

STATE OF NEW YORK
DEPARTMENT OF LABOR
Elmer F. Andrews, Industrial Commissioner

INTERIM REPORT
ON
PARTIAL UNEMPLOYMENT

SUBMITTED TO THE INDUSTRIAL COMMISSIONER

by the

COMMITTEE ON PARTIAL UNEMPLOYMENT

Marion B. Folsom
George Meany
Herman A. Gray, *Chairman*

February 1, 1938

Price 75 Cents

DIVISION OF PLACEMENT AND UNEMPLOYMENT INSURANCE

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STATE OF NEW YORK
DEPARTMENT OF LABOR
ALBANY

New York Office, No. 80 Centre Street

New York, February 1, 1938

I have the honor to submit herewith the report and recommendation of the Committee on Partial Unemployment appointed by me in accordance with Section 527, Article 18, of the Labor Law of the State of New York. In support of its recommendation the Committee submits a study of this problem prepared by the Division of Placement and Unemployment Insurance of the Department of Labor.

In view of the heavy costs which partial unemployment benefits might add to the drain on the fund and the danger of serious depletion of the unemployment insurance reserves which might attend such a large extension of coverage at this time—unless additional revenues were provided—and in view of our unsatisfactory knowledge as to the exact nature and extent of partial unemployment and the need for further experience and study before undertaking to provide for its compensation, I therefore recommend that no payments for partial unemployment in New York State be made this year, but that authority be provided to begin such payments under an appropriate plan as soon as feasible after April 1, 1939.

I concur in the recommendation of the Committee that the law be amended to postpone the due date of a final report until February 1, 1939.

Respectfully,



ELMER F. ANDREWS,
Industrial Commissioner

LETTER OF TRANSMITTAL
to the
INDUSTRIAL COMMISSIONER
from the
COMMITTEE ON PARTIAL UNEMPLOYMENT

New York, N. Y.
February 1, 1938

To the Hon. Elmer F. Andrews
Industrial Commissioner of the State of New York
80 Centre Street
New York, N. Y.

Sir:

The Committee on Partial Unemployment, appointed by you pursuant to Section 527 of the Labor Law, submits herewith as its Interim Report a study prepared at the request of and in cooperation with the Committee by the Bureau of Research and Statistics of the Division of Placement and Unemployment Insurance.

This document is concerned mainly with a description of the nature and scope of the problem of partial unemployment in its many ramifications. No attempt has been made to reach final conclusions. It should be clearly understood that any conclusion found in the report is based on the incomplete information now available and is therefore wholly tentative and subject to change in the light of fuller knowledge and additional study.

Partial unemployment is found to be much more serious, in terms of possible drain on the fund, than was at first supposed. While we appreciate that a fully rounded system of unemployment insurance may require provision for partial unemployment, it appears to us unwise to embark at this time on a specific plan in advance of the accumulation and analysis of further experience and information. The Committee therefore makes no recommendation other than that for continued study.

The above conclusion is enforced by the following considerations:

- (1) Partial unemployment is as pervasive and widespread as total unemployment and occasions losses in wages which may be comparable in magnitude with the losses caused by total unemployment.
- (2) The devising of equitable and practicable provisions affording protection against partial unemployment and their administration are more complex and difficult tasks than that of framing and putting into operation the provisions covering total unemployment.

- (3) It would be unsafe to introduce partial unemployment benefits into the present system before the adequacy of the fund has been tested, since the available evidence indicates that a larger fund may be required if partial unemployment is to be compensated.

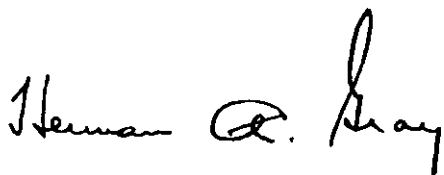
The Interim Report analyzes sample data relating to industries representing approximately one-third of aggregate annual payrolls in New York State during 1936. The results of the study indicate that several moderately liberal plans of partial unemployment benefits, described and analyzed in the report, might have cost almost half of the annual contributions of these industries to the Unemployment Insurance Fund at the present 3 per cent rate during that year.

The report presents no data concerning the possible cost of partial unemployment benefits for industries representing two-thirds of the payrolls in the State not covered by the data analyzed. If the illustrative results of the sample study were found to obtain for the remaining industries of the State, however, the cost of compensating partial unemployment in the degree indicated would have left for total unemployment benefits only about one-half of the aggregate 3 per cent contributed by employers. In recent Wisconsin experience one-half of the individual benefit payments provided compensation for partial unemployment, these payments aggregating about one-third of the total disbursements for all types of claims.

The Committee directs your attention to the fact that the data analyzed for New York State and the figures for Wisconsin relate to a period of expanding employment. To what level the cost of partial unemployment benefits would rise in periods of marked employment decline cannot now be estimated, but it is probable that they would be considerably higher than for 1936. On the basis of the data available no approximation of total costs and no forecasts can now be made.

For the above reasons the Committee recommends an amendment postponing the due date of a Final Report on Partial Unemployment until February 1, 1939.

Very respectfully submitted,



Chairman (for the Committee)

MARION B. FOLSOM
GEORGE MEANY

TERMS OF REFERENCE

Section 527 of Article 18 of the New York State Labor Law, as inserted by Chapter 468 of the Laws of 1935, and amended in 1937, provides as follows:

Study of Partial Unemployment. The commissioner shall appoint a committee of not more than three persons who shall make a study of partial unemployment, in whatever form it may occur and shall make recommendations to the commissioner in respect to provision for the inclusion of benefits for partial unemployment under this article, and to compensate for loss of earnings resulting from such partial unemployment. The commissioner shall transmit the report and recommendations of the committee with his comments thereon and recommendations to the legislature, not later than the first of February, nineteen hundred thirty-eight.

The amendments of 1937 included the introduction of the following phrases in Section 527:

“. . . . in whatever form it may occur”

and

“. . . . and to compensate for loss of earnings resulting from such partial unemployment.”

PREFACE

This interim report deals with the problem of partial unemployment in the specific legislative and administrative setting provided by the Unemployment Insurance Law (Article 18, Labor Law) of the State of New York. The report has been prepared for the Committee on Partial Unemployment by the Bureau of Research and Statistics, Division of Placement and Unemployment Insurance. As an interim document this study is a progress report on a continuing investigation conducted by the Bureau for the purpose of establishing the required basis for specific plans and a legislative proposal for partial unemployment insurance benefits in this State.

It is hoped that the present report, and more particularly the further investigation under way, will throw needed light on the character, extent, and incidence of this insidious form of unemployment which presents so many difficulties from the statistical and economic, as well as the administrative, point of view.

Any definition of partial unemployment for statistical purposes is necessarily arbitrary. This point, stressed in the report, deserves special emphasis for readers who are primarily interested in the economic nature and scope of the hazard rather than in considerations relating to the methods of coping with it under the framework of social insurance. The present study has been prepared for the specific purpose defined by law, namely, that of implementing a plan of partial unemployment insurance. For administrative reasons under the New York law and procedure it is necessary to use the *week* as the line of demarcation between total and partial unemployment. Thus, full unemployment of one or more weeks in duration is defined as total unemployment. Conversely, partial or fractional unemployment occurs only within spells of lesser duration than a week.

It is recognized that a statistical study of time lost, measured in man hours or man days in relation to full-time employment on a monthly or an annual basis, would yield results of intrinsic value in measuring partial unemployment as an economic phenomenon. If the materials required for such a study were accessible, however, it would still be necessary to determine what fraction of partial unemployment could be compensated under a given administrative plan.

The definitions used in this study require close examination—especially the distinctions between “fractional,” “partial,” and “part-total” unemployment. The distinctions represented by these terms are essential and sound, although the terminology of the subject is not a matter of settled usage.

One purpose of this Interim Report is to invite and stimulate critical discussion of approach and method in advance of final conclusions and recommendations. It is hoped, therefore, that those who read or use this report will submit comments, questions, and suggestions to the Bureau.

The detailed work of this study has been planned, supervised and carried through by Karel Ficek, with the active advice and collaboration of other members of the Bureau's research staff. The charts were prepared by Louis Yaphé.

MEREDITH B. GIVENS

Director of Research and Statistics
Division of Placement and Unemployment Insurance

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INTERIM REPORT ON PARTIAL UNEMPLOYMENT

SECTION 1. CONCLUSIONS AND RECOMMENDATION

The interim report on partial unemployment submitted herewith is not implemented at this time with definite recommendations for a specific plan of insurance against this hazard. In view of the technical and administrative difficulties of the problem and the need for further analysis, it is recommended that the study of partial unemployment be extended for at least another year.

The investigation made thus far has disclosed the following facts:

- (1) Partial unemployment is, even in normal times, as wide-spread as short-term total unemployment, and occasions losses in wages comparable in magnitude with losses caused by total unemployment;
- (2) The administration of partial unemployment insurance is a much more complicated undertaking than the administration of insurance against total unemployment; and
- (3) The cost of even a modest plan of partial unemployment insurance would amount to more than the New York unemployment insurance fund as at present constituted could carry over a period of good and bad years.

It would seem reasonable that partially unemployed workers should be compensated for the losses which are inflicted upon them through no fault of their own. But more knowledge must be acquired and analyzed before a specific scheme to meet this industrial hazard may with confidence be brought to the attention of the Legislature. It would ill serve the people of this State if a hastily devised system of partial unemployment insurance were now foisted upon them, to the accompaniment of administrative friction and the possible exhaustion of the fund through the payment of partial unemployment benefits, resulting in inability to provide for total unemployment benefits at a time of the greatest need.

Social insurance requires the mastery of extensive administrative detail. Following the first year's experience with the payment of ordinary benefits for full time or total unemployment it will be easier to estimate accurately the sustaining power of the fund and to envisage the administrative techniques required for a sound approach to partial unemployment coverage. The temporary exclusion of partial unemployment benefits until the initial attack on the administrative problem is over is in line with the spirit of the American unemployment compensation laws, which have generally resorted to exclusions of various types in order to hold the administrative task within reasonable bounds at the outset.

It is proposed to devote the coming year to the preparation of a more complete report on partial unemployment and partial unemployment benefits, which would cover the following principal points:

- (1) Definitive estimates of the cost of partial unemployment insurance;
- (2) The possibilities of devising a practical and equitable plan for partial unemployment insurance;
- (3) Proposals concerning the ways and means of meeting the cost.

Accordingly, it is recommended that Section 527 of the Unemployment Insurance Law, quoted above, be amended to postpone the date of transmittal of the final report on partial unemployment until February first, nineteen hundred thirty-nine.

SECTION 2. PARTIAL UNEMPLOYMENT

The problem of partial unemployment is a complicated one. Some of the difficulties are inherent in the subject; others are due merely to the use of inexact definitions of the various aspects of this industrial hazard. It is probably safer, at the outset of a study, to risk an appearance of pedantry rather than to begin by using words which carry different connotations to different minds. The following paragraphs are devoted to a few definitions and to a discussion of their relevance.

a. Definitions

For present purposes the concept of partial unemployment is a derivative of the Unemployment Insurance Law. The Law as it now stands provides¹ compensation only for unemployment when it lasts for one entire week or a multiple thereof. Loss of employment falling short of one week is a fractional loss—in the eye of the Law—for which no benefits are to be paid. The line of division is quite arbitrary, and could have been drawn elsewhere. In Great Britain, for example, compensable unemployment is measured in days. If unemployment were to be compensated in terms of hours, the problem of partial unemployment would, for our present purposes, cease to exist.

In this study we must accept the concept embodied in the Law and say that *total unemployment* means only loss of employment which has occurred uninterruptedly for an entire week. The purpose of partial unemployment insurance would thus be to extend insurance coverage to that fraction of the field of exposure which total unemployment provisions do not reach, i.e., to unemployment which is less than a full week in duration.

¹ See Sections 504, 505, 507, 510 (2). In Section 502 (10), where "total unemployment" is defined, the time-span involved is not mentioned.

This discussion assumes that the system of total unemployment insurance set up in the Law of New York State is to be accepted in its present form, and that the investigation of partial unemployment properly proceeds from that starting point. There would be little point in requiring an investigation if, as an easy solution of the problem of partial unemployment insurance, it were proposed that the Law be amended so as to substitute the word "day" or the word "hour" wherever the expression "week" is to be found in the original text of the Law.

