau of Labor and Industry, Tenth Annual Report, 1894. (Topeka: Press of the Hamilton Printing Company, 1895).

Short Description: Individual reports on the economic, educational and social conditions of 164 female and 1,233 male wage earners in professional, manufacturing, clerical, sales, and service occupations in cities across the state. Averages, by occupation, for a much larger number of workers.

Noteworthy Attributes: Includes workers outside of manufacturing. Years of schooling and age when left school reported.

Selected Comments of Commissioners:

The civilization of this age is inclined to broaden the opportunities and make women more independent, until she is now man's competitor in almost every occupation and profession. By this change in industrial conditions the bars have been let down, but their advent into all the industrial fields has perhaps tended to decrease men's wages; for the only way in which women could procure work was to offer their services for less money, as the prejudice against women taking up other than something domestic had to be overcome; but now that this difficulty has been conquered and the fields are all open to them, they have proven themselves equal to the task; nay, in most instances, more competent and careful workers than their more favored brothers. They all say: "Give us equal pay for equal work, regardless of sex. And the tendency is decidedly in that direction; industrial progress is all in their favor" [pp. 173-174].

WORKER SURVEY

Source: Iowa Bureau of Labor Statistics, Reports, Nos. 9-15, 1899-1900 to 1910-11. (Des Moines: Emory H. English, State Printer).

Brief Description: Eight reports with virtually identical formats containing the individual responses of 2466 wage earners from a cross section of trades and locations across the state.

Noteworthy Features: Savings, insurance, home ownership and amount of equity in the home, change in hours and wage rates since the previous year.

A Concern of the Commissioners:

"While this is the largest number of reports ever returned to the Bureau for any one report, it only represents a very small per cent of the total number sent out.

There seems to be very little interest manifested by the wage earners of the state with regard to properly filling out these blanks and returning them to the department, and so long as the mailing system is used as a means to circulate blanks and collect this data, it will be impossible to obtain any definite information along this line of inquiry. However, great care has been observed in an effort to obtain a fair representation of the different trades and vocations, and from the various localities throughout the state as well" (p 270).

WAGE EARNERS

Showing occupation, hours worked, wage rates, annual earnings, savings in hours and annual earnings, savings in hours and

AIR BRAKE CLEANER.

Married Number	Locality Where Employed	Working hours per day	Wages		Total earnings for year 1908	Total savings for past year	Number and sex reported by you	Satisfaction if employed here again
			Rate	Per hour				
1	Fort Dodge	10	hour	1.00	\$ 600.00	no	5	good

BAGGAGE STATIONS.

2	Le Mars	11	\$ 10.00	week	480.00	\$ 125.00	1	yes
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BARBERS.

3	Cedar Rapids	18	\$ 16.00	week	720.00	no	5	yes
4	Cedar Rapids	10 1/2	12.00	week	800.00	no	4	yes
5	Cedar Rapids	10 1/2	13.00	week	853.25	30.00	3	yes
6	Cedar Rapids, No. 1	10 1/2	12.00	week	750.00	no	4	yes
7	Cedar Rapids	12	11.00	week	720.00	100.00	3	no
8	Council Bluffs	7 to 8	17.00	week	856.00	"	2	no
9	Council Bluffs, No. 3	11	13.50	week	702.00	"	2	yes
10	Creston	10	12.00	week	672.00	"	1	yes
11	Creston	10	15.00	week	840.00	"	1	yes
12	Davenport, No. 3	11 1/2	12.00	week	620.00	"	3	yes
13	Des Moines	10 1/2	12.00	week	620.00	no	1	yes
14	Des Moines	10 1/2	12.00	week	620.00	no	1	yes
15	Des Moines	10 1/2	12.00	week	620.00	no	1	yes
16	Des Moines	10 1/2	12.00	week	620.00	no	1	yes
17	Des Moines, No. 4	13	15.00	week	895.00	200.00	2	yes
18	Des Moines	13	15.00	week	700.00	"	1	yes
19	Dubuque	12	12.50	week	650.00	"	1	yes
20	Dubuque	11	3.50	day	800.00	"	4	yes
21	Dubuque	12	3.00	day	4,000.00	"	4	yes
22	Dubuque	11	22.00	week	1,100.00	250.00	1	yes
23	Fort Dodge	12	12.00	week	620.00	"	1	yes
24	Muscatine	12	12.00	week	620.00	"	1	yes
25	Muscatine, No. 5	13	12.00	week	620.00	"	2	yes
26	Muscatine	13	12.00	week	620.00	no	1	yes

No. 1—Idle 14 days of year.
 No. 2—Idle 84 days of year.
 No. 3—Idle 60 days of year.
 No. 4—Idle 60 days of year.
 No. 5—Idle 15 days of year.
 (a) Not reported.

OF IOWA.

number in family, sanitary conditions, insurance, the home, and variation wages since 1908.

AIR BRAKE CLEANER.

Married Number	Amount of Insurance Carried		The Home		Variation in Hours and Wages Since 1908
	Life	Fire	Owed	Value of Equity in	
1	\$ 750.00	Yes	\$ 1,000.00	No variation	No variation

BAGGAGE STATIONS.

2	\$ 3,000.00	No	No	No variation	No variation
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BARBERS.

3	1,500.00	No	No	No variation	2% increase in wages
4	2,000.00	No	No	No variation	No variation
5	3,500.00	No	No	250.00	About 2% increase in wages
6	500.00	No	No	No variation	No variation
7	2,000.00	No	No	No variation	No variation
8	2,000.00	No	No	No variation	No variation
9	2,000.00	No	No	No variation	No variation
10	1,000.00	No	No	No variation	No variation
11	1,000.00	No	No	No variation	No variation
12	1,000.00	No	No	No variation	No variation
13	1,500.00	No	No	No variation	No variation
14	1,500.00	No	No	No variation	No variation
15	1,500.00	Yes	Yes	\$ 1,100.00	No variation
16	1,500.00	Yes	Yes	1,500.00	No variation
17	2,000.00	No	No	No variation	No variation
18	2,300.00	No	No	No variation	No variation
19	2,000.00	No	No	No variation	No variation
20	2,000.00	No	No	No variation	No variation
21	1,000.00	No	No	No variation	No variation
22	1,000.00	No	No	No variation	No variation
23	1,000.00	No	No	No variation	No variation
24	1,500.00	No	No	No variation	No variation
25	1,500.00	No	No	No variation	No variation

WORKER SURVEY

Source: Pennsylvania Bureau of Industrial Statistics, Report, 1894. (Clarence M. Busch, State Printer, 1895).

Short Description: Report on the condition of the building trades from 1890 through 1894.

Noteworthy Attributes: Individual-level longitudinal data on wage rates and months worked each year from 1890 through 1894.

A Comment of the Commissioners:

As the workingmen in one place know what wages are paid for similar labor in other places, one would suppose that in view of the easy and cheap modes of communication between them, those living in places where remuneration was lowest would go to places where the highest remuneration was paid.... One of the consequences of establishing labor organizations, and, indeed, one of the reasons for establishing them, was to obtain information for the use of their members concerning these matters, and in truth the members do know quite as well, or better, than their employers what remuneration is paid everywhere throughout the State. Nevertheless,...., there is no uniformity in the rates, nor do they vary from year to year in the same manner. Doubtless the varying local demands explain some of the differences, but they do not wholly account for the variations. Another reason is that employers are disinclined to change rates unless the necessity for doing so clearly exists. Perhaps no prices on the whole remain as stable as those paid for labor, and so the varying rates exist, even within short distances and often where communication is easy and frequent [p. 4B, emphasis added.]

WORKMEN IN BUILDING TRADES.—PHILADELPHIA.