From the text of the Law (Sections 502 (9), 507, and 527) it appears to have been the intention of the Legislature that total unemployment benefits should be based on earnings and that partial unemployment should also be compensated on the basis of lost earnings. Since these benefit provisions are defined with reference to a concept of a full-time wage, full-time earnings and loss of earnings become the relevant standards of measurement.

The implications of this main premise will emerge as the various forms of compensable fractional unemployment are analyzed in detail. It is convenient to use *fractional unemployment* as the inclusive term at this stage, because it is necessary to distinguish two variants of fractional unemployment, viz., partial unemployment and part-total unemployment, each of which may require different treatment at the hands of the Legislature and of the unemployment insurance administration. The definitions required in order to distinguish various possible forms of fractional unemployment involve a distinction between "full-time" and "part-time" jobs on the one hand, and between "regular" and "casual" jobs on the other.²

Partial unemployment will be defined as a partial loss of employment in a normally full-time job. It should be noted that this definition excludes, for the purposes of the present inquiry, all consideration of the problem of regular part-time employment and of casual part-time employment.

A part-time job is one which does not normally occupy a worker's full time, as judged with reference to the customary standards of what constitutes full-time work. Part-time employment may be voluntary or it may be involuntary.

Voluntary part-time employment is entirely outside the orbit of the present inquiry. It presents no problem at this time inasmuch as the Law has already made adequate provision for the coverage of voluntary part-time workers.³ The net result of the provision

² The rotating week — a week of employment regularly followed by a week of lay-off — is sometimes regarded as a form of partial unemployment. However, this device for spreading work had best be classed, for the purpose of this study, as a species of recurrent total unemployment. It is taken care of as such under the Unemployment Insurance Law as now constituted.

³ Section 509 of the Unemployment Insurance Law provides as follows: "*Part-time employment.* An employee who for reasons personal to himself is unable or unwilling to work usual full-time and who customarily works less than the full-time prevailing in his place of employment shall register as a short-time worker in such manner as the commissioner shall prescribe. The time which such employee normally works in any calendar week shall be deemed his week of full-time employment. The commissioner shall fix the minimum benefits for such employee in lieu of the minimum amounts provided in subdivision one of section five hundred five."

is to suit the legal definition of what constitutes full-time employment to the realities characterizing the individual case of each voluntary part-time worker.

Involuntary part-time employment gives rise to *part-total unemployment*. It is a moot question whether the term "part-total unemployment," coined recently in Wisconsin, should cover involuntary part-time employment in both regular and casual part-time jobs, or only in the latter. Since it is not the purpose of this Report to analyze part-total unemployment, the designation will be used in its widest general sense. The distinction is, however, of importance. Casual employment is employment which arises out of a job the duration of which is comparatively brief. A casual worker is hired to fill a casual job. There is no pretense, at the time of hiring, that the job is permanent in any sense of the word. A part-time job may be a casual job or it may be a permanent one, but it does not occupy a worker's full time. A casual job while it lasts may occupy a worker's full time or only a fraction of his full time, but it is not permanent.

This study is limited to partial unemployment, as defined above. The hazard of partial unemployment is quite definite. A full-time worker, holding down a full-time job, anticipates an uninterrupted stream of income. When his employer is forced to curtail output, the worker suffers a loss through no fault of his own. It makes little difference whether he is laid off or put on short time; either form of unemployment runs counter to his reasonable expectations.

Casual employment, on the other hand, is an entirely different phenomenon. The casual worker does not expect steady employment when he is hired to do a particular job, although he may expect a steady succession of jobs yielding a certain amount of income. A spell of unemployment, if it is not too severe, does not mar his reasonable expectation; in varying degree he is accustomed to being unemployed between jobs. However, a full-time worker, who, while totally unemployed, seeks to obtain odd jobs, is in another category; his case falls under the heading of part-total unemployment.

Part-total unemployment is not partial unemployment. The worker who is partially unemployed continues to hold to his (normally) full-time job. He is not seeking other work. The worker who is part-totally unemployed is in a far more desperate state. Two possibilities are to be distinguished. The first is the case of a worker who was employed in a full-time job, became totally unemployed, and secured, while totally unemployed, part-time work or various odd jobs to do. The second is the situation of a worker who never had a full-time job but who was able to derive full-time employment out of several part-time jobs, until he was reduced to less than full-time employment by the loss of some of them. The first-mentioned worker should be taken care of in connection with total unemployment insurance; he is clearly a candidate for full-time work, and he is (or should be) looking

for a job while on part-time. The second worker is seeking additional part-time employment of a permanent character. His problem falls neither under the heading of total unemployment nor under the heading of partial unemployment; his is a plain case of part-total unemployment.

Such distinctions are of considerable practical importance, as will be seen from the various points taken up below. To illustrate how fundamental they are to questions of policy in unemployment insurance, the various considerations relating to benefits may be mentioned. The principles on which the New York Law is established suggest that the partially unemployed worker should receive, in benefits, the difference between his earnings and his total unemployment benefit rate. But if total unemployment benefit recipients are to be encouraged to prefer work to unemployment, something more than this should be granted to the totally unemployed worker who has sought and accepted a *temporary part-time job*.⁴ It is not intended here to pass judgment on the merits of such a policy.

b. Causes of Partial Unemployment

Fluctuations in employment reflect mainly the effects of forces which operate on the markets for goods and services. There are, first of all, the secular movements which characterize the long-term growth and decay of industries; there are the cyclical swings which produce a succession of good and bad years; there are the seasonal variations which mark the difference between rush and slack weeks or months of the year; and there are irregular interruptions or swellings in orders which no business analyst can foresee.

These dynamic movements, over which the average firm has little or no control, set the limits within which its labor policy may operate. There are also, of course, other kinds of limits, but the directives emanating from markets appear to be of primary importance. Leaving, then, all other limits out of the discussion, some general observations may be made on the basis of the analysis briefly sketched above.

Labor policy has the narrowest field for action when changes in orders are due to random or capricious causes. Under the impact of such developments short-time work or overtime work are

⁴ The argument is as follows: The purpose of partial unemployment insurance is to bridge the arbitrary distinction between a spell of unemployment falling short of one week and a spell of unemployment in excess of one week. Therefore, the partially and the totally unemployed worker should be put on an equal footing. Each one should be made to bear a loss in wages up to the statutory limit of his protection. There is no point in paying a premium to the partially unemployed worker and thus discriminating against the totally unemployed one. The partially unemployed worker is in a preferential position in any event; he is continuing to hold down a (normally) full-time job, he is not going to quit it so long as he has any expectations of improvement in working conditions. But the totally unemployed worker should be given an inducement to seek odd jobs or temporary part-time employment; it would not be fair to him if his benefits and earnings from temporary part-time jobs combined amounted to only his total unemployment benefit rate—the same as for other unemployed workers who made no effort to obtain a temporary part-time job. The fundamental difference between partial unemployment and part-total unemployment is the worker's reaction toward his future employment status. The partially unemployed worker has a full-time job; the part-totally unemployed worker is without one.

the devices readiest at hand. It takes time and foresight to reduce the working force as well as to build it up. Irregular changes defy forecasting as well as planning. It is safe to say that industries most affected by abrupt fluctuations in demand are especially susceptible to partial unemployment. That is one of the reasons why, in New York State, the needle trades stand at the top of the groups chronically subject to this industrial hazard.⁵

Seasonal employments come very close to being irregular employments. A business man can see only a little way ahead. He may know in January that trade will pick up in the Spring, but whether the pick-up will occur in the last week of February or the first week of March, or even whether it will come in March or in April, he never can tell for certain. The limits of choice in his employment policy are fairly narrow. A lull in business will often catch him unawares. Unless his slack season is very long, he will be inclined to keep his organization intact and spread the work, daily hoping for an up-turn which would enable him to resume full-time operations. Partial unemployment is a logical concomitant of seasonal variations in trade.

Building construction, the manufacture of apparel, of furniture, of paper boxes, of boots and shoes, motor trucking, retail trade in apparel and in such merchandise as fuel and ice—these are all seasonal industries par excellence. Consequently, the incidence of partial unemployment in them is high. But year-round hotels (non-seasonal by definition), drug stores, and, especially, milk dealers, operate on a regular schedule day in and day out. They are almost entirely exempt from the vicissitudes of partial unemployment.⁶

Thus both irregular and seasonal variations in the demand for goods and services bring partial unemployment in their train. It is otherwise with cyclical variations. There management has a comparatively free choice between two alternatives: to reduce staffs or to spread the work. The second alternative is more tempting in the first stages of an economic depression, because these first stages are not always recognizable as such. The first impact of a depression comes either in the guise of an especially severe seasonal down-swing, or in the guise of an apparently irregular drying-up of orders. Business men are confused; they do not know whether to plan for a curtailment of operations or whether to carry on by spreading work, or even by producing for stock when that is possible. In most cases, partial unemployment characterizes the initial phase of an incipient depression.

As an economic depression deepens, partial unemployment tends to vie in importance with total unemployment. Two economic principles of labor policy interact to decide the issue between the two types of unemployment. On the one hand, spreading the

⁵ Cf. p. 62, *infra*.

⁶ Cf. p. 62, *infra*.

work is more cumbersome and costly than reducing the working force; on the other hand, spreading the work helps to maintain the loyalty of the workers, their habits of workmanship, their techniques of productive cooperation, and their morale. Reducing the working force destroys not only the physical labor organization of a going concern but also its *esprit de corps*. But while these two economic principles strive against each other, the issue is in many cases decided outside the economic field. The exigencies of technology may wholly preclude the use of the work-spreading device in some employments; the pressure of public opinion may command it in others. These factors—the technological and the social—cannot be discussed in general terms. A survey of individual industries is necessary to evaluate each of them in its particular setting.

While cyclical fluctuations are productive of both partial and total unemployment, secular developments are associated in theory mostly with total unemployment. These are the developments which permanently modify the character of industry. When jobs are eliminated through the introduction of new methods of production, or when an industry has outlived its usefulness, there is no point in spreading the remnants of work among the workers formerly fully employed. Good social policy would dictate that the workers who are no longer needed should be released immediately and should receive total unemployment benefits while seeking jobs in other industries. But even here partial unemployment does in practice play an appreciable role. A secular change is not always recognized as such, being at first mistaken for a transient cyclical recession. And even when it is known for what it is, workers may be unwilling to leave the occupation which has served them for many years, and their employers may facilitate their efforts to remain in the industry. Anthracite mining is one instance of this kind which immediately comes to mind.

In conclusion, it is worthwhile to point out that partial unemployment is the first line of defense in most branches of business against the vagaries of the market, and that total unemployment results only when the situation is desperate. Except in years of decided economic depression, therefore, the problem of partial unemployment is, on the whole, fully comparable with total unemployment in its sweep, if it does not actually surpass it in importance.

c. Effects of Partial Unemployment

Workers overwhelmingly prefer partial unemployment to total unemployment, and unemployment insurance probably will not diminish this preference, even if unemployment benefits are granted only to totally unemployed workers. A partially unemployed worker has a job; a totally unemployed worker may have only the promise of one and, in the majority of cases, not even that. To have a normally full-time job is the main thing. The

worker's industrial status is relatively secure if he has a job, even though he is not working full-time at it. He can manage to shift for a while on the contents of a reduced pay envelope. A partially unemployed worker may not have much in the way of savings, but he can pay for some of the things he needs in cash, and he can obtain others on credit.

But, for all that, partial unemployment is a serious obstacle to the enjoyment of a decent standard of living. In 1929 there were 6,905,000 families in the United States whose incomes, in that prosperous year, amounted to \$1,500-\$2,500, and whose savings amounted to \$918,000,000, or less than \$134 per family. There were, at that time, 7,434,000 families whose incomes fell short of \$1,500, and who saved nothing at all.⁷ Among these are the people who suffer, some of them chronically, from partial unemployment. Their normal budget is limited almost wholly to the basic items of food, shelter, and clothing; no margin for savings is left. If they are unemployed, they have nothing to fall back upon and very little room in which to retrench. In that case, the only remedy, in time of partial unemployment, is a trip to the pawn broker or some other merchant dealing in credit.

d. Scope of the Problem

The question should here be asked, how serious is this condition? How many workers are affected by partial unemployment? how often? for what periods? and how much do they lose by it? These questions are discussed at length in the special studies accompanying this report, and in the statistical appendix. It is pointed out that only tentative answers are at present available, and that further research in this field is urgently needed. But however tentative these answers may be so far as the exact measurement of partial unemployment is concerned, they leave no doubt as to the approximate magnitude of this industrial hazard.