Office number.	Nationality, where born.	Trade or occupation.	How long an apprentice-ship, if so, how long?	What wages did you receive per hour or day in					During what part of the six months ending June 30, 1904, were you out of employment.	During what part of the years			
				1894	1895	1897	1891	1890		1893	1892	1891	1890
1	United States.	Bricklayer.	4 years.	45 cts.	45 cts.	45 cts.	45 cts.	45 cts.	All.	8 months.	9 months.	3 months.	months.
2	England.	do.	5	45	45	40	40	40	4 months.	3	3	3	3
3	United States.	do.	5	45	45	45	45	45	4	6	6	1	1
4	England.	do.	5	45	45	45	45	45	None.				
5	United States.	do.	5	45	45	40	47	45	3 months.	5	5	5	5
6	Germany.	do.	5	45	45	45	45	45	1	1			
7	United States.	do.		40	40	40	40	40	None.				
8	Germany.	do.	3	45	45	45	45	45	3 months.				
9	United States.	do.	4	45	45	45	45	45	3	3	3	3	
10	Ireland.	do.	7	45	45	40	40	40	All.				
11	United States.	do.	5	45	45	45	45	45					
12	Germany.	do.	4	45	45	40	40	40	3 months.				
13	do.	do.	5	45	45	45	45	40	3	3	3	3	
14	do.	do.	5	45	45	45	45	45	5	5	5	5	
15	United States.	do.	3	45	45	45	45	45	5	5	5	5	
16	England.	do.	No.	45	45	45	45	30					
16	do.	do.	4 years.	45	45	45	45	45					
17	United States.	do.	4	45	45	45	45	45					
18	do.	do.	3	45	45	45	30	30	4	5	5	5	

19	do.	do.	4	45	45	45	45	45	None.	None.	None.	None.	
20	do.	do.	4	45	45	45	45	45	3 months.	4 months.	None.		
21	do.	do.	4	45	45	45	45	45	None.				
22	do.	do.	3	45	45	45	45	45	4 months.	3	3 months.	3 months.	3
23	Ireland.	do.	4	45	45	45	45	45	3	4	4	3	3
24	United States.	do.	3	45	45	45	45	45	3	3	3	3	3
25	Ireland.	do.	4	45	45	45	45	45	3	3	3	3	3
26	United States.	do.	4	45	45	40	40	40	3	3	3	3	3
27	Germany.	do.	4	45	45	45	45	45	3	3	3	3	3
28	England.	do.	3	45	45	45	45	40	3	3	4	7	2
29	Ireland.	do.	3	45	45	45	45	45	3	3			
30	United States.	do.	3	45	45	45	45	45	4	4	4	4	4
31	do.	do.	5	45	45	45	45	45	all.				4
32	do.	do.	4	45	45	45	45	45	3 months.	4	4	4	4
33	do.	do.	9	45	45	45	45	45	3	3	3		
34	do.	do.	5	45	45	45	45	45	3	3	3	3	3
35	do.	do.	4	45	45	45	45	45	4	4	none.	3	3
36	do.	do.	4	45	45	45	45	45	All.				
37	do.	do.	5	45	45	45	45	45	4 months.	3			3
38	England.	do.	4	45	45	45	45	45	3				
39	United States.	do.	4	45	45	45	45	45	all.	5	5	5	5
40	England.	do.	5	45	45	45	45	45	3 months.	3	3	3	3
41	United States.	do.	3	45	45	45	45	45	3	3	3	3	3
42	do.	do.	4	45	45	45	45	45	all.	5	5	5	5
43	Ireland.	do.	4	45	45	45	45	45	3 months.	3			
44	United States.	do.	4	45	45	40	40	40	3	7			
45	do.	do.	5	45	45	45	45	45	none.				
46	do.	do.	5	45	45	45	45	45	3 months.	3	3	3	3
47	do.	do.	3	45	45	45	45	45					

APPENDIX C
SAMPLE PAGES FROM STATE BUREAU OF LABOR STATISTICS
SPECIAL SURVEYS

SPECIAL SURVEY

Source: Connecticut Bureau of Statistics of Labor, Tenth Annual Report for the Year Ending November 1, 1894. (Meriden, Conn.: Press of the Journal, 1894).

Short Description: Report of an investigation into the effects of the industrial depression of 1893 on the manufacturing establishments of the State.

Noteworthy Attributes: Firm-level data on changes in output, employment, time worked, earnings and wage rates.

Remark of Commissioners: "It will be noted that the large majority of the industries retained on the pay-rolls a large percentage of the ordinary number of employes. The reduction made necessary by the depression was largely in the working time,..." (p. 186).

CHANGES IN WAGE RATES.

A little more than one-half of the establishments represented reduced the rate of wages. The reductions, as reported, will be found in the tables. The most common percentage of reduction was ten. In many cases the reduction did not affect all of the employees. The industries in which wage-rate cutting was most frequently reported are the manufacture of musical instruments, stone-cutting, cotton, carriage-making, wool, hosiery and knit goods, wire goods, cast-iron and forgings, hardware and cutlery. In several industries not over one-third of the establishments reported reductions in wage rates, and in the one industry of printing and book-binding no changes in wage rates were reported. There were reports of a slight increase in wage rates, sometimes restricted to a portion of the employees, in sixteen establishments, three of them being woolen mills. In four instances the increase was a restoration of part of a previous reduction, three of the four instances being in woolen mills.

All the details supplied by the schedules are presented in the succeeding tables by establishments, industries and months. Each of the establishments is given a serial number, which it retains through the tables.

BOOTS, SHOES AND LEATHER GOODS.

HOURS, EMPLOYEES AND WAGES BY ESTABLISHMENTS.

Serial Number of Establishment	AVERAGE NUMBER EMPLOYED.		Per Cent. Average Number Employed in 1892.	AVERAGE MONTHLY PAYMENTS IN WAGES.		Per Cent. Monthly Average Wages Paid of Average in 1892.
	In 1892.	June, 1892, to August, 1894.		In 1892.	June, 1892, to Aug., 1894.	
1	75	64	86.00	\$4,281.50	\$2,087.00	77.66
2	75	73	100.00	3,000.00	2,218.67	85.23
3	40	40	100.00	3,400.00	3,048.00	89.18
4	80	78	96.00	3,435.00	3,280.79	89.06
5	100	100	100.00	5,700.00	5,453.50	95.58
6	25	26	74.28	1,200.00	699.87	58.32
7	175	164	93.71	7,209.46	5,595.71	81.78

PER CENT. HOURS, EMPLOYEES AND WAGES BY MONTHS.

MONTHS.	Per Cent. Hours Worked of Full Time.	Per Cent. Less Than Full Time.	Per Cent. Number Employed of Average Number in 1892.	Per Cent. Wages Paid of Average Monthly Payments in 1892.	Per Cent. Decrease in Wage Payments.
June, 1892.	95.71	4.29	94.09	92.55	7.45
July, 1892.	78.13	21.87	90.91	90.07	9.93
August, 1892.	68.08	31.92	96.56	77.74	22.26
September, 1892.	63.90	36.10	91.25	70.89	29.11
October, 1892.	57.73	42.27	80.83	65.16	33.82
November, 1892.	63.51	36.49	85.00	67.62	32.38
December, 1892.	52.18	47.82	84.09	66.24	33.76
January, 1893.	46.40	53.60	81.58	60.48	39.52
February, 1893.	70.21	29.79	87.20	78.37	21.63
March, 1893.	77.24	22.76	87.66	84.21	15.79
April, 1893.	80.23	19.77	87.66	89.29	10.71
May, 1893.	81.51	18.49	86.06	84.90	15.10
June, 1893.	80.23	19.77	84.23	79.93	20.07
July, 1893.	67.99	32.01	77.91	70.91	29.09
August, 1893.	78.23	21.77	84.09	80.62	19.38

IDLE DAYS, PRODUCTION AND CHANGES IN WAGE RATES.

Serial Number of Establishment	Per Cent. Number of Idle Days of Working Days.	Per Cent. Production in Last Fiscal Year of That in 1892.	CHANGES IN WAGE RATES.			
			Reductions.		Increases.	
	Per Cent. General.	Per Cent. of Reduction. Affected.	Per Cent. of Increase.	Per Cent. of Employees Affected.	Per Cent. General.	Per Cent. of Employees Affected.
2	14.58	80.00	....	....	....	....
3	18.91	81.00	....	....	....	....
4	....	89.00	....	....	....	....
5	1.80	80.00	....	....	....	....
6	1.29	75.00	10.00	....	....	....
7	11.98	75.00	....	....	....	....

SPECIAL SURVEY

Source: New York Bureau of Statistics of Labor, Eleventh Annual Report. (Albany: James B. Lyon, 1894).

Short Description: Report of an investigation into the effects of the industrial depression of 1893 on the manufacturing establishments of the State.

Noteworthy Attributes: Information on changes in wage rates and responses to the question, "At the time your works closed, did you have orders ahead sufficient to keep them running, provided the banks would render you the usual discounts and assistance?"

Summary Remarks of Commissioners: Firms' responses to the question regarding the role of banks in the depression are summarized as follows:

...1,359 reported they were deficient in orders ahead, which necessitated the closing of their manufactories, either partially or totally, while 92 inform the Bureau that they had orders ahead; that the banks were willing to render them the usual discounts and assistance, but they, nevertheless, closed their workshops. Eighty-six manufactures reported that they had no orders ahead, but the banks were willing to assist them, and 55 manufactures stated that the banks refused to assist them. Forty-eight manufactures reported that their works were not closed during the business depression [p. 414].

TABLE F.

Answers to Question: "At the Time your Works Closed did you have Orders Ahead Sufficient to keep them Running, Provided the Banks would Render you the Usual Discounts and Assistance?"

INDUSTRY.	Number who answer yes.	Number who answer no.	Number who do not reply.	Number of workshops not closed.	Manufacturers reporting that orders were canceled.	Manufacturers reporting no orders ahead, but that banks were willing to render usual discounts and assistance.	Manufacturers reporting that banks refused to render required discounts and assistance.
Agricultural implements.							
Agricultural implements (not classified).....	4			4	1		
Agricultural implements (not classified) and bridges.....	1						
Agricultural implements (not classified) and sash, doors and blinds.....				1			
Drills.....	1						
" (grain).....	1						
Farm edge tools.....	1						
Feed cutters.....	1						
Hoes and tools.....				1			
Horse forks and rakes.....	1					1	
Machine knives.....	1			1			
Machinery (agricultural).....	1						
" (grain cleaning).....	1						
" (harvesting).....	1						
Mowers and binders.....	1						
Plows.....	2			1			
Totals.....	18		2	6	1	1	
Arms and ammunition.							
Arms, sewing machines, etc.....	1						
Guns.....	3				2		
" and hardware specialties.....	1						
Toy torpedoes and paper caps.....				1			
Totals.....	1	4		1	2		
Artisans' tools.....							
Axes.....				2			
Drills (rock) and compressors.....	1						
Files and rasps.....	1						
Hammers and hatchets,.....	1						
" (steel).....				1			
Tools (butchers').....	1						
" (edge).....	1						
" (steamfitters').....	1					1	
" (trimmers').....							1
Totals.....		6		3		1	1
Boots and shoes.							
Boots and shoes.....	4	4		1			3
Shoes.....		536	1	7	1	3	1
" (men's).....		2					
" (misses' and children's).....	1	1					

^c One firm remarks: "The fact that banks would not discount our business papers interfered considerably with our business, and caused embarrassment for the time being."

^b One firm remarks: "We had orders which we would have filled in ordinary times, but which were rejected through fear that the depression might so affect the particular parties in question as to result in a loss to us."

SUMMARY OF TABLE F.

INDUSTRY.	Number who answer yes.	Number who answer no.	Number who do not reply.	Number of workshops not closed.	Manufacturers reporting that orders were canceled.	Manufacturers reporting no orders ahead, but that banks were willing to render usual discounts and assistance.	Manufacturers reporting that banks refused to render required discounts and assistance.
Agricultural implements.....	1	18	2	6	1	1	
Arms and ammunition.....	1	4		1	1		
Artisans' tools.....	7	56	1	5	2	1	
Boots and shoes.....	4	4		5	2	4	
Brick, tile and sewer pipe.....	9	9		2			
Brooms and brushes.....	5	5		1			
Building.....	1	45	1	14		6	
Burial cases, caskets, coffins, etc.....	1	6					
Buttons and dress trimmings.....	2	23		2	1		
Carpets, rugs and oilcloths.....	2	13		1	1		
Carriages, wagons, etc.....	2	23		13	1	2	
Cement, lime, plaster, etc.....		3		2			
Chemicals, acids, etc.....		3		4			
Clocks, watches, jewelry, etc.....		12		1	1	1	
Clothing.....	31	359		70	23	29	11
Cooking and heating apparatus.....	1	29		7			1
Cordage and twine.....	1	3		1			
Cotton goods.....		19		6			
Drugs and medicines.....		4		7			
Dyestuffs.....		3		2			
Earthen and stoneware.....		3					
Electric apparatus and appliances.....		5		5			1
Fancy articles.....	2	7		4	2		1
Fireworks, matches, etc.....	1	1		2			
Flags.....		1					
Flax, hemp and jute goods.....		2				1	
Food products.....		27		40		1	1
Furniture.....	2	77	5	10		19	1
Glass and glass goods.....	1	16	1	1	1		
Hosiery and knit goods.....		22	2	2	5	1	
Ink, mucilage and paste.....				2			
Ivory, bone, shell, horn goods, etc.....		2					
Laundries.....		7	2	14			
Lead pencils.....		1		1			
Leather and leather goods.....	1	29	2	2		1	
Liquors and beverages (not spirituous).....		2		3			
Liquors (spirituous).....		2		15			
Lumber.....	2	22	3	10			
Machines and machinery.....	9	56	16	15	2	10	4
Metals and metallic goods.....	4	107	9	17	4	2	2
Musical instruments and materials.....	1	11	2				
Oil and illuminating fluids.....		4		6		1	
Paints, colors and crude materials.....		5	1	2		1	
Paper and paper goods.....	1	76	6	22	1	4	2
Perfumery.....		2		1		1	
Photographs and photographic materials.....		5		2		1	
Polishes and dressings.....		2					
Printing, publishing and bookbinding.....	5	28	9	42			5
Railroad construction.....		18	1	7		1	
Rubber and elastic goods.....		6	1	2			
Salt.....		4		1			
Scientific instruments.....		4		1			
Ship and boat building.....		1		2			
Silk and silk goods.....	1	26	4	3	1	1	
Sporting goods.....		1		1			
Stone, marble, etc.....		4		2		1	
Tallow candles, soap and grease.....		1	1	5			
Tobacco, cigarettes and cigars.....	4	44	6	22		2	6
Toys and games.....		6					
Trunks and valises.....		4					
Whips.....		1		1			
Wooden goods.....		13	1	5			
Woolen goods.....		19	1	4	1	1	
Worsted goods.....		7		2	1		
Totals.....	92	1,259	84	470	45	56	

SPECIAL SURVEY

Source: Ohio Bureau of Labor Statistics, Eighteenth Annual Report. (Columbus: State Printers, 1895).

Short Description: Survey of employment, wages, days in operation, capital, raw materials, and inventories for manufacturing establishments throughout the State in 1892 and 1893.

Noteworthy Attributes: Information on changes in wage rates and on inventories on hand January 1, 1893 and January 1, 1894.

Comments: The Ohio report contains no discussion of these statistics. Albert Rees comments:

The Ohio data are very different in form from those of the other states we have used. The data consist of the number of workers employed, average number of days worked, average daily earnings, and average yearly earnings by occupations within industries, separately for Cincinnati, Cleveland, Columbus, Dayton, Toledo, other cities, and villages. No averages whatever are provided for these many observations for occupations.... The industry definitions of the Ohio data are consistent throughout, though they do not correspond exactly to census definitions. The coverage of the data is very good after 1900 but often low before that time.*

* Albert Rees, Real Wages in Manufacturing, 1890-1914. (Princeton: Princeton University Press, 1961: Appendix A, pp. 133-134.