Surveys made by the New York State Department of Labor in 1921-1927 indicate that from one-tenth to one-quarter of factory employment is regularly on part-time; the Buffalo and Syracuse surveys suggest that in some industries, in a period of economic depression, more than 50 per cent of all employed workers are on short-time schedules. The Federal Census of Business discovered in 1935 (a year of economic recovery) that part-time workers in many lines of business comprise more than one-tenth of all employed workers and in some lines more than one-third. In January 1936, in the state of Rhode Island, close to seven per cent of all employed persons lacked full-time work. In New York State in November 1937, there were probably more than 500,000 partially unemployed workers seeking additional work.

Regardless of defects in the present measurement of partial unemployment, this condition is known to exist; and something should be done about it. The policies and methods of partial

⁷ Leven, Maurice and others, *America's Capacity to Consume* (1934)

unemployment insurance may provide a means of dealing with it. They will be discussed in the following section.

SECTION 3. POLICY AND ADMINISTRATION

Questions of policy and of administration must be taken up jointly. The broader principles of policy are usually embodied in law, while the methods of administration are left at least in part to the discretion of the unemployment insurance authorities. But of the two tests of policy which involve the questions, is it equitable? and can it be administered? the second is of equal importance with the first. This fact has been largely neglected in the partial unemployment insurance legislation passed in the United States since 1935. For that reason the discussion in this section must be somewhat critical in tenor. Unfortunately, the difficulties of administering partial unemployment insurance are so great that no solution worthy of the attention of the Legislature has been found to date. The matter requires further study. In the meantime, experience in other states is beginning to accumulate, and soon it will be possible to draw some conclusions from practice rather than from theory.

It was shown in the preceding section that partial unemployment insurance is a logical counterpart of total unemployment insurance. The absence of a system of partial unemployment insurance results not only in a discrimination against partially unemployed, but creates inequities in the labor market. Some employers may endeavor to convert partial unemployment into total unemployment; others may adopt the contrary course. Various avenues of adjustment of operating time will be explored, in the interest of wage earners or of the employer, and it is doubtful whether all of them will lead to socially desirable results. The experience of Great Britain illustrates the way in which plant operations may be adjusted to meet a statutory definition of "unemployment" to the advantage of insured workers.⁸

Issues of policy and administration revolve mainly around the points of eligibility for benefits, rates of benefits, and waiting period requirements. The statutory approach (Section 527) is predicated on a comparison of actual earnings with the full-time wage. When earnings fall below the full-time wage, there is a *prima facie* presumption of partial unemployment.⁹ Two addi-

⁸ Cf. Appendix B.

⁹ The obvious objection that this approach apparently covers also decreases in earnings attributable to wage-cuts is academically correct but practically trivial. Only partial unemployment exceeding a certain degree (e. g., 50 per cent of the full-time wage) is compensable; and it is very unlikely that wages could be cut by as much as 50 per cent in a space of time not exceeding five calendar quarters. This however, makes it advisable to define eligibility in such a manner that no question of confusion with wage-cuts could arise. The Federal Coordinator of Transportation suggested (cf. *Unemployment Compensation for Transportation Employees*, Washington, D. C., March, 1936) that partial unemployment be defined as a loss in wages exceeding 20 per cent of the full-time wage. This low percentage is feasible in the railroad industry where wages are uniform and where any wage-cuts are a matter of public record. It would not be feasible in most of the industries represented in New York State because wages are neither so stable nor made a matter of public record.

tional tests, however, are needed to render partial unemployment compensable: the degree of incidence (i.e., the percentage of full-time earnings which marks the point at which partial benefits will be paid) and the test of availability for full-time employment.¹⁰ This latter test is meant to establish the fact that the partial unemployment is involuntary. Inasmuch as it is concerned principally with the technique of reporting, it should be discussed in that connection. The degree of incidence is logically connected with the definition of the partial unemployment benefit rate which in turn depends on the definition of the full-time weekly wage.

The definition of eligibility may, for example, run as follows: An insured worker is eligible if he earns less than 120 per cent of his total unemployment benefit rate. The complementary definition of partial unemployment benefits will then read: The benefits equal the difference between the total unemployment benefit rate and five-sixths of the earnings in the week for which benefits are claimed; or partial unemployment benefits plus earnings should equal the total unemployment benefit rate plus one-sixth of the earnings.¹¹ This is one of the definitions approved by the Social Security Board.

It was mentioned earlier¹² that considerations of equity have suggested that partially unemployed workers be put on a footing of equality with totally unemployed workers, and it was deduced from this that the partial unemployment benefit rate should then be defined as the difference between actual earnings in a week of partial unemployment and the total unemployment benefit rate. This deduction, however, differs from current practice. Only California, Indiana, and Wisconsin, among the 44 states and territories which adopted some system of partial unemployment compensation, have defined the benefit rate in this manner. All other states allow the partially unemployed worker more than the difference between his earnings and one-half of his statutory full-time wage. The premium amounts in some states to one dollar, in others to two dollars, in still others to five-sixths of the difference between earnings and 120 per cent of the total unemployment benefit rate.¹³

There are two possible explanations of this divergence in policy. It may be that the legislators felt that one week was not the proper unit for assessing the comparative status of the partially unemployed worker and the totally unemployed worker. The argument would appear to have been somewhat as follows: Take two workers, one of whom is totally unemployed for three months in the year, while the other is on half pay for six months, earning exactly the equivalent of his total unemployment rate. Both may lose exactly the same number of dollars, on an annual basis. Yet the

¹⁰ Other conditions, such as previous employment in an insured occupation earnings amounting to at least eighteen times the total unemployment benefit rate, etc., require no special mention in this section.

¹¹ In the legislation of three states (Alabama, Idaho, and New Mexico), however, the eligibility requirement is inconsistent with the definition of the benefit rate. Cf. Appendix C.

¹² Cf. p. 5, *supra*.

¹³ Cf. Appendix C.

totally unemployed worker will get benefits, and the partially unemployed worker would get none unless a premium were provided. In the end, therefore, the worker totally unemployed part of the year will realize a higher annual income, counting both earnings and benefits, than the partially unemployed worker. This argument is hardly in harmony with the spirit of an unemployment insurance law which considers weekly rather than net annual losses caused by unemployment. Furthermore, it is probable that this was not the consideration which prevailed when additions to partial unemployment benefits in the form of a premium over total unemployment benefits were decided upon. It is more likely that the premium was written into the 41 laws because the legislators were not advised concerning the fundamental difference between partial unemployment and part-total unemployment.¹⁴

But whatever the difference between the benefit (and hence eligibility) definitions of the several state laws may be, they all agree in making benefits proportional to actual earnings in weeks of partial unemployment and to the statutory full-time weekly wage. This is the chief potential source of administrative difficulties. The worker or his employer cannot report partial unemployment unless the full-time weekly wage is known; and in most states, including New York, the full-time weekly wage is not computed unless a worker reports that he is unemployed. There is a vicious short circuit here which it is difficult to break.

Two solutions of this problem deserve special notice. In Germany, partial unemployment is not compensable unless a majority of the workers employed by a firm are affected, and advance notice of the facts is required before the partial unemployment occurs. The whole matter, including the determination and payment of partial unemployment benefits, is handled by the employer. Benefits for partial unemployment are checked and authorized by the local employment office before the short-time schedule goes into effect.¹⁵ The worker is entirely out of the administrative picture. He is not responsible for notifying the local employment office nor need he hold himself available for other work during his spell of partial unemployment. In Wisconsin, each worker's full-time weekly wage is determined in advance of the beginning of his benefit year; so that each worker knows on January 1 what his full-time weekly wages are supposed to be all through the coming calendar year, and thus is in a position to tell at the end of any week whether or not he was partially unemployed in the course of that week.

It should be noted that the worker cannot know at the beginning of any week whether he is going to be partially unemployed in that week unless his employer is able to disclose his operating

¹⁴ Cf. pp. 3-5, *supra*. Many state laws followed the Draft Bills of the Social Security Board. The distinctions which were not drawn in the Draft Bills are clearly drawn in a confidential memorandum, U. S. Social Security Board, Bureau of Unemployment Compensation, Benefit Procedures Section, *Benefit payment procedures; Memorandum II; Benefits for partial unemployment* (November 1937).

¹⁵ Cf. Appendix B.

schedule to him. In some lines of business this is possible. In other lines of business, however, the employer himself may not know whether or not he can provide full-time work for a whole week in advance. This is true especially in the industries affected by irregular fluctuations.¹⁶ These are precisely the industries which are most susceptible to the hazard of partial unemployment; and these are industries notably represented in New York State.¹⁷ Thus even if a worker knew his statutory full-time weekly wage (which he does not know under the present system of total unemployment insurance in New York State), he would still be unable to claim partial unemployment benefits at the beginning of a week of partial unemployment.

The New York State Unemployment Insurance Law provides in part as follows:

“No benefits shall be payable to any employee who refuses to accept an offer of employment for which he is reasonably fitted by training and experience . . .”;¹⁸ “no employee shall be entitled to benefits until he has suffered total unemployment for a period of three full weeks after first giving notice of unemployment.”¹⁹

These provisions are an essential part of the Law. They are similar to those of the laws of other states, and of the Draft Bills. They are perfectly suited to the administration of total unemployment benefits. But it is difficult to visualize how they may be brought to bear effectively in the administration of partial unemployment benefits.

Consider the dissimilarities of two cases. A totally unemployed worker registers with the placement office at the beginning of the spell of unemployment, which he intends to be counted as constituting a portion of his waiting period, or for which he intends to claim benefits. His availability for work may be tested by offering him a job before the end of the first week. But a partially unemployed worker may not be able to tell whether he is going to be underemployed in any week; consequently, he cannot claim waiting period privileges or benefits for that week until it is over. How then should the placement office make sure that he had been available for full employment? There is even doubt of the legality of paying partial unemployment benefits under these circumstances, if the Law provides that the notification of unemployment must precede the beginning of the waiting period.

There is a ready solution for the availability test. A ruling could be made that a partially unemployed worker is ipso facto available for full-time employment—in the concern which engaged his services. The evidence of his former full-time status (embodied in the employer's regular reports to the unemployment insurance admin-

¹⁶ Cf. pp. 5-7, *supra*.

¹⁷ Cf. p. 60, *infra*.

¹⁸ New York State Unemployment Insurance Law, § 506

¹⁹ New York State Unemployment Insurance Law, § 504

istration) could be corroborated by a statement obtained from the employer, testifying that the worker had been on short time through no fault of his own. But the further test, that of offering a partially unemployed worker full-time employment in some other concern, is practically out of the question. By the time the offer is made, the worker may be back on full time; and the contrary could not be proved (except in a limited number of cases) until the earnings of that week had been determined—which could not be done before its end. It would be futile then to deny the worker partial unemployment benefits for that week because he had refused the offer of a full-time job. Moreover, the employment office could never guarantee that the full-time job it was offering him would remain full-time work for any length of time; especially if it was the same kind of job, i.e., a job “for which he is reasonably fitted by training and experience”—the only kind which he is bound to accept. This form of the availability test, therefore, appears to be quite worthless in the case of partial unemployment.