TABLE I

GIVING BY OCCUPATIONS NUMBER EMPLOYED, NUMBER OF DAYS WORKED IN 1892 AND 1893, AVERAGE DAILY WAGES, YEARLY EARNINGS FOR 1893, HOURS OF DAILY LABOR AND CHANGES IN WAGES IN PER CENT. FOR THE YEAR 1893.

TABLE Ia—Cincinnati.

Number.	Occupations—Male.	Number employed.	Number of days worked in		Average daily wages.	Yearly earnings, 1893.	Hours of daily labor.	Change in wages, in per cent., for year ending Dec. 31, 1893.	
			1892.	1893.				Advanced.	Reduced.
<i>Tools.</i>									
2716	Machine hands.....	85	300	200	\$1 75	\$350 00	10		
2803	".....	4	300	250	2 60	180 00	8 3/4		
	Machinists.....	2	300	250	2 25	562 50	8 3/4		
321	".....	10	300	245	1 25	306 25	10		10
2803	Vice hands.....	3	300	250	1 75	437 50	8 3/4		
	Blacksmith.....	1	300	250	2 25	562 50	8 3/4		
	Polishers.....	2	300	250	1 75	437 50	8 3/4		
	Grinders.....	4	300	250	3 75	187 50	8 3/4		
716	Engineer.....	1	300	200	3 00	600 00	10		
	Fireman.....	1	300	200	1 50	300 00	10		
	Drivers.....	2	300	200	1 50	300 00	10		
2843	Japanner.....	1	300	250	1 00	250 00	8 3/4		
<i>Brooms, Brushes and Wire Goods.</i>									
986	Brush makers.....	3	300	288	1 35	338 80	9		
2143	".....	6	250	215	1 25	269 75	9		
2466	".....	12	312	312	1 25	389 00	10		
1814	Wire workers.....	10	312	312	2 50	780 00	10		
2466	".....	18	312	312	1 50	468 00	10		
	Engineer.....	1	312	312	1 80	561 60	10		
2207	Broom makers.....	1	200	300	1 10	330 00	9		
2053	".....	5	292	225	1 80	513 00	9		
993	".....	7	275	250	1 35	337 50	10		
1814	".....	5	312	312	2 50	780 00	10		
1019	".....	6	312	312	1 50	468 00	8		
<i>Artificial Ice.</i>									
2713	Engineers.....	2	300	300	2 15	645 00	12		15
2632	".....	2	270	275	3 00	825 00	12		
2796	".....	2	366	363	3 31	1205 15	12		
2568	".....	2	180	180	2 50	450 00	12		
	Ice pullers.....	2	150	150	1 50	270 00	12		
	Firemen.....	2	180	180	1 50	270 00	12		15
713	".....	2	300	300	1 50	450 00	12		
2796	".....	5	366	363	1 92	700 80	12		
2713	Wagon men.....	16	300	300	1 75	525 00	12		
2632	".....	12	270	276	1 75	471 25	12		
796	Helpers.....	6	366	363	1 80	657 00	12		
2713	Tankmen, laborers.....	10	366	363	1 80	657 00	12		
	".....	2	300	300	1 50	450 00	12		
2713	Stable hand.....	1	300	300	2 00	600 00	15		
2032	House men.....	13	270	273	1 50	412 50			
<i>Coffins.</i>									
2499	Wood workers.....	14	300	190	1 75	332 50	8		10
1304	".....	5	240	280	1 83	512 40	9		
2635	".....	5	298	276	1 83	505 08	9 1/2		
1355	".....	75	308	274	1 55	424 70	8		
2655	Hearse mounters.....	12	298	276	1 95	534 20	9 1/2		
	Designer.....	1	298	276	4 17	1,150 92	10		
	Blacksmiths.....	18	298	276	1 95	534 20	10		
	Coffin mounters.....	8	298	276	1 74	440 24	9		
1355	Firemen.....	2	303	274	1 50	411 00	10		
	".....	8	303	274	2 50	685 00	10		
2655	Machinists.....	7	298	276	1 95	538 20	10		

TABLE IIc--Toledo.

Industries.	Janua.		July.		August.		September.		October.		November.		December.		Monthly average.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Large and wagon water sh...	120	10	120	8	120	4	42	8	24	8	9	8	1	8	56	4
ry and machine shop...	149	81	145	83	124	48	115	48	118	8	184	8	117	8	139	8
lure...	891	7	898	8	1,028	8	1,028	8	1,046	8	1,090	8	1,079	8	977	7
ore and blinding...	213	7	247	8	247	2	246	2	241	2	234	2	238	2	237	1
ing and blinding...	48	41	41	41	70	89	70	87	70	49	70	49	70	84	78	68
oor clean...	408	1	492	1	492	1	492	1	481	1	490	1	494	1	487	1
illanous...	1,830	1,089	1,798	1,043	1,827	1,065	1,833	1,088	1,843	1,044	1,779	947	1,802	937	1,781	991
total	4,187	1,106	4,168	1,108	4,214	1,118	4,188	1,108	4,186	1,101	4,418	1,100	4,603	1,118	4,398	1,200

TABLE IIId--Toledo.

Industries.	January.		February.		March.		April.		May.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
No. of establish...	8	2	1	3	1	4	1	6	120	9
ago and wagon water sh...	132	47	141	47	151	4	116	6	165	49
ry and machine shop...	787	89	808	845	808	845	845	845	885	885
lure...	175	4	202	6	202	6	202	6	202	6
ore and blinding...	227	4	227	241	241	241	241	241	241	241
ing and blinding...	80	41	80	41	80	41	80	41	80	41
oor clean...	263	1	263	481	481	481	481	481	481	481
illanous...	1,700	856	1,700	1,065	1,785	993	1,705	1,013	1,893	1,039
total	3,618	913	3,600	973	3,845	1,064	4,089	1,078	4,187	1,104

TABLE IIe--Dayton.

Industries.	Janua.		July.		August.		September.		October.		November.		December.		Monthly average.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
cultural implements...	694	7	651	7	492	9	898	9	908	9	848	8	698	6	848	6
g powder and spica...	46	47	46	47	47	81	47	81	47	81	46	46	46	46	46	46
rs, tanks and engine...	376	86	342	101	353	102	367	102	372	21	431	8	484	8	372	8
and tile...	86	82	80	80	83	8	88	8	80	2	8	8	78	8	78	8
aces and warons...	2,097	17	2,021	16	2,082	14	2,079	15	1,991	19	2,084	17	2,107	14	2,010	19
ad and street...	61	61	64	64	63	63	64	64	68	68	68	68	68	68	68	68
ing mill product...	66	66	78	78	80	80	86	86	86	86	87	87	88	88	88	88
dry and machine shop...	160	160	164	164	140	140	129	129	174	174	174	174	174	174	174	174
rs, malt...	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
s and varnish...	187	70	184	68	184	72	189	76	189	71	184	70	184	76	184	71
ng and blinding...	802	802	808	808	818	818	809	809	815	815	818	818	818	818	818	818
s and water wheels...	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185
doors and blinds...	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
co. cigars...	145	432	148	431	150	439	158	432	160	435	168	457	187	458	185	444
llanous...	704	294	710	295	718	215	715	228	687	219	692	268	709	259	684	240
total	4,540	718	4,852	786	4,979	801	4,884	838	4,487	803	4,914	871	4,378	839	4,394	844

TABLE IIe--Dayton.

Industries.	January.		February.		March.		April.		May.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
No. of establish...	8	2	1	3	1	4	1	6	120	9
ago and wagon water sh...	132	47	141	47	151	4	116	6	165	49
ry and machine shop...	787	89	808	845	808	845	845	845	885	885
lure...	175	4	202	6	202	6	202	6	202	6
ore and blinding...	227	4	227	241	241	241	241	241	241	241
ing and blinding...	80	41	80	41	80	41	80	41	80	41
oor clean...	263	1	263	481	481	481	481	481	481	481
illanous...	1,700	856	1,700	1,065	1,785	993	1,705	1,013	1,893	1,039
total	3,618	913	3,600	973	3,845	1,064	4,089	1,078	4,187	1,104

TABLE V—GIVING BY INDUSTRIES THE NUMBER OF ESTABLISHMENTS REPORTED, THE VALUE OF GOODS MADE AND MATERIALS USED IN 1893, THE VALUE OF MANUFACTURED ARTICLES AND MATERIALS ON HAND JANUARY 1, 1893, AND JANUARY 1, 1894, WITH THE CAPITAL INVESTED.