Similarly, there is a ready solution of the waiting period requirement. There is some ground for waiving it altogether. The waiting period performs two functions: it enables the employment office to place the name of the applicant on the live register, and it reduces the financial liability of the insurance fund. The first function is not readily applicable to partial unemployment insurance, as has been shown above; and the second function refers to the applicant's record for a whole year. In this connection, the argument described previously²⁰ has some validity. Limiting partial unemployment benefits to the difference between earnings and the weekly total unemployment benefit rate equalizes the position of the partially unemployed worker with that of the totally unemployed worker for the space of one week, but it does not equalize it for the space of one year, assuming that one of the two workers was partially unemployed only, but for a considerable period, while the other was totally unemployed, but for a shorter period of time. The annual incomes (counting both earnings and benefits) would differ, and the totally unemployed worker would have an advantage. This may be illustrated by the case of two workers each earning \$1,200 a year when fully employed. The first worker becomes partially unemployed for a period of six months, earning \$40 a month, or \$240 for the half year, and \$600 in the other half of the year, making a total of \$840. He receives in addition partial unemployment benefits of \$10 a month for six months, bringing his total year's income to \$900. The second worker becomes totally unemployed for a period of three months. He thus receives \$900 in wages and, after a three-week waiting period, \$111.50 in benefits, bringing his total annual income to \$1,011.50. It is doubtful whether this advantage would be resented by the partially unemployed worker, who would probably not want to change places with the jobless individual at any price. Still, there is a certain

²⁰ Cf. p. 10, *supra*.

disparity here, and since it emerges only when the year as a whole is taken into account, it would probably be equitable to adjust it by requiring a longer waiting period for total than for partial unemployment benefits.

A waiting period for partial unemployment is of no appreciable administrative advantage. The administration does not need to be notified before the week of partial unemployment occurs, because, as supposed in this argument, the worker's total unemployment benefit rate must somehow already have been known, and his partial unemployment benefit rate for any particular week of partial unemployment is determinable only after the claim for that particular week has been filed. The administrative process could not be speeded up by a single second as a consequence of any waiting period requirement, because each week's partial unemployment benefit rate is different and must be computed separately. Delays in payment of partial unemployment benefits are unavoidable.

The only useful attribute of the waiting period for partial unemployment benefits lies in the fact that it reduces the cost of partial unemployment insurance. Actuarial considerations, therefore, should be allowed to decide this point. Only two states, California and Michigan, provide no waiting period for partial unemployment benefits. In Wisconsin, three weeks of waiting are required, for actuarial reasons. The waiting period was formerly only one week but this was found to occasion too many claims on the employer reserves.

Some states make no mention of this subject in their unemployment insurance laws: But in most states the recommendations of the Draft Bills have been followed: there is only one two-week waiting period for both partial and total unemployment benefits, and two weeks of partial unemployment are regarded as equivalent to one week of total unemployment.²¹

It is not clear whether this provision means that weeks of partial unemployment may constitute a waiting period for total unemployment benefits *and* that weeks of total unemployment may form a waiting period for partial unemployment benefits, or whether it means that only weeks of partial unemployment count as required waiting for partial unemployment benefits, and that the separate waiting period for partial unemployment compensation is twice the length of that for total unemployment compensation. Whatever the legal interpretations of this clause may be, the theory that waiting period requirements for both partial and total unemployment benefits should consist interchangeably of weeks of total and of partial unemployment equated by means of the 1:2 ratio deserves close scrutiny.

This theory leads to an attitude which it is difficult to justify on the triple grounds of equity, administrative expediency, and actuarial soundness of partial unemployment insurance. So far

²¹ Cf. Appendix C. In Minnesota, three weeks of partial unemployment count as one week of total unemployment.

as equity goes, one week of total unemployment is not equivalent to two weeks of partial unemployment. There is nothing in the a priori logic of the situation which would allow one to suppose that a partially unemployed worker will lose, on the average, one-half of his full-time wage in each week of partial unemployment. One state, Ohio, resolved this difficulty by providing that the *waiting period* for partial unemployment is the number of weeks in which earnings equivalent to three weeks' full-time wages were lost by reason of partial unemployment. This makes the waiting period quite elastic. Some workers may have to wait only four weeks, others as many as thirty weeks or more. But even this method is not an equitable one. The waiting period is to be regarded as a portion of the worker's benefit year, and partially unemployed workers should be contrasted with totally unemployed workers, from the point of view of relative waiting period requirements, on a yearly basis.

But perhaps the equity consideration rests on the analysis of the case of a worker affected both by partial and by total unemployment, one coming after the other. The argument may be stated as follows: Suppose a worker has been partially unemployed for six weeks, and that that is his waiting period for partial unemployment benefits. Suppose he now becomes totally unemployed. Is it then equitable that he be required to wait three more weeks before he becomes eligible for total unemployment benefits? Surely not; but the argument proceeds from the conclusion which it is meant to reach. If there were no waiting period for partial unemployment benefits, the worker in question would have received, during the first six weeks, fifty per cent of his full-time wage per week (counting both earnings and benefits), and he would have been as justly treated in being thereafter asked to wait three weeks for total unemployment benefits as a worker who had actually earned fifty per cent of his full-time weekly wage in the preceding six weeks, and who, therefore, had not been eligible for partial unemployment benefits.

On the other hand, if a prescribed waiting period for partial unemployment benefits is necessary because of actuarial considerations, then it ought to be made independent of the waiting period for total unemployment benefits. It would then represent part of the cost of the additional protection granted by the law, and it is just that such a cost be borne exclusively by those who are meant to enjoy the additional benefits and only in conjunction with such benefits.

Compounding the total and partial unemployment waiting periods by making them interchangeable is bound to lead to administrative difficulties. The constant splicing of the total with the partial unemployment records will require recurrent calculation. On mathematical principles of probability, there is an even chance that the partial unemployment part of the waiting period will consist of an odd number of weeks, thus necessitating either a

fundamental change in total unemployment benefit procedures (the counting of half-weeks of total unemployment) or, what is worse, favoring either the odd-number week workers or the even-number week workers at the expense of the other half of the partially unemployed group.

Actuarially, the compounding of the weeks of partial with the weeks of total unemployment is absolutely unsound. It increases the cost of total unemployment insurance in a capricious manner. Six weeks of partial unemployment occasioning a slight fractional loss validate all subsequent weeks of total unemployment involving a 50 per cent compensable loss of wages. It is more likely that earnings in weeks of partial unemployment will exceed fifty per cent of the total unemployment benefit rate than that they will fall below this proportion. Hence, the drain on the fund caused solely by compounding waiting periods will be greatly in excess of the drain consequent upon the payment of partial unemployment benefits conditioned upon separate waiting periods. This point is discussed and illustrated elsewhere.²²

Many administrative difficulties connected with partial unemployment insurance need not be discussed in an interim report. For example, there is the question of the load. Partial unemployment benefits are apt to involve the issuance of a great number of very small benefit checks. These are minor items, and excellent solutions for them have been proposed.²³ The cardinal questions of eligibility and of benefits overshadow all such administrative details. Some apparently reasonable answers to these questions have been proposed in this chapter; but all of these were based on the assumption that (a) the employer notifies the insurance administration in advance of an impending curtailment of working time, so that total unemployment benefit rates for all workers may be computed, or (b) that each worker is notified, at the beginning of his benefit year, what his statutory full-time weekly wage in that benefit year is going to be. Neither one of these two assumptions is realistic, so far as the economic pattern of New York State and her system of unemployment insurance are concerned. Pending a solution of this fundamental difficulty, no plan of partial unemployment insurance for New York State can be put forward.

It was pointed out above that part-total unemployment differs in various respects from partial unemployment as defined for the purposes of this study. From the administrative point of view, part-total unemployment presents few difficulties, since it may be handled in conjunction with total unemployment, as suggested by the Social Security Board. For this reason it is not discussed in this Report.

SECTION 4. RESULTS OF SPECIAL STUDIES

The preceding section introduced the subject of the cost of partial unemployment benefits. It has been indicated that some

²² Cf. pp. 31-37, *infra*.

²³ Cf. Appendix C.

points of policy and administration depend for their solution on actuarial considerations. The next step is to find a tentative answer to the question: How much might a plan of partial unemployment insurance cost?

Partial unemployment insurance extends the coverage of the law and hence also increases the payments from the fund. It is not evident from the published documents covering the deliberations of the Committee on Economic Security²⁴ how far the cost of partial unemployment benefits was taken into account when the basic three per cent payroll tax rate was determined. The character of the statistical material available for analysis by that Committee was such that it seems hardly possible that these costs could have been adequately represented in their preliminary estimates, and the recent Wisconsin experience points in the same direction.

In order to clarify this question information has been sought first from the publicly recorded statistics of part-time employment. Such statistics are meagre, however, and, what is worse, they do not yield a significant actuarial estimate. The story of this thorough but fruitless search is contained in the first section of the accompanying summary of special studies and in the statistical appendix. It was decided, therefore, to seek required data from the files of the Division of Placement and Unemployment Insurance.

The Division receives (aside from monthly contribution reports which do not refer to individual employees) quarterly reports on the total earnings of each employee and the highest earnings received in any single pay period in the calendar quarter. These reports throw no light on the experience of the workers in the other pay periods in which earnings may or may not have varied in proportion to the full time wage, and hence they are of little value for a study of partial unemployment.

In 1936, however, employers had the option of filing with the Division either a monthly payroll summary on Form UI-C1 or a copy of the actual payroll for each month. A number of employers submitted actual payrolls, and hence the files of the Division contain a collection of valuable detailed duplicate payroll material. Among the industries covered, the book and job printing industry is represented by a sufficient number of complete annual payrolls, covering a sufficient number of insured workers, to justify statistical and actuarial investigation. This material has been analyzed by means of a type study in order to develop proper methods of measuring the incidence and cost of partial unemployment. Incidentally, this study furnished a bench mark which has aided in the utilization of far less adequate material for other industries (monthly summary of payrolls for 1936, Form UI-C1) in an attempt to arrive at a crude and highly tentative estimate of the minimum cost of partial unemployment insurance.

Payrolls of 30 book and job printers in New York City were analyzed in detail. They covered the employment experience of

²⁴ U. S. Committee on Economic Security, *Social Security in America* (1937)

1,737 insured individuals whose combined records represented an average annual employment of 690 workers.

Four possible definitions of eligibility for partial unemployment insurance were considered when the earnings' records of these employees were studied. Of the four, the most generous is that proposed by the Federal Coordinator of Transportation. This plan provides for the payment of partial unemployment benefits at the rate of five-eighths of the difference between the worker's part-time earnings and 80 per cent of his full-time monthly earnings. The recognized *degree of compensable partial unemployment* is thus 80 per cent of the full-time wage, the non-compensable margin being fixed at 20 per cent.

Another definition is that current in the states of Wisconsin, California, Indiana, and Connecticut, where a worker is eligible for partial unemployment benefits only if he earns less than his total unemployment benefit rate. This corresponds to a 50 per cent degree of compensable partial unemployment. The other two definitions which were used fall between these two extremes and correspond to the 70 and 60 per cent degree, respectively. That is, they pre-suppose a 30 or a 40 per cent non-compensable margin of loss, as compared with the full-time wage. The 60 per cent definition of eligibility is the one which has been most favored in American legislation to date.

One way of measuring partial unemployment is to relate the number of partially unemployed workers to the number of employed workers. On the average throughout the year 1936 over 12 per cent of all employed workers were, in any given unit of time (week or month), partially unemployed in the sense that they were earning less than eighty per cent of their full-time wage. But the actual proportion of partially unemployed workers varied from week to week and from month to month. Monthly changes as reflected in the records which were studied are summarized in Table I, which shows the index of employment, the percentage of partially unemployed workers, and the index of partial unemployment which is based on this percentage.

Table I suggests that there is a tendency for employment to increase from January to a pre-Easter peak in March; that this is followed by a gradual decline till a low point is reached in August; that there is pick-up after Labor Day and a busy pre-holiday season in December. Partial unemployment tends to increase as total employment declines, and vice versa. There is an indication that partial unemployment in the book and job printing industry may be associated with a prospective increase in orders rather than an actual slowing-up of business. Men seem to have been carried on the payroll at part-time in February in anticipation of the March trade; and some men were hired in September and put on part-time so that they would be available for full-time work in October.

TABLE I

Monthly Variation in the Incidence of Partial Unemployment, Book and Job Printing Industry, New York City, 1936

| Month | Index of Employment Average 1936 = 100 | Per Cent of the Number of Partially Unem- ployed Workers to the Total Number of Employed Workers | Index of Partial Unemployment Average 1936 = 100 |
|-----------|--|--|---|
| January | 97 | 11.2 | 91 |
| February | 99 | 13.2 | 107 |
| March | 106 | 8.5 | 69 |
| April | 102 | 11.6 | 94 |
| May | 101 | 13.1 | 107 |
| June | 98 | 13.8 | 112 |
| July | 98 | 14.1 | 115 |
| August | 94 | 15.4 | 125 |
| September | 97 | 17.6 | 143 |
| October | 97 | 11.2 | 91 |
| November | 104 | 11.5 | 94 |
| December | 105 | 8.7 | 71 |
| Average | 100 | 12.3 | 100 |

Another way of measuring partial unemployment is to relate the number of workers *becoming* partially unemployed, at any time in the course of one year (if only for a single week) to the average number of workers exposed to this hazard throughout the entire year. This measure, the quotient of the number affected by the average number exposed, is the *rate of partial unemployment*. Applying this measure, it was found that out of 100 insured workers constantly exposed to the hazard of partial unemployment throughout the year 1936 in the book and job industry in New York City, 57 experienced at least one week in which their earnings fell by a greater amount than 20 per cent of their full-time weekly wage; 49 experienced, in at least one week, a loss exceeding 30 per cent; 41 experienced a loss in excess of 40 per cent; and 36 experienced a loss such that they earned, in at least one week, less than their total unemployment benefit rate.

The rate of partial unemployment measures only the *extent* of the incidence of this hazard. The *average duration* of partial unemployment is also important. This is stated in terms of the average number of weeks partially lost per worker affected. It was found that those workers who experienced a loss in weekly wages exceeding 20 per cent of their full-time weekly wage at some time in the course of 1936 suffered such a loss for an average of 11.3 weeks; that those who experienced a wage loss in excess of 30 per cent suffered such a loss for an average of 7.5 weeks; that those with a wage loss in excess of 40 per cent suffered such a loss for an average of 5.4 weeks; and that those who experienced a loss such that their earnings fell below their total unemployment benefit rate suffered such a loss for an average of 3.9 weeks.

It is also important to know how much was lost, in dollars and cents, in the weeks of partial unemployment. The loss is com-

puted by subtracting the actual earnings in such weeks from each worker's full-time weekly wage. Such a loss per week of partial unemployment is a measure of the *average intensity* of the incidence of this hazard. It was found that the average full-time weekly wage of the workers affected by partial unemployment varied from \$26.72 to \$26.87. In those weeks of partial unemployment in which earnings fell by more than 20 per cent of the full-time weekly wage, the average loss amounted to \$10.86 per week; in those weeks in which earnings fell by more than 30 per cent, the average loss was \$13.17; in those weeks in which earnings fell by more than 40 per cent, the loss stood at \$15.69; and in those weeks in which earnings fell short of the average total unemployment benefit rate, the loss reached \$17.98.

The aforementioned figures describing the three cardinal dimensions of partial unemployment, viz., extent, duration, and intensity, are summarized in Table II below.

TABLE II
Incidence of Partial Unemployment, Book and Job Printing Industry, New York City, 1936

| Dimensions of Partial Unemployment | Compensable Degree of Partial Unemployment, Measured in Per Cent of the Full-Time Wage | | | |
|---|--|-------|-------|-------|
| | 80 | 70 | 60 | 50 |
| Extent: The annual rate of partial unemployment | .571 | .494 | .410 | .361 |
| Duration: Average number of weeks partially lost, per worker affected | 11.3 | 7.5 | 5.4 | 3.9 |
| Intensity: Average loss per week of partial unemployment in dollars and cents | 10.86 | 13.17 | 15.69 | 17.98 |

From the foregoing table it may be seen, for example, that for a 50 per cent definition of eligibility about 36 per cent of the workers experienced partial unemployment on the average in about four weeks and that in such weeks they lost, on the average, about \$18.00 per week.

In order to utilize the foregoing data on partial unemployment in the book and job printing industry for an actuarial estimate of the cost of partial unemployment insurance, it is necessary to convert them into adjusted tables showing average benefits, expected number of benefit payments, and the relationships between contributions and benefits. Such detailed tables were prepared and are presented in a Special Study following this Report. The rates of benefits were computed by a formula which states that the benefit rate is equal to five-eighths of the difference between actual earnings and 80 per cent of the full-time weekly wage, when 80 per cent is the degree of incidence which rules the definition of compensable partial unemployment; that the benefit rate is equal to five-sevenths of the difference between earnings and 70 per cent

of the full-time weekly wage, under the 70 per cent degree; that it is equal to five-sixths of the difference between earnings and 60 per cent of the full-time weekly wage, under the 60 per cent degree; and that the rate is equal to five-fifths, or the whole difference, between actual earnings and the total unemployment benefit rate, when the 50 per cent degree is the standard.

These four mutually exclusive benefit formulae correspond to the four possible definitions of eligibility for partial unemployment benefits which were discussed above and which characterize, in a general way, the four different plans of partial unemployment insurance blocking out the scope of the present actuarial inquiry. Many detailed plans, however, are contained in this general framework, because various waiting period requirements may be specified and combined with various flat maximum benefit payment provisions. All such combinations, with the cost and effect of each, may be found in the actuarial tables implementing the Special Studies accompanying this Report. These tables make it possible to calculate the partial unemployment benefits which the average worker in the book and job printing industry in New York City might have received had any one of the many conceivable plans of partial unemployment insurance been in operation in 1936. For example, he might have received, upon becoming partially unemployed, benefits of \$3.44 a week for a period of 11.05 weeks under the most liberal plan (80 per cent degree, no waiting period, 50-week maximum). This would have brought him a sum of \$38.01. Or he might have received under the least liberal plan (50 per cent degree, 6-week waiting period, 16-week maximum) an insurance income of \$4.55 a week for a period of .83 weeks. This would have given him a total yearly benefit of \$3.78 in compensation of the partial unemployment he had experienced.

From the information on the number of weeks of benefits and the weekly benefit rate per average worker, it is easy to establish the total amount of benefits to be paid. This amount when related to the annual insured payroll yields an estimate of the cost of partial unemployment insurance. Such estimates for some of the possible plans of partial unemployment insurance are presented in Table III.

This table suggests that the most liberal plan of partial unemployment insurance for the book and job printing industry in New York City would have cost, in 1936, 1.3 per cent of the insured payroll, or about 43 per cent of the total contributions received from that industry (at the rate of 3 per cent of the annual insured payroll). The least liberal plan would have cost .1 per cent.

These estimates are based on the supposition that a separate waiting period would be served for partial unemployment benefits. However, most states (and the Draft Bill of the Social Security Board) appear to provide for an interchangeable uniform waiting period for both partial and total unemployment, one week of total unemployment being reckoned as equivalent to two weeks of partial unemployment.

TABLE III

Cost of Partial Unemployment Insurance (Per Cent of Annual Insured Payroll) Book and Job Printing Industry, New York City, 1936

| Waiting Period (Weeks) | Maximum Number of Weeks of Benefits | | |
|--|-------------------------------------|-----|-----|
| | 16 | 32 | 50 |
| Degree of Incidence: 80 Per Cent Average Benefit Rate: \$3.44 | | | |
| None | 1.0 | 1.2 | 1.3 |
| One | .9 | 1.1 | 1.2 |
| Two | .8 | 1.0 | 1.1 |
| Three | .7 | .9 | 1.0 |
| Four | .7 | .9 | .9 |
| Five | .6 | .8 | .8 |
| Six | .5 | .7 | .7 |
| Degree of Incidence: 70 Per Cent Average Benefit Rate: \$3.68 | | | |
| None | .7 | .8 | .8 |
| One | .6 | .7 | .7 |
| Two | .5 | .6 | .6 |
| Three | .4 | .5 | .5 |
| Four | .4 | .5 | .5 |
| Five | .3 | .4 | .4 |
| Six | .3 | .4 | .4 |
| Degree of Incidence: 60 Per Cent Average Benefit Rate: \$4.13 | | | |
| None | .5 | .5 | .5 |
| One | .4 | .4 | .4 |
| Two | .3 | .4 | .4 |
| Three | .3 | .3 | .3 |
| Four | .2 | .2 | .2 |
| Five | .2 | .2 | .2 |
| Six | .2 | .2 | .2 |
| Degree of Incidence: 50 Per Cent Average Benefit Rate: \$4.55 | | | |
| None | .4 | .4 | .4 |
| One | .3 | .3 | .3 |
| Two | .2 | .2 | .2 |
| Three | .2 | .2 | .2 |
| Four | .1 | .1 | .1 |
| Five | .1 | .1 | .1 |
| Six | .1 | .1 | .1 |

It is obvious that such a system of partial unemployment insurance adds to the cost of protection against unemployment more than the cost of partial unemployment benefits. An analysis of the material for the book and job printing industry for 1936 (see Special Studies section of this Report) shows that this additional cost may equal from 25 to 200 per cent of the cost of partial unemployment benefits, depending upon the specific plan adopted.

The results of the detailed analysis of the book and job printing industry were used as a bench mark in deriving from the less adequate statistical material covering a number of other industries a highly tentative minimum estimate of the incidence and cost of partial unemployment insurance in these industries in a year of recovery such as 1936. Thirty-three other industries were submitted to this type of analysis, yielding results typified by the data

shown in Table IV. (For complete statement of results, see Special Studies section of this Report.) The costs are calculated for a middle-of-the-way plan from the standpoint of liberality of benefits. This estimate applies to a plan providing for partial unemployment benefits after a separate waiting period of two weeks, the benefits to compensate for the difference between five-sixths of the actual earnings and 50 per cent of the full-time weekly wage for not more than 16 weeks in the year. It applies also to a plan providing for partial unemployment benefits after a separate waiting period of one week, the benefits to compensate for the difference between actual earnings and 50 per cent of the full-time weekly wages for an unlimited number of weeks in the year.

TABLE IV

Estimated Cost of Partial Unemployment Insurance in
Per Cent of Insured Payroll, Selected Industries, New
York State, 1936

| Industry | Cost in Per Cent of Insured Payroll |
|--|--|
| Building construction, general contractors | 2.2 |
| Knit goods (outerwear), manufacturing | 4.0 |
| Women's coats, suits and skirts, manufacturing | 3.9 |
| Women's hats, manufacturing | 6.5 |
| Boots and shoes, manufacturing | 4.4 |
| Motor trucking for hire | 1.5 |
| Women's ready-to-wear stores | 1.0 |
| Millinery stores | 2.1 |
| Barber shops and beauty parlors | .7 |
| Motion picture theatres | .5 |

The statistics obtained by this method should not be taken at their face value; the limitations of the materials used and of the necessarily crude methods followed are such as to warrant extreme caution in quoting the estimates for other than illustrative purposes.

The tentative cost figures for each of these industries as well as the cost figure for the book and job printing industry may, however, be combined into an average which indicates the approximate order of magnitude of the cost of partial unemployment insurance for industries accounting for about one-third of the total annual payroll in the State. The cost of partial unemployment insurance in a year like 1936 appears to be in excess of 1.3 per cent of the annual payroll, thus approximating one-half of the employers' contributions provided under the present Law.

However tentative such an estimate may be, one conclusion is inescapable: the cost of even a very modest plan of partial unemployment insurance is bound to be heavy. If in a relatively good year partial unemployment insurance in 34 of the most important industries might have cost at least 1.3 per cent of the insured payroll, what might it not cost in a bad year? Is there not a danger that partial unemployment benefits might, over a period of years, equal the total of employers contributions to the fund?

The question cannot yet be answered. But the fact that all available information points rather toward a positive answer than away from it makes it imperative to insist upon a postponement of partial unemployment insurance legislation in New York State until a definite answer to it has been found.

SECTION 5. PROGRAM OF PROPOSED RESEARCH

The methodological inquiry briefly summarized above has led to the conclusion that the proper unit of investigation in the study of the incidence of partial unemployment is a sufficient sample covering the records of individual workers attached to payrolls of firms engaged in the same line of business for the space of at least one year. An analysis of such a sample for the book and job printing industry is presented in this Report. The objective of future research should be to extend this type of study to other important homogeneous groups of industry.