TABLE Vc—Cincinnati.

Industries.	No. of establishments reported.	Total value of all goods made from January 1, 1893, to January 1, 1894.		Value of manufactured articles on hand—		Total value of all materials used from January 1, 1893, to January 1, 1894.		Value of materials on hand—		Capital invested.
		January 1, 1894.		January 1, 1893.		January 1, 1894.		January 1, 1893.		
Awings, tents and flags.....	6	\$166,745 23	\$36,450 00	\$43,475 00	\$114,700 00	\$97,694 00	\$62,875 00	\$114,000		
Bags, paper.....	4	369,951 00	15,297 00	15,892 00	206,229 00	11,280 00	9,993 00	175,500		
Bags, rattan and willow ware	4	7,540 00	1,660 00	2,000 00	2,290 00	865 00	940 00	4,100		
Billiard tables and bar fixtures	9	417,779 96	67,004 00	48,638 00	255,812 98	87,931 31	29,216 78	389,518		
Boilers and tanks.....	6	233,865 40	6,320 00	3,260 00	113,319 17	16,831 00	12,505 00	125,987		
Brooms and shoes.....	80	5,127,343 87	68,161 91	201,288 82	2,894,153 14	191,416 88	239,849 81	3,270,944		
Boxes, paper.....	7	178,351 73	8,080 00	3,639 00	74,116 67	18,911 93	17,602 02	65,250		
Boxes, wooden.....	6	255,230 26	6,773 11	8,848 11	141,706 80	45,739 26	12,004 06	65,771		
Bread and other bakery products.....	13	967,276 91	13,951 98	16,306 97	643,743 88	45,106 08	36,528 38	842,078		
Brick.....	11	14,152 00	91,737 00	34,639 30	21,815 33	6,393 06	7,434 80	84,400		
Brooms and brushes.....	9	275,141 66	116,437 00	186,871 00	205,159 68	101,870 00	113,323 00	175,785		
Carpenter and wagon materials.....	43	4,193,433 37	865,288 30	354,284 72	2,445,603 25	696,555 50	680,120 54	2,319,735		
Castings.....	9	615,131 68	417,611 22	278,636 70	369,265 41	211,516 49	191,388 02	428,732		
Clothing.....	42	8,716,955 99	74,734 82	63,529 69	257,692 33	67,278 21	68,632 86	592,300		
Collars and shirt collars.....	3	727,213 21	2,951,939 77	2,846,125 64	4,870,074 70	1,295,468 97	1,119,833 86	6,592,063		
Collins and barrel cases.....	4	945,000 00	6,926 31	4,516 00	680,315 10	23,963 25	20,631 46	89,216		
Copper and brass.....	11	486,376 41	185,200 00	122,850 00	618,532 00	385,740 00	814,333 00	957,000		
Copper and brass.....	17	914,381 31	27,488 64	26,816 80	272,313 83	41,576 91	3,335 17	177,840		
Flouring extracts.....	3	169,613 20	142,449 31	44,049 33	520,461 48	203,932 13	227,371 20	816,500		
Furniture.....	43	1,957,489 83	33,600 00	149,280 00	448,257 79	161,245 60	147,791 00	646,446		
Harness.....	6	1,033,646 00	470,291 62	463,294 00	696,416 81	78,750 00	7,177 00	80,120		
Hats.....	5	231,652 96	9,784 00	12,182 00	630,859 00	170,176 00	127,622 00	708,000		
Ice, artificial.....	4	109,091 00	900 00	936 10	150,348 00	15,356 00	24,653 00	72,300		
Iron, architectural.....	6	195,317 25	4,025 69	4,738 91	97,350 49	7,273 81	8,773 80	106,956		
Leather.....	13	119,172 64	23,500 00	25,600 00	66,777 00	70,401 52	57,252 92	1,250,000		
Liquors, malt.....	17	2,252,408 25	1,128,956 82	1,171,354 97	1,416,745 04	424,905 62	378,867 45	6,676,015		
Liquors, distilled.....	7	4,621,204 92	1,015,669 40	1,020,049 25	2,461,938 00	414,161 67	48,471 67	675,000		
Lithography.....	4	8,353,165 00	515,012 97	461,806 00	2,044,075 87	47,871 17	46,401 00	302,600		
Machinery.....	38	69,868 72	41,071 05	62,239 27	204,075 87	320,804 88	371,363 06	4,420,200		
Manicels and staves.....	8	2,232,672 64	797,821 92	927,228 66	871,827 99	22,060 00	8,850 00	183,000		
Monuments.....	2	142,000 00	83,700 00	28,000 00	46,000 00	72,000 00	24,000 00	212,000		
	8	247,116 23	15,741 43	17,110 00	111,089 22	24,908 20	24,094 64	312,000		

SAMPLE PAGES FROM STATE BUREAU OF LABOR STATISTICS REPORTS

SPECIAL SURVEY

Source: New Jersey Bureau of Statistics of Labor and Industries, Seventeenth Annual Report for the Year Ending October 31st 1894. (Trenton, N.J.: MacCrellich and Quigley, Book and Job Printers 1895).

Short Description: Report on 306 co-operative building and loan associations doing business in New Jersey in 1894.

Noteworthy Attributes: Information on assets, shares, debts, and arrearages.

July 14, 1989
July 13, 1989

State Bureaus of Labor Statistics

PART VI.

Co-operative Building and Loan Associations of New Jersey.

The data from 306 associations doing business in this State in 1894 have been summarized in the present report, and those from 295 collated in detail in the general tables, Nos. 1 to 4. This is exclusive of two small so-called national concerns calling themselves the Metropolitan Building and Loan Society and Columbia Building, Loan and Investment Company, incorporated in Camden county, in August 1, 1893, and April, 1894, respectively, concerning which no reliable information could be obtained officially. Nor is one foreign association included, the Granite State Provident, of Manchester, N. H., admitted by the Commissioner of Banking and Insurance to do business in this State, having made the required deposit of securities. This is the first outside building and loan association that has complied with the provisions of the act of June 10th, 1890, and thus becomes legally entitled to carry on its transactions in New Jersey. It is a national, and its general yearly report for 1894 is published in the annual report of the Bank Commissioner. Its admission to this State occurred too late to render the required statement to this office, under the legislation of 1890, Chap. 261, which provides for returns from "every mutual loan, homestead and building association organized under the laws of this State or doing business therein."

NEW ASSOCIATIONS.

There were 21 new associations incorporated in New Jersey since the Bureau report of 1893, and of these, as far as known, 13 are in operation, viz.:

APPENDIX I.
SUMMARY 1--BUILDING AND LOAN ASSOCIATIONS OF NEW JERSEY--CLASSIFICATION
ACCORDING TO NET ASSETS.*

LOCATION.†	Average amount of net assets per association.	NUMBER OF ASSOCIATIONS IN WHICH THE AMOUNT OF NET ASSETS IS							Number of associations.	Average number of years in operation.	
		\$3,000 and under.	\$3,000 to \$5,000.	\$5,000 to \$10,000.	\$10,000 to \$50,000.	\$50,000 to \$100,000.	\$100,000 to \$200,000.	\$200,000 to \$500,000.			Over \$500,000.
Atlantic.....	\$127,088	.....	.....	.....	.....	.....	.....	.....	.....	8	14.9
Atlantic City.....	146,496	.....	.....	.....	.....	.....	.....	.....	.....	3	13.7
Hammonden.....	196,062	.....	.....	.....	.....	.....	.....	.....	.....	2	20
Bergen.....	48,291	3	3	1	7	1	6	1	.....	22	4.5
Burlington.....	71,708	.....	.....	.....	6	7	4	.....	.....	17	15.5
Burlington.....	109,968	.....	.....	.....	.....	1	1	.....	.....	2	24.5
Mount Holly.....	104,404	.....	.....	.....	.....	2	1	.....	.....	3	31
Camden†.....	127,190	1	1	4	6	5	6	11	.....	34	11.8
Camden†.....	133,257	.....	1	3	4	5	6	9	.....	28	14
Camden†.....	143,507	.....	.....	2	4	3	4	10	.....	24	12.5
Gloucester City.....	162,823	1	.....	1	2	3	4	8	.....	14	10.8
Gloucester City.....	118,127	.....	.....	.....	.....	1	1	.....	.....	2	17.5
Cape May.....	42,001	.....	.....	.....	6	1	1	.....	.....	8	15.6

*See Summary 3, below, for details. † City totals included in county totals. ‡ First line includes, besides locals, nationals and State incorporated in county; second line, locals only.