Since time and resources are necessarily limited, the program of research should be so organized that the most important industries may be covered with a minimum of effort. The first step is to prepare a list of industries to be taken into account, from which some will be selected for detailed analysis. The number chosen will depend, first, on the accuracy required for the final estimates, and, second, on the time and facilities at the disposal of the investigators. From the detailed analysis it is expected that an estimate will be developed defining the incidence of partial unemployment in fields which could not be analyzed in detail in the preliminary study and a unified comprehensive picture of the problem of partial unemployment in New York State can then be presented. This investigation is required to provide the needed basis for designing an extension of the existing system of unemployment insurance to enable the insurance system to cope with the hazard of partial unemployment.

Considerable progress has already been made in the first stage of the research plan. Since September 1937 an investigation of the contents of the Employers' Initial Statement files of the metropolitan office of the Division of Placement and Unemployment Insurance has been under way. Schemes of industrial classification were devised, the strength of representation in each industry was noted, and a list containing 87 industries was prepared. These are believed to be homogeneous industries, prominently represented in the metropolitan area and important from the point of view of a study of partial unemployment. This list must be supplemented by a number of important industries adequately representative of upstate areas.

The selection of industries for detailed analysis will be governed mainly by the available information as to the relative incidence of partial unemployment in each. This information will be derived from an analysis of the employers' monthly contribution reports (Form UI-C1) by methods similar to those used in the study of

the 34 groups discussed in the preceding section. In this investigation average weekly hours will be considered in addition to average weekly wages. This, it is hoped, will make it possible to correlate the loss of time with the loss of earnings and to isolate the instances and conditions under which the two types of loss diverge from each other.

The preliminary investigation based on the Division's file of monthly contribution reports will assist in the selection of industries for detailed analysis and will furnish the necessary background for a study of the industries selected. It is essential to know something of the structure of each industry in terms of size and location of plant; it is also necessary to determine how far the different groups of establishments in each industry may be susceptible to seasonal and irregular fluctuations in employment. Such information yields both a test of representativeness of the selected sample and a gauge of the limits within which general interpretations and conclusions may be drawn.

The next and most important phase of the research program is concerned with the intensive study of the records of individual workers attached to the payrolls of employers in a selected number of industries. The best obtainable materials are employers' payrolls covering the space of at least one year. Unfortunately the Division does not possess adequate records of this type except for the book and job printing industry and a few other industries much less homogeneous than book and job printing. The reports required by the Division for administrative purposes are not sufficient for this study, since the only employment report dealing with individual workers (the so-called quarterly payroll report, Form UI-C54) does not present a consecutive record of earnings by weeks or other pay periods.

For the above reasons it is proposed to ask representative employers to furnish in confidence copies of payroll records for the years 1936 and 1937. Some firms may be able to furnish the required information in partially processed form. Such firms will be requested to fill out a questionnaire covering the following essential points:

1. A list of all payrolls (referred to hereafter as "selected payrolls") which at any time in 1936 and 1937 included employees who received in at least one pay period a wage amounting to less than 80 per cent of their full-time wage. The list should furnish a description of each such payroll. The full-time wages used as standards of comparison with actual earnings will be calculated in accordance with the definition prescribed by the New York State Unemployment Insurance Law.
2. The number of employees on each selected payroll and their total compensation for each pay period in 1936 and 1937.
3. The number of employees, of those covered under point 2, who had remained with the concern for at least

fourteen consecutive weeks. This number should be given as of each pay period in 1936 and 1937.

4. The social security account numbers (or names) of those workers who were included in the totals covered under point 3, and who had experienced, at any time in the course of the years 1936 and 1937, earnings falling short of 80 per cent of their statutory full-time wage. These workers will be referred to as "selected workers."

5. An excerpt from the record of each selected worker, showing

- (a) total earnings received in each calendar quarter of 1936 and 1937;
- (b) dates of all accessions to and separations from the payroll;
- (c) highest earnings per pay period in each calendar quarter of 1936 and 1937;
- (d) dates of all weeks in which earnings fell short of 80 per cent of the worker's full-time wage and the actual earnings in those weeks.

The effort required for this investigation is an indispensable prerequisite to an adequate study of the incidence of partial unemployment and of the cost of partial unemployment insurance. The cooperating employers as well as the community at large will be fully repaid for this effort by the provision of a sound factual basis for a system of partial unemployment insurance which will meet the real needs of the situation.

The inauguration of partial unemployment benefits is comparable in difficulty and importance with the task of initiating the insurance features of the existing scheme of placement and unemployment insurance. Partial unemployment is one of the persistent "blind spots" in our current economic and statistical picture of labor and employment. We cannot afford to plunge into costly experiments without adequate forethought. The cost of the needed inquiry will be small indeed if it can facilitate the sound launching of partial unemployment insurance and the avoidance of unnecessary and expensive economic and administrative errors. Many times the cost of a fairly adequate preliminary investigation will be spent in hasty studies concurrent with actual beginnings of a system of partial unemployment benefits, if the need for careful forethought is not recognized and provided for at this time.

While this investigation is under way attention will be paid to the current unemployment insurance experience in New York State and in other states. It is hoped that the present study and the experience of other states with partial unemployment may facilitate the creation of an equitable and workable system of partial unemployment benefits.

SPECIAL STUDIES

SECTION 1. THE MEASUREMENT OF PARTIAL UNEMPLOYMENT

The logical procedure in a statistical inquiry is to begin by surveying the field and noting how much has already been accomplished. Thereupon it becomes possible to formulate the scope of further research and to determine methods to be used. A survey of published data disclosed the fact that relatively little is known concerning the incidence of partial unemployment; and that, in any case, an actuarial inquiry into the nature of this hazard must adopt, as its starting point, the definitions of compensable partial unemployment found in American unemployment compensation legislation, especially those connected with the concept of the statutory full-time weekly wage.

a. Survey of Published Data

The study of partial unemployment in the United States dates back to the first post-war depression. The President's Conference on Unemployment, which met in Washington in September 1921, found that practically nothing was known concerning the nature and incidence of partial unemployment. And the Committee on Unemployment and Business Cycles—appointed by Secretary of Commerce Herbert Hoover, Chairman of the Conference—to consider the underlying causes of recurrent depressions, could quote only a few statistical estimates of partial unemployment, and reached the following conclusion:

“We have little enough information on cyclical unemployment. On under-employment there is even less. What fragmentary data do exist are almost entirely discontinuous—the by-products of surveys. Yet it seems a simple enough matter, along with returns for the number employed or unemployed, to get continuing monthly reports giving the number partially employed.”¹

The State of New York was the first state to take steps to secure the information the lack of which was deplored at the September 1921 meeting of the President's Conference. The New York State Department of Labor made a detailed survey of partial unemployment in New York State factories in December 1921. The results were published in the *Industrial Bulletin*² and were later quoted by the Committee on Unemployment and Business Cycles.³ This survey was repeated in June 1922, June and December 1923, June and December 1924, and in June 1927. Had this

¹ Conference on Unemployment, Washington, D. C., 1921. *Business Cycles and Unemployment*. New York (1923) p. 76 f.

² *Industrial Bulletin*, January and February, 1922, p. 67

³ *Business Cycles and Unemployment*, p. 71

periodic survey not been abandoned, the task of this report would have been made much easier, and some of the conclusions sketched here would have been much more clear-cut.⁴

It is significant that when, in 1928-1929, a thoroughgoing inventory of the economic well-being of the United States was taken by the Committee on Recent Economic Changes of the President's Conference on Unemployment, only a single page of the final report of 950 pages was devoted to the problem of partial unemployment. On that page, an excerpt from the statistics of per capita full-time hours and the average per capita hours actually worked (compiled by the National Industrial Conference Board) was given and it was concluded that

"The averages for all industries unquestionably give the impression of greater stability than was to have been expected . . ."⁵

The world economic depression again focused attention on the problem. Partial unemployment became in 1930 and subsequent years more widespread in the United States than it had ever been before. Curiously enough, this form of unemployment was in many places regarded not as hazard but as a palliative of a greater disaster, that of total unemployment. Yet quantitative measurements were lacking. The State of New York did, indeed, break this new ground with its Buffalo and Syracuse surveys⁶, but these stood almost isolated. The Committee on Economic Security, reporting in 1934 to the President of the United States, had to admit that

"Information on partial or under-employment is even more fragmentary than for total unemployment. The few data which have been collected provide little definite information about part-time unemployment, other than a general substantiation of the commonplace observation that there is a considerable volume of part-time work in 'normal' times, and that this volume increases materially in depression years.

"Ideally, it would be desirable to know (1) the number of part-time workers; (2) the proportion of full-time worked by part-time workers; (3) the proportion of total full-time man-hours lost through part-time employment; (4) the incidence of part-time employment by industries. Detailed information of this character is available for only four cities in the country—Columbus, Buffalo, Syracuse, and Philadelphia. Virtually no information exists about part-time work in the country as a whole."⁷

⁴ For tables setting forth the results of this periodic survey, see pp. 68-69.

⁵ *Recent Economic Changes in the United States*, New York, 1929, p. 466

⁶ New York State Department of Labor. *Special Bulletins 179 and 173*

⁷ U. S. Committee on Economic Security, *Social Security in America*, Washington (1937) p. 64

From the published record it appears that the Committee on Economic Security did not, in its actuarial estimates of the cost of unemployment insurance, leave much room for the cost of partial unemployment benefits. It determined, first, the gross cost of total unemployment insurance, and then raised the total sum by 2 per cent—which indicates that, in the opinion of the Committee, the cost of partial unemployment insurance should stand, on the average, somewhere in the neighborhood of one-twentieth of one per cent of the insured workers' incomes.⁸ The committee justified this low estimate by pointing out that

“An analysis of part-time work (see p. 64)⁹ showed that in the present unemployment situation a certain group was employed at less than 50 per cent full-time work. Possibly 5 per cent of the current working force may have been working less than 50 per cent of its time for 2 or 3 years. If they are working less than 50 per cent of their time, workers cannot qualify for more than 5 or 6 weeks of benefits by the assumed rule which allows 1 week of benefits to 4 weeks of covered employment. In normal years the proportion of such part-time workers is probably similar. Some extra benefits will be drawn under this provision. The addition to cost has been placed at . . . +2 (per cent).”¹⁰

This estimate was based on inadequate statistical materials and on an incomplete analysis of the problem of eligibility for partial unemployment benefits. A worker cannot qualify for partial unemployment benefits unless he had been fully employed in the past; which means that he will be entitled to more than six weeks of benefits.¹¹

The United States Bureau of the Census attempted to estimate the extent of part-time employment in 1930.¹² Its estimates were based on the report of “days worked last week” by persons having a job but on lay-off without pay. In 1929, 1933 and 1935, however, the procedure of counting conjointly both full-time employment and part-time employment was followed in some fields of the Census of Business.¹³ The results of this census present the first comprehensive statistics of part-time employment in the United States.

The Federal Census of Partial Employment, Unemployment, and Occupations, taken in November 1937 represents the first na-

⁸ *Op. cit.*, p. 419. However, on p. 86 sub (5) this increase is erroneously referred to in the text as “savings.”

⁹ See footnote 7, above.

¹⁰ *Op. cit.*, p. 419.

¹¹ The contingency mark-up provided by the committee (cf. *op. cit.*, p. 420-421) was not intended to cover the cost of partial unemployment benefits.

¹² U. S. Department of Commerce, Bureau of the Census, *Fifteenth Census of the United States 1930*, “Unemployment,” vol. II, General Report, pp. 355-360.

¹³ See Appendix A, p. 71.

tionwide attempt to ascertain the volume and characteristics of partial unemployment in this country. Unfortunately the serious limitations under which the project was carried out left the problem, which is difficult enough at best, almost insoluble. It is not easy, to quote the Administrator of the Census,¹⁴

“. . . to get people to understand the important distinction between partial employment and partial unemployment. Many persons regularly work only part-time and do not need or want more work. They are partially employed. Others are reduced to part-time work by force of circumstances, not by personal limitations or choice. They are partly unemployed.

Preliminary analysis indicates that a very considerable number have registered or reported themselves as partially unemployed when they clearly belong to the group of partly employed workers and should not have included themselves in either the voluntary or the test census.”

The task of the census-takers was not facilitated by the fact that people were requested to answer the vaguely worded question “Are you (a) totally unemployed and want work, (b) partly employed and want more work?” Moreover, the fact that the Census was not a house-to-house canvass by a crew of enumerators engaged for the purpose resulted in a serious incompleteness of the returns. According to the Administrator, the voluntary registration of the partially unemployed was only 57 per cent of the number reported in the test enumeration which was made under more nearly normal census conditions on a small sample of the postal routes. The results of the Census in reference to partial unemployment may therefore be regarded as from one-third to one-half incomplete.