SUMMARY 2—BUILDING AND LOAN ASSOCIATIONS OF NEW JERSEY—CLASSIFICATION OF ASSOCIATIONS ACCORDING TO NUMBER SHARES OUTSTANDING, BY COUNTIES.*

LOCATION. †	Average number of shares per association.	NUMBER OF ASSOCIATIONS IN WHICH NUMBER OF SHARES OUTSTANDING IS								Largest number held.	NUMBER OF ASSOCIATIONS IN WHICH THE LARGEST NO. IS					Over 1.				
		100 and under.	100 to 500.	500 to 1,000.	1,000 to 2,000.	2,000 to 3,000.	3,000 to 4,000.	4,000 to 5,000.	5,000 to 10,000.		Over 10,000.	LARGEST NO. IS								
												10 and under.	10 to 25.	25 to 50.	50 to 100.		Over 100.	1 and under.		
Atlantic County.....	1,797	1	3	1	2	1	1	1	1	1	1	1	1	2	2	2	8	20	2	
Atlantic City.....	1,925	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	2	
Hamorton.....	2,877	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	
Bergen County.....	1,132	1	7	2	3	1	1	1	1	1	1	1	1	3	12	6	1	1	1	2
Burlington County.....	1,420	1	7	4	4	1	1	1	1	1	1	1	1	1	6	6	2	3	3	17
Burlington.....	1,281	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Mount Holly.....	2,732	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
Camden County.....	3,442	1	4	4	8	6	1	1	1	1	1	1	1	1	3	7	3	15	5	33
Camden.....	4,308	1	2	6	6	6	6	6	6	6	6	6	6	2	4	2	11	4	4	23
Gloucester City.....	1,540	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Cape May County..	687	3	4	1	1	1	1	1	1	1	1	1	1	1	4	2	2	2	2	8
Cumberland County.....	2,288	1	2	2	2	2	2	2	2	2	2	2	2	1	1	3	2	2	1	7
Bridgeton.....	3,579	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Millville.....	1,324	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4

* See Summaries 6 and 8, below, for totals. † City totals included in county totals. ‡ First figure State; second, local.

SUMMARY 3.—BUILDING AND LOAN ASSOCIATIONS OF NEW JERSEY—CLASSIFICATION OF ASSOCIATIONS ACCORDING TO NUMBER OF SHARES PLEDGED.*

LOCATION. †	Average number of shares pledged per association.	NUMBER OF ASSOCIATIONS IN WHICH THE NUMBER OF SHARES PLEDGED IS						Number of associations.	
		100 and under.	100 to 200.	200 to 300.	300 to 400.	400 to 500.	500 to 1,000.		Over 1,000.
Atlantic County.....	630	1	1	2	1	.....	.....	3	8
Atlantic City.....	664	1	.....	1	.....	.....	.....	1	3
Hammonden.....	1,162	.....	.....	.....	.....	.....	.....	2	2
Bergen County.....	260	9	4	3	.....	.....	5	.....	21
Burlington County.....	490	1	3	4	2	2	3	2	17
Burlington.....	395	.....	.....	.....	1	.....	.....	.....	2
Mount Holly.....	1,974	.....	.....	.....	.....	.....	.....	1	3
Camden County †.....	725	7	5	1	2	2	7	10	34
Camden †.....	643	5	3	1	2	2	7	8	28
Gloucester City.....	833	4	3	1	2	.....	5	9	24
.....	743	2	1	1	2	.....	5	7	18
.....	696	.....	.....	.....	.....	1	1	.....	2
Cape May County.....	190	1	5	1	.....	1	.....	.....	8

* See Summaries 6 and 8, below, for totals. † City totals included in county totals. ‡ First line includes national, State and local associations; second line, locals only.

SUMMARY 9.—BUILDING AND LOAN ASSOCIATIONS OF NEW JERSEY — GENERAL STATISTICS: SHARES AND SHAREHOLDERS, NET ASSETS, NET PROFITS, INDEBTEDNESS, RECEIPTS AND DISBURSEMENTS—Continued.

AMOUNT OF DEBTS OWING BY ASSOCIATIONS.

LOCATION.*	TOTAL OUTSTANDING		CASH PAID DURING YEAR.		CASH REPAID DURING YEAR †		LOANS UNDELIVERED TO BORROWERS.		UNEARNED PREMIUMS.	
	Number associations	Total amount. †	Number associations	Total amount. †	Number associations	Total amount. †	Number associations	Total amount.	Number associations	Total amount.
Atlantic County.....	8	\$52,841	1	\$1,000	3	\$11,340	2	\$1,215	1	\$22
Atlantic City.....	3	1,110	1	1,000	2	8,740	1	200	1	22
Hammonden.....	2	39,700	.....	.....	1	2,600	.....	.....	.....	.....
Bergen County	18	35,794	4	91,664	14	104,350	9	22,651	2	3,425
Burlington County.....	12	34,456	7	48,976	7	34,025	4	3,900	2	4,012
Burlington.....	2	5,607	.....	.....	.....	.....	.....	.....	.....	.....
Mount Holly.....	1	11,000	1	30,200	1	19,200	2	2,700	1	1,525
Camden County.....	33	169,566	12	66,785	10	57,769	3	40,200	5	15,770
Camden.....	24	154,028	8	61,765	8	65,200	3	40,200	4	14,701
Gloucester City.....	2	11,910	1	3,600	.....	.....	.....	.....	.....	.....

* City totals included in county totals. † Inclusive of overpayments and amounts owing on cancelled shares, but exclusive of net worth, unearned premiums and uncompleted loans. ‡ Inclusive of amounts paid on borrowings of previous years.

SUMMARY 9.—BUILDING AND LOAN ASSOCIATIONS OF NEW JERSEY — INVESTMENT OF ASSETS, BY COUNTIES—Continued.

LOCATION.*	Number of associations.	Total net worth (net assets).	INVESTMENT OF ASSETS.					Total resources (Gross assets).	Book loans (stock) as collateral only.	Real estate.	Cash on hand.	Other assets.†
			BOND AND MORTGAGE.	Amount.	Per cent. of Investments.	Book loans (stock) as collateral only.	Real estate.						Cash on hand.
Essex County.....	67	\$8,566,871	\$8,925,825	\$8,106,635	91	\$343,412	\$105,714	\$184,777	\$185,285			
Newark.....	64	7,061,651	7,306,243	6,528,482	90	288,133	91,675	179,610	168,021			
Gloucester County.....	7	718,581	756,298	690,272	92	13,444	11,485	10,392	24,703			
Hudson County.....	51	8,182,980	8,929,402	8,226,495	92	134,434	132,004	206,079	230,390			
Jersey City.....	40	6,836,602	6,494,670	6,408,702	91	105,286	125,009	166,380	189,681			
Mayonne.....	3	718,730	771,898	731,635	95	4,676	2,217	17,419	15,418			
Harrison.....	2	772,121	789,200	764,406	95	10,100	4,778	10,531	9,304			
Hoboken.....	1	498,915	498,945	468,400	91	10,435	.....	17,670	2,440		
Hunterdon County.....	2	267,357	271,360	220,085	80	6,400	.....	2,510	22,765		
Mercer County.....	7	557,420	571,200	471,823	83	24,982	17,244	29,959	27,192			
Trenton.....	3	411,203	442,602	378,105	80	6,510	10,216	28,420	19,531			
Middlesex County.....	17	2,307,364	2,328,767	2,139,079	89	89,114	6,413	43,637	53,524			
New Brunswick.....	11	1,415,783	1,431,351	1,308,080	91	24,673	4,740	11,890	17,062			
Perth Amboy.....	4	397,015	399,803	317,701	90	10,000	1,273	14,803	27,967			

* City totals included in county totals. † Inclusive of \$10,660 special loans. ‡ Inclusive of \$30,115, both mortgage and stock.

SPECIAL SURVEY

Source: Massachusetts Bureau of Statistics of Labor, Eighteenth Annual Report, December, 1887. Boston: Wright and Potter, State Printers, 1887.

Short Description: Results of a survey on the incidence and duration of unemployment conducted in connection with the state census of 1885.

Noteworthy Attributes: Unemployment incidence and duration by gender and age, and by town, gender and occupation. Also information on "other work having been done during the whole or a part of the time unemployed at the principal occupation" [p. 261].

Comments of Commissioners:

[A]bout one-third of the total persons engaged in remunerative labor were unemployed at their principal occupation for about one-third of the working time.

By a purely mathematical calculation based on the elements here presented, the result of this investigation would seem to indicate that all the products of manufactures could have been secured by steady work for 307 working days of 9.04 hours each, if this steady work could have been distributed equally among all the persons engaged in manufactures, while all remunerative work of the State, of whatever kind, if it could have been distributed equally among the entire working population, could have been accomplished in 307 working days averaging 8.99 hours per day. The practical difficulty in reaching such a condition lies entirely in the distribution of time employed to secure equalization in the various industries [p. 294].

THE UNEMPLOYED: FOR THE STATE.

THE STATE, SEX, AND NUMBER OF MONTHS UNEMPLOYED.	AGE PERIODS									ALL AGES
	10 to 13	14 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 79	80 and Over	Un- known	
THE STATE, . . .	560	44,905	78,584	45,678	33,725	22,119	15,610	388	20	241,589
Males, . . .	341	26,216	51,051	36,826	29,337	20,028	14,650	361	18	178,628
Females, . . .	219	18,689	27,533	9,052	4,388	2,091	960	27	2	62,961
ONE MONTH, . . .	44	3,844	7,640	4,039	2,251	1,156	511	12	1	19,578
Males, . . .	28	1,816	4,474	3,149	1,935	1,063	474	8	1	12,948
Females, . . .	16	2,028	3,166	940	316	123	37	4	-	6,630
TWO MONTHS, . . .	91	8,642	17,483	9,718	6,402	3,626	1,785	25	3	47,775
Males, . . .	48	4,469	10,488	7,469	5,300	3,215	1,649	23	2	32,753
Females, . . .	43	4,173	6,995	2,249	1,012	411	136	2	1	15,022
THREE MONTHS, . . .	82	7,009	14,642	8,539	6,062	3,433	1,975	27	6	41,877
Males, . . .	49	3,900	9,156	6,813	5,216	3,135	1,836	27	6	30,138
Females, . . .	33	3,109	5,486	1,778	846	350	139	-	-	11,739
FOUR MONTHS, . . .	85	7,417	15,000	9,431	7,157	4,919	3,328	73	6	47,424
Males, . . .	53	4,805	10,665	8,022	6,454	4,565	3,169	67	6	37,808
Females, . . .	32	2,612	4,335	1,409	703	354	167	6	-	9,618
FIVE MONTHS, . . .	37	2,926	4,997	3,026	2,490	1,601	1,151	17	2	16,247
Males, . . .	24	1,627	3,528	2,574	2,298	1,523	1,098	17	1	12,890
Females, . . .	13	1,099	1,469	452	192	78	53	-	1	3,357
SIX MONTHS, . . .	114	8,073	11,924	7,333	6,283	4,692	4,265	128	1	42,813
Males, . . .	78	5,244	8,310	5,927	5,460	4,195	3,999	121	1	33,335
Females, . . .	36	2,829	3,614	1,406	823	497	266	7	-	9,478
SEVEN MONTHS, . . .	13	1,369	1,775	970	834	628	537	11	1	6,138
Males, . . .	10	806	1,180	784	729	575	505	10	1	4,800
Females, . . .	3	563	595	186	105	53	32	1	-	1,538
EIGHT MONTHS, . . .	18	1,770	1,853	1,037	837	827	740	84	-	7,166
Males, . . .	12	1,108	1,200	805	743	738	697	32	-	5,335
Females, . . .	6	662	653	232	144	89	43	2	-	1,831
NINE MONTHS, . . .	27	1,520	1,357	673	642	520	566	15	-	5,320
Males, . . .	12	914	805	494	512	466	522	14	-	3,739
Females, . . .	15	606	552	179	130	54	44	1	-	1,581
TEN MONTHS, . . .	22	1,368	1,094	480	432	346	394	17	-	4,153
Males, . . .	14	774	697	325	353	296	368	16	-	2,843
Females, . . .	8	594	397	155	79	50	26	1	-	1,310
ELEVEN MONTHS, . . .	27	912	628	229	193	150	123	9	-	2,276
Males, . . .	13	510	386	175	155	125	116	8	-	1,488
Females, . . .	14	402	242	54	38	25	12	1	-	788
TWELVE MONTHS, . . .	-	55	191	103	92	139	222	20	-	822
Males, . . .	-	43	162	89	92	132	217	18	-	753
Females, . . .	-	12	29	14	-	7	5	2	-	69

From the table giving the unemployed for the State, we draw three tables of percentages, showing the distribution of the unemployed first by sex, second by number of months unemployed, and third by age periods. The first percentage table showing the distribution of the unemployed *by sex*, as regards age periods and number of months unemployed, follows:

SPECIAL SURVEY

Source: Rhode Island Commissioner of Industrial Statistics, Ninth Annual Report, 1896. (Providence: E. L. Freeman and Sons, State Printers, 1897).

Short Description: Report on strike activity in Rhode Island between 1886 and 1894.

Noteworthy Attributes: Information on the cause, duration and outcomes of all strikes in the state between 1886 and 1894.

OCCUPATION.	Locality.	Cause or Object.	Ordered by labor organization.		Establishment's involv'd.	Beginning—	Strikers re-employed or places filled by others.	
			Closed.	Not closed.			Date.	Days to date.
1886.								
<i>Building Trades.</i>								
Bricklayers and mason...	Providence...	For reduction of hours from 10 to 9 per day	yes.	18	1	May 17.	Apr. 1, '87.	319
1887.								
<i>Cotton Goods.</i>								
Male spinners.....	Cesterdale...	For increase of wages	no.	.....	1	Jan. 24.	Jan. 28, '87.	2
Weavers.....	Manville.....	Against obnoxious rules.....	no.	1	.....	June 12.	Aug. 22, '87.	66
Beamers.....	Thornton.....	For the reinstatement of discharged foreman.....	no.	.....	1	Oct. 17.	Oct. 24, '87.	7
<i>Metals and Metallic Goods.</i>								
Hornboars.....	Providence...	For increase of wages	yes.	.....	24	July 5.	July 6, '87.	1
1888.								
<i>Building Trades.</i>								
Masons.....	Newport.....	For reduction of hours from 10 to 9 per day....	yes.	.....	1	Apr. 16.	May 14, '88.	28
<i>Cotton Goods.</i>								
Velvet cutlers	Crompton.....	Against employment of imported workmen and for increase of wages	no.	.....	1	Jan. 22.	Feb. 8, '88.	16
Carders, spinners and weavers..	Crompton.....	For increase of wages of 10 per cent.....	no.	.....	1	Feb. 20.	Mar. 1, '88.	10
Weavers.....	Manville.....	Against reduction of wages.	no.	.....	1	May 7.	May 14, '88.	7
Beamers.....	Valley Falls..	Against change from day to piece work.....	no.	.....	1	July 30.	Aug. 6, '88.	7
<i>Metals and Metallic Goods.</i>								
Moulders, iron foundry.....	Pawtucket...	For reduction of hours.....	no.	.....	1	Feb. 27.	Mar. 9, '88.	11
<i>Woolen and Worsted Goods.</i>								
Weavers.....	Olneyville.....	For increase of wages.....	no.	.....	1	Mar. 12.	Mar. 12, '88.	1
Weavers.....	Woonsocket..	Against alleged excessive fines.....	no.	1	.....	Aug. 27.	Sep. 26, '88.	20
<i>Miscellaneous.</i>								
Laborers, building material yard	Providence...	For increase of wages from \$1.50 to \$2 per day.....	no.	.....	1	May 2.	May 4, '88.	2

STRIKES.