All this tends to show that our knowledge of the actual incidence of the hazard of partial unemployment is meagre indeed. No data now on record meet the requirements mentioned by the Committee on Economic Security.¹⁵ The New York State Department of Labor Surveys of 1921-1924 and 1927 do not throw any light on the number of weeks lost through partial unemployment over a period of time. The Buffalo and Syracuse surveys, in addition to this defect, fail to relate the number of partially unemployed persons to the total number of workers exposed to the hazard of partial unemployment, while the U. S. Census of Business gives no measure either of the duration of part-time employment or of the proportion of time lost (beyond the mere qualifying limit of “at least fifty per cent of regular scheduled hours”).

Most serious of all, most of the available sources fail to distinguish partial unemployment from part-time employment. A

¹⁴ *Preliminary Report on Total and Partial Unemployment*, John D. Biggers, Administrator, Washington, D. C., January 18, 1938, p. IX. Cf. Appendix A, p. 112.

¹⁵ Cf. p. 28, *supra*.

person who is working for only a few hours a week but does not wish full-time employment is not partially unemployed. His partial "idleness" is voluntary.

However, even if statistics of genuinely lost time were available, this alone would not be enough. The unemployment insurance system in the United States is built on the principle that lost time is insurable only insofar as it occasions a loss of earnings. And, even more specifically, what is meant by a loss of earnings under the American laws is not loss computed from any kind of wage, but the loss emerging when actual earnings in any given week are contrasted with the statutory weekly wage which serves as a basis for the determination of the unemployment benefit rate.

b. The Statutory Weekly Wage

The definitions of weekly wages which are incorporated in the laws of the various states as a basis for determining unemployment benefit rates may be briefly summarized as follows:

1. New York formula: The full-time weekly wage is an average of the highest weekly earnings in two calendar quarters of the base year; these calendar quarters are selected in such a way as to exclude the quarters in which the highest weekly earnings are the largest and lowest in the base year. This New York formula is modified for the fixed stipend workers, to make their weekly wage the weekly equivalent of the wage rate set for a day, a week or longer period.

2. Draft Bill 1937 formula: The full-time weekly wage is one-thirteenth of the total earnings in that calendar quarter of the base period in which the total earnings are highest. The base period may consist of from four to eight consecutive calendar quarters. This definition, which occurs in the January 1937 revision of the Draft Bill prepared by the Social Security Board, is incorporated also in the statutes of 33 states.

3. Draft Bill 1936 formula: The full-time weekly wage is a product of the hourly rate of earnings in recent weeks of employment and the full-time weekly hours. These hours may be established from the applicant's record for the year preceding the determination or be set as the full-time weekly hours customary in the applicant's occupation or industry. This definition follows the lines of the Draft Bill of 1936 and is found in the laws of five states. The wage may also be the most recent wage rate for a full-time week (using the hours customarily worked), and this definition is found in 33 state laws.

4. Wisconsin formula: The average weekly wage is the quotient of total earnings during the year used in the calculation of the benefit rate by the number of weeks of employment in that year. This is the definition introduced in the Wisconsin statute in 1937, but it will not go into practical operation for most workers until after February 1938.

5. Delaware formula: The weekly wage is the quotient of the total wages earned in the base period by the number of weeks comprised in the base period. This is the provision of the Delaware law, which stipulates a two-year base period.

It is obvious that five or more different weekly wages could be obtained from a single wage and hours record by the use of the above formulae. The first three definitions aim at a full-time weekly wage. The other two definitions provide for an average weekly wage, the Delaware formula going so far as to include weeks of no earnings in the calculation of the average.

The statutory definition of weekly wages has an obvious bearing on any study of partial unemployment. Even by the average weekly wage definition, earnings in at least half the weeks in the base period will be lower than the statutory weekly wage. As measured by the full time weekly wage standard, the number of weeks with a partial loss of earnings will be considerably greater. This consideration by itself would make it advisable to limit the statistical analysis of partial unemployment only to those weeks in which the earnings fell short of the full time weekly wage by an appreciable margin. At least equally important in this connection is the consideration that it is no more reasonable to expect full compensation for a partial loss of earnings than for a total loss of earnings. Suggestions as to the magnitude of the margin in the full time weekly wage which must be allowed before compensation for the loss of earnings can be considered as a practical question may be gathered from the various state laws and the recommendations of the Federal Coordinator of Transportation.

c. The Non-compensable Margin in the Weekly Wage

The proposed federal unemployment insurance plan for transportation employees is based wholly on the wage-loss principle. Indeed, the Coordinator maintains that

“As a matter of fact, the use of a wage loss basis instead of time loss was dictated by the extensive use of the mileage principle in making wage payments in the transportation industry and the consequent difficulty of determining full time wages, and by the fact that partial unemployment cannot be equitably compensated on any other basis, no matter what methods of wage payment are in use.”¹⁶

The plan provides for the payment of partial unemployment benefits at the rate of five-eighths of the difference between the worker's part-time earnings and 80 per cent of his full-time monthly earnings.¹⁷ The recognized degree of compensable partial unem-

¹⁶ U. S. Federal Coordinator of Transportation, *Unemployment Compensation for Transportation Employees*, Washington, D. C., March, 1936, p. 8

¹⁷ *Op. cit.* p. 9

ployment is thus 80 per cent of the full-time wage, the non-compensable margin being fixed at 20 per cent.

Thirty-three states and the District of Columbia (as well as the Draft Bill of the Social Security Board) begin partial unemployment compensation when earnings fall below 60 per cent of the full-time wage. Four other states begin partial unemployment compensation when earnings fall below 50 per cent of the full-time wage.¹⁸ This latter percentage represents a limit, since total unemployment is compensated at the rate of one-half the full-time wage. If employees were required to work for less than 50 per cent of their full-time wage without receiving benefits, they would be better off on benefit than working. This is in accordance with the recommendations of the Committee on Economic Security:

"In no case should partial unemployment involving more than 50 per cent loss of wages go uncompensated."¹⁹

Since there are, at present, no provisions for partial unemployment insurance in New York State, it was considered necessary to utilize in this analysis four possible degrees of compensable partial unemployment, viz., 50, 60, 70, and 80 per cent of the full-time wage. It should be borne in mind that statistics, such as the *rate* of partial unemployment, depend on the *degree* of partial unemployment in question. Thus out of one hundred workers exposed to this hazard, 50 may have been affected in at least one week of the year when the 80 per cent degree is the standard of reckoning; only 20 may have been affected when 60 per cent is the standard; and none may have been affected under the 50 per cent degree. This fact makes any statistics of the extent of partial unemployment relative to the standard of measurement used to determine its existence.

This brings forcibly to the attention of the student the true character of the problem which he is investigating. Statistics of partial unemployment which do not measure the degree of loss of income involved are meaningless. With the New York definition of the full-time weekly wage in force, all workers receiving a variable compensation for their services are partially unemployed at some time or other—if only by a matter of a few cents' difference in their pay envelope. But a loss falling short of 20 per cent is not within any practically possible compensable range, and so had best be disregarded.

d. The Dimensions of Partial Unemployment

The determination of the degree of partial unemployment is the first step on the road toward its measurement. But in itself it merely blocks out the frame within which statistical study may

¹⁸ Cf. Appendix C. p. 32.

¹⁹ U. S. Committee on Economic Security, *Social Security in America*, p. 120

operate. There are three statistical dimensions which are required in order to make the picture complete:

1. The extent of the incidence of partial unemployment
2. The average duration per worker affected
3. The average intensity, or loss in earnings, per unit of duration per worker affected.

These three dimensions combined give a valid answer to the question: How much did the average worker lose, in the course of a given year, because of partial unemployment?

It is essential for actuarial purposes that the number of workers affected by partial unemployment be related to the number of workers exposed to the hazard of partial unemployment for a year. This means that the rate of partial unemployment must be defined as the number of workers affected divided by the average number of workers exposed. The average number of workers exposed is, of course, merely another term for average weekly employment, all weeks of a given year being taken into account.

The average duration of partial unemployment could be measured simply by computing the total of all man-weeks partially lost and dividing it by the number of workers concerned. This would indicate how many weeks of partial unemployment were suffered, on the average, by a worker who became partially unemployed in the course of the year. If this figure were multiplied by the rate of partial unemployment, the product would define the average duration of partial unemployment per unit of average yearly employment. However, for an actuarial study of the cost of partial unemployment insurance, it is important not to merge the man-weeks of partial unemployment, but to treat each worker as an individual, and to express the duration factor in the form of a frequency distribution. This procedure makes it possible to calculate not only the average duration (number of weeks of partial unemployment per workers becoming partially unemployed), but also the average duration following any stated number of weeks (such as the weeks comprising the statutory waiting period). This method is followed in the present report.²⁰

The average wage loss per worker affected per week of partial unemployment is obtained indirectly, by deducting the average earnings in weeks of partial unemployment from the average full-time weekly wage. Again, if this average loss figure were multiplied by the rate of partial unemployment, the product would indicate the average loss per week per worker employed. A further multiplication by the average duration of partial unemployment would yield the total loss incurred, in dollars and cents, per worker employed, as a consequence of partial unemployment of some workers in the course of the given year. This figure could be related to the statistics of average yearly earnings or

²⁰ See pp. 36-47, *infra*.

average yearly full-time earnings, if it were desired to arrive at a statement of loss as a percentage of actual or potential incomes.

However, it is more important to relate the compensable loss (paying due attention to various partial unemployment benefit formulae and to various possible schemes of waiting period requirements) to the average annual wage on which contributions were paid. In this manner, estimates of the yearly cost of partial unemployment insurance may be arrived at. This method was used in analyzing the 1936 experience of the book and job printing industry.²¹

This kind of picture of partial unemployment is complete so far as one year is considered the time-limit of investigation. The year is indeed the logical time-unit, because the statutory benefit periods, base periods, and rates of contribution are defined on an annual basis. Yet it is also important to know how the incidence of partial unemployment varies within the year, chiefly due to the influence of the changing seasons. This problem may be elucidated by following the fortunes of a group of workers, representative of a homogeneous industry, week by week, from the beginning of the year to its end. It is desirable to show how many of the group were attached to the industry on a more or less permanent basis (disregarding temporary lay-offs) in the course of each calendar week, how many of those attached were actually employed, and how the employed working force was distributed as between the fully employed and the partially unemployed.

But while the year may be the logical unit of investigation, the experience of only one year is not sufficient for a complete and significant inquiry. If any one year could be regarded as a "representative" year—representative of what happens, on the average, over a long period of years—then, indeed, the experience of one year would have a considerable degree of universal applicability. This supposition is never realized in practice. It is therefore desirable to study the incidence of partial unemployment in at least the critical years of the business cycle, because, as has been shown, the volume of partial unemployment is influenced by the alternation of the several phases of the cycle. A good survey of the problem could be made if the experience of a depression year could be compared with that of a year of prosperity, and the experience of a year of recovery with that of a year of economic recession. But even this modicum of basic material is practically out of the reach of the investigator. The only resource then is to study very carefully the character of the year which served as a unit of analysis, and to attempt no more than an estimate of the range within which the extent and other quantitative characteristics of partial unemployment might deviate from the values obtained for the year under investigation.

It follows from the above discussion that the best source of material for a study of partial unemployment is to be found in

²¹ See pp. 47-59, *infra*.

the payroll records of individual firms. The policies of a firm determine its average employment as well as the distribution of partial unemployment. It is not necessary to study the subsequent records of workers who pass from one firm to another. While the worker is partially unemployed, this circumstance will always be accurately reflected in the payroll record; and it does not matter (so far as measurement of partial unemployment is concerned) what happens to him after he is separated from the payroll. If he finds some other employment, he becomes attached to another unit of exposure; and his experience will have general significance only with reference to the new field.

This statement is subject to some qualifications in a consideration of the cost of partial unemployment, since factors like waiting periods, a flat maximum of benefits, and the limitation of the final amount of benefits would be affected by the experience of individuals outside of the field of attachment to a particular plant or industry. These considerations will be taken up at a later point.