Succeeded ?	Employees.		Loss of employers.	Employees before strike.			Employees for whom strike was undertaken.			Strikers.			Employees thrown out of employment by strike.			New employees after strike.			Weekly working hours.		
	Wage loss.	Assistance.		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Brought from other places.	Before strike.	After strike.
no.	\$20,000	\$1,300	\$44,000	250	...	250	100	...	100	100	...	100	125	...	125	40	...	40	60	60	
no.	18	.....	.....	40	50	90	8	...	8	8	...	8	6	...	6	.....	.....	.....	60	60
no.	60,000	.....	50,000	800	730	1530	294	233	529	794	233	529	500	730	1230	.....	.....	.....	60	60
no.	60	.....	100	17	.....	17	1	.....	1	1	.....	1	1	.....	1	2	.....	2	60	60
(c)	100	.....	.....	73	.....	73	73	.....	73	73	.....	73	73	.....	73	18	.....	18	60	60
no.	1,800	.....	.....	17	.....	17	16	.....	16	16	.....	16	16	.....	16	13	.....	13	60	60
no.	180	.....	150	407	233	632	20	10	30	20	10	30	20	10	30	2	.....	2	60	60
no.	2,750	.....	1,500	407	770	1177	263	73	340	265	73	340	400	100	500	23	.....	23	60	60
no.	200	.....	.....	478	545	1023	50	...	50	50	...	50	50	...	50	.....	.....	.....	60	60
no.	240	240	250	500	30	...	30	30	...	30	30	...	30	13	13	15	60	60
no.	940	.....	.....	25	.....	25	8	...	8	8	...	8	12	.....	12	2	.....	2	60	60
no.	250	.....	150	437	233	660	44	8	52	44	8	52	143	23	200	.....	.....	.....	60	60
no.	11,000	.....	10,000	349	218	567	73	27	112	75	27	112	349	218	567	.....	.....	.....	60	60
no.	25	.....	.....	18	.....	18	14	.....	14	14	.....	14	14	.....	14	7	.....	7	60	60

c Succeeded in 24 establishments, failed in 10.

SPECIAL SURVEY

Source: New Jersey Bureau of Statistics of Labor and Industries, Twenty-sixth Annual Report, 1903.
(Somerville: The Unionist-Gazette Printing House, 1904).

Short Description: Report on "The Negro in Manufacturing and Mechanical Industries" in New Jersey in 1903.

Noteworthy Attributes: Survey of all the largest manufacturing establishments in the state. Published results for those employing black workmen include kind of skilled work done and whether equal wages are paid to negroes for the same work.

Comments of Commissioners:

[W]ill the managers of great industrial enterprises receive them into their shops and will the white mechanics who must always be greatly in the majority, consent to work with them; until that is settled in a manner favorable to the negro, industrial education will only fill his mind with delusive hopes which cannot be realized and make him discontented with the occupations he now follows, and in the pursuit of which he meets with little or no opposition on the part of the whites.

That this aversion to the negro and disinclination to collaborate with him exists among the whites there is no doubt, but there is also good reason to hope that as this dislike was based on the characteristics of the negro as he came fresh from chattel slavery, with but few human attributes beyond the form and speech of a man, it will weaken and finally disappear before a race transformed and humanized by the influence of education and the pursuit of industry [p. 165].

Number, Relative Proportion and Weekly Wages of Negro Workmen Employed in Eighty-three Manufacturing Establishments.

Office Number.	Industry.	Total Number of Persons Employed.	Negro Workmen.		Total number of Negroes.	Percent- age of		Wages Paid per Week to Negroes.	Are equal wages paid to Negroes for the same work? Yes-No.
			Number who are Skilled.	Kind of Skilled Work Done.		Number whose work does not require skill.	Whites			Negroes
1	Manufacture of brick and terra cotta.....	230	69	Brick machine operators and firemen,	138	40.	60.	\$9-\$10.50	Yes
2	Manufacture of brick and terra cotta.....	185	2	Engineers,	20	89.2	10.8	10.00	Yes
3	Manufacture of brick and terra cotta.....	55	6	Brick burners and captains of sailing craft,	45	12.2	87.8	9.25	Yes
4	Manufacture of brick and terra cotta.....	50	10	.....	10	50.	50.	9	Yes
5	Manufacture of brick and terra cotta.....	30	30	Setting brick in kilns.....	30	60.	40.	8.90	Yes
6	Manufacture of brick and terra cotta.....	65	20	Sand molds and set brick.....	23	23.4	76.6	8	Yes
7	Manufacture of brick and terra cotta.....	125	2	.....	4	3.2	96.8	10.50	Yes
8	Manufacture of brick and terra cotta.....	65	10	Not reported,	1	1.5	98.5	7.50	Yes
9	Manufacture of brick and terra cotta.....	250	1	Locomotive engineers,	10	4.0	96.0	8.10	Yes
10	Manufacture of brick and terra cotta.....	115	4	.....	1	0.9	99.1	12.00	Yes
11	Manufacture of brick and terra cotta.....	138	4	.....	4	2.9	97.1	12.00	Yes
12	Manufacture of brick and terra cotta.....	30	5	Clay machine operators,	5	16.7	83.3	7.50	Yes
13	Manufacture of brick and terra cotta.....	50	7	.....	7	14.0	86.0	9.00	Yes
14	Manufacture of brick and terra cotta.....	65	6	.....	3	4.6	95.4	10.00	Yes
15	Manufacture of brick and terra cotta.....	175	6	.....	6	3.4	96.6	10.50	No
16	Fruit and vegetable canning.....	36	40	.....	40	100.	0.	10.50	Yes
17	Carriage and wagon building.....	26	2	.....	2	7.7	92.3	8.00	Yes
18	Chemical manufacture,	268	3	Firemen and running extractors.....	3	1.1	98.9	9.00	Yes
19	Chemical manufacture,	700	2	.....	2	0.3	99.7	10.00	Yes
20	Chemical manufacture,	903	2	.....	2	0.2	99.8	9.00	Yes
21	Chemical manufacture,	903	1	.....	1	0.1	99.9	10.00	Yes
22	Cotton dyeing,	733	1	Runs washing machine.....	1	0.1	99.9	6.00	Yes

APPENDIX D
SAMPLE PAGES FROM STATE BUREAU OF LABOR STATISTIC
TIME SERIES

TIME SERIES

Source: Massachusetts Bureau of Statistics, Annual Statistics of Manufactures, Ninth Report, 1894.
(Boston: Wright and Potter Printing, State Printers, 1895).

Short Description: Report on the condition of manufactures, by industry, including number of establishments, average number of wage earners, total wages, classified weekly wages, and days in operation.

Noteworthy Attributes: Consistent information is provided annually from 1890 through 1920.

A Description of the Annual Series by Albert Rees:

Beginning in 1908, the industry classification used is identical with that of the census. The data for 1909 and 1914 are identical with the census data, but provide, in addition, the number of days in operation. There are no omissions of industries or employees.

Before 1908 the industry classification is not identical with that of the census but is rather similar, and there were a few difficulties in combining series into census industries. The coverage of census employment is not complete, but is generally very high. Through 1905, two sets of data are provided for each year, one covering the same establishments included in the preceding year, one covering the establishments included in the following year.*

* Albert Rees, Real Wages in Manufacturing, 1890-1914. (Princeton: Princeton University Press, 1961: Appendix A, pp. 131-132.

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