SECTION 2. A TYPE STUDY OF PARTIAL UNEMPLOYMENT IN THE BOOK AND JOB PRINTING INDUSTRY IN NEW YORK CITY IN 1936

In order to measure the incidence of partial unemployment along the lines established in the preceding section, it is necessary to analyze separately each important homogeneous industry group. The incidence of partial unemployment varies significantly from industry to industry and from occupation to occupation.¹ An investigation covering records of workers engaged in various non-homogeneous employments might be of some interest² but the results would probably lead to ill-advised conclusions rather than to a correct understanding of the problem. This investigation pursues a more laborious but more satisfying course,³ since it seems likely that even for a superficial measurement of the general incidence of partial unemployment a thorough comprehension of the circumstances governing a single industry is better than a collection of scattered bits of information bearing on industry as a whole.

As indicated in the preceding section, the published sources on partial unemployment are meagre and not adequate for a thorough study of this hazard, much less an actuarial estimate of the cost of protection against it. The Division of Placement and Unemployment Insurance is in possession of a number of duplicate payrolls for the year 1936, furnished by employers in connection with the payment of contributions. These records make possible a study of partial unemployment in homogeneous industrial groups. They do not, however, provide any significant amount of informa-

¹ It is probable that a complete study of partial unemployment for most industries would have greater significance if based on broad occupational groups, such as the office force, the sales force, the maintenance workers, etc., as distinct from direct production workers. In some fields of industrial activity, notably construction, a study which disregards craft or trade lines would be of relatively little value.

² Cf. *Partial Unemployment, A Report and Recommendations to the Legislature*, State of New Hampshire, Bureau of Labor, Unemployment Compensation Division, 1937.

³ See pp. 37-38, *infra*.

tion on the occupational characteristics of the insured employees. The duplicate payrolls for the book and job printing industry in New York City were selected for a detailed analysis because this industry happens to be best represented in the available material. An additional reason for this selection is that the variation from plant to plant in the occupational composition of the labor force in the book and job printing industry is not so pronounced as to affect seriously the reliability of the results of the study.

Thirty 1936 payrolls of New York City book and job printing establishments were analyzed in detail. It was found that the incidence of partial unemployment varied from firm to firm only within the limits attributable to the influence of pure chance, and that there was no causal connection between the severity of the incidence of partial unemployment and the size of the firm or the size of the average annual wage of the workers attached to the several payrolls. For this reason, records of these thirty firms were merged into one mass believed to be thoroughly homogeneous from the point of view of the incidence of partial unemployment, as well as from the point of view of the technical line of production involved, and thoroughly representative of the book and job printing industry at large.

The material covered the employment experience of 1,806 individual workers, 69 of whom earned more than \$3,000 a year and were accordingly exempt from the provisions of the Unemployment Insurance Law. The records of these 69 workers were, therefore, excluded from the data before any statistical tabulations were made.

The records of the remaining 1,737 workers represented an average weekly employment of only 690.44. The average duration of a job amounted, therefore, to about 21 weeks. There were 2,418 accessions and 2,364 separations, showing an annual accession rate of 3.502 and an annual separation rate of 3.424. The total annual insured payroll stood at \$1,166,949. The per capita earnings of all workers from these 30 employers were \$671.82, but the average annual wage obtained by dividing the total insured payroll by the average insured employment was \$1,690.15.

The records of 1,076 workers covered so short a period of time, or were so scattered throughout the year that they gave no trustworthy indication of the worker's full-time weekly wage. Over 65 per cent of them were employed for three weeks or less and about 92 per cent had less than 3 months employment. Some of the 1,076 workers were casual workers; others, while not exactly in the casual class, were hired only during busy periods. Other workers appeared to be part-time workers. A few workers might have been partially unemployed, though, in the absence of a clear indication of their full-time weekly wage, this could not be ascertained. These were workers who lost their employment after having been on the payroll during the first week of January, or who were hired late in the year. The records of all these 1,076 workers were disregarded when the partially unemployed workers

were counted;⁴ and thus to some extent the computed data on partial unemployment fall short of the true data.⁵

The partial unemployment rates, for the four degrees of incidence,⁶ and their standard errors, are shown in Table V.

TABLE V
Extent of Partial Unemployment, Book and Job Printing Industry, New York City, 1936

| Degree of Incidence | Partial Unemployment Rate | Standard Error |
|---------------------|---------------------------|----------------|
| 80 per cent | .571 | .019 |
| 70 per cent | .494 | .019 |
| 60 per cent | .410 | .019 |
| 50 per cent | .361 | .018 |

On the basis of Table V, it may be said that out of 100 insured workers constantly exposed to the hazard of partial unemployment throughout the year 1936 not more than 61 and not fewer than 53 experienced at least one week in which their earnings fell by a greater amount than 20 per cent of their full-time weekly wage; not more than 53 and not fewer than 46 experienced, in at least one week, a loss exceeding 30 per cent; between 45 and 37 experienced a loss in excess of 40 per cent; and from 40 to 33 experienced a loss such that they earned, in at least one week, less than their total unemployment benefit rate.

From the available data, it may be concluded that those workers employed in the book and job printing industry in New York City in 1936 who at some time in the course of that year experienced a loss in weekly wages exceeding 20 per cent of their full-time weekly wage suffered such a loss, on the average, for not more than thirteen nor less than ten weeks; that those who experienced a loss in excess of 30 per cent suffered such a loss, on the average, for not more than nine nor less than six weeks; that those who experienced a loss in excess of 40 per cent suffered such a loss, on the average, for not more than six nor less than five weeks, and that those who experienced a loss such that their earnings fell below their total unemployment benefit rate suffered such a loss, on the average, in not more than five nor less than three weeks.

It is also instructive to note that from 3 to 12 per cent of the total time worked represented part-time employment. However, the details of the frequency distribution should not be overlooked. The distribution is not a cumulative one; that is, each group of workers itemized experienced only the stated number of weeks of partial unemployment, neither more nor less. One week of

⁴ But their records are included in the average employment figure and the average annual wage figure, because contributions were paid for them while they were working.

⁵ Since the average yearly employment equivalent to the combined records of these 1,076 workers amounted to 93, the error could not have exceeded 13 per cent. Since only 162 workers were employed for more than 9 weeks, equivalent to a yearly average employment of 48 men, the error most likely did not exceed 7 per cent.

⁶ See p. 19, *supra*.

TABLE VI
Duration of Partial Unemployment, Book and Job
Printing Industry, New York City, 1936

| Number of Weeks of Partial Unemployment | Number of Workers Partially Unemployed, According to Degree of Incidence of Partial Unemployment | | | |
|--|---|-------------|-------------|-------------|
| | 80 per cent | 70 per cent | 60 per cent | 50 per cent |
| 1 | 52 | 66 | 72 | 88 |
| 2 | 27 | 40 | 44 | 50 |
| 3 | 29 | 35 | 38 | 24 |
| 4 | 24 | 33 | 27 | 21 |
| 5 | 22 | 24 | 12 | 15 |
| 6 | 24 | 23 | 19 | 10 |
| 7 | 25 | 14 | 14 | 9 |
| 8 | 22 | 17 | 8 | 6 |
| 9 | 18 | 11 | 4 | 5 |
| 10 | 14 | 7 | 8 | 2 |
| 11 | 14 | 10 | 4 | 5 |
| 12 | 5 | 8 | 4 | 5 |
| 13 | 4 | 6 | 6 | 1 |
| 14 | 10 | 5 | 2 | 1 |
| 15 | 10 | 1 | 1 | 1 |
| 16 | 5 | | 3 | 1 |
| 17 | 7 | 4 | 3 | |
| 18 | 4 | 5 | 2 | 1 |
| 19 | 5 | 3 | 2 | |
| 20 | 8 | 1 | | 1 |
| 21 | 2 | 2 | | |
| 22 | 1 | 1 | 1 | |
| 23 | 1 | | | |
| 24 | 2 | | | 1 |
| 25 | 3 | 1 | 1 | 1 |
| 26 | 2 | 1 | 1 | |
| 27 | 2 | 2 | 2 | |
| 28 | 5 | | 1 | |
| 29 | 3 | | 1 | |
| 30 | 3 | 2 | | |
| 31 | 1 | 2 | | |
| 32 | 6 | 4 | | |
| 33 | 4 | 2 | 1 | |
| 34 | 2 | 2 | 1 | |
| 35 | 3 | 2 | | |
| 36 | 3 | 1 | | |
| 37 | 3 | 4 | | |
| 38 | 4 | | | |
| 39 | 4 | | | |
| 40 | 3 | | | |
| 41 | 2 | | | |
| 43 | 2 | | | |
| 44 | 1 | 1 | | |
| 47 | 1 | | | |
| 49 | | 1 | 1 | 1 |
| 50 | 2 | | | |
| Total number of workers affected | 394 | 341 | 283 | 249 |
| Total number of man- weeks partially lost | 4,445 | 2,548 | 1,520 | 964 |
| Average number of weeks partially lost, per work- er affected | 11.3 | 7.5 | 5.4 | 3.9 |
| Standard error of the above average | .8 | .5 | .4 | .3 |
| Man-weeks partially lost in per cent of total man-weeks worked | 12.4 | 7.1 | 4.2 | 2.7 |

TABLE VII

Intensity of Partial Unemployment, Book and Job
Printing Industry, New York City, 1936

| Earnings in Weeks of Partial Unemployment (dollars) | Number of Man-Weeks According to Degree of Incidence of Partial Unemployment | | | |
|--|---|-------------|-------------|-------------|
| | 80 per cent | 70 per cent | 60 per cent | 50 per cent |
| .01- .99 | 3 | 3 | 3 | 3 |
| 1.00- 1.99 | 10 | 10 | 10 | 10 |
| 2.00- 2.99 | 42 | 42 | 42 | 42 |
| 3.00- 3.99 | 36 | 36 | 36 | 36 |
| 4.00- 4.99 | 56 | 56 | 56 | 56 |
| 5.00- 5.99 | 94 | 94 | 94 | 94 |
| 6.00- 6.99 | 38 | 38 | 38 | 38 |
| 7.00- 7.99 | 123 | 123 | 123 | 96 |
| 8.00- 8.99 | 81 | 81 | 79 | 74 |
| 9.00- 9.99 | 149 | 149 | 98 | 90 |
| 10.00-10.99 | 201 | 193 | 170 | 125 |
| 11.00-11.99 | 165 | 142 | 118 | 92 |
| 12.00-12.99 | 238 | 176 | 131 | 115 |
| 13.00-13.99 | 178 | 105 | 69 | 51 |
| 14.00-14.99 | 208 | 118 | 53 | 42 |
| 15.00-15.99 | 232 | 146 | 89 | |
| 16.00-16.99 | 396 | 222 | 177 | |
| 17.00-17.99 | 400 | 274 | 134 | |
| 18.00-18.99 | 363 | 199 | | |
| 19.00-19.99 | 204 | 144 | | |
| 20.00-20.99 | 327 | 197 | | |
| 21.00-21.99 | 261 | | | |
| 22.00-22.99 | 410 | | | |
| 23.00-23.99 | 230 | | | |
| Total number of man- weeks of partial unem- ployment | 4,445 | 2,548 | 1,520 | 964 |
| Average earnings per week of partial unemployment | \$15.88 | \$13.55 | \$11.13 | \$8.89 |
| Standard error of the above average | \$0.08 | \$0.10 | \$0.11 | \$0.11 |
| Number of workers affected | 394 | 371 | 283 | 249 |
| Average full-time weekly wage, per worker affected | \$26.74 | \$26.72 | \$26.82 | \$26.87 |
| Standard error of the above average | \$0.25 | \$0.27 | \$0.29 | \$0.31 |
| Critical fraction of full- time wage | \$21.39 | \$18.70 | \$16.09 | \$13.44 |
| Standard error of the above average | \$0.25 | \$0.27 | \$0.29 | \$0.31 |
| Average loss per week of partial unemployment | \$5.51 | \$5.15 | \$4.96 | \$4.55 |
| Standard error of the above average | \$0.26 | \$0.28 | \$0.31 | \$0.33 |
| Percentage of loss in excess of critical fraction to full-time weekly wage | 20.6 | 19.3 | 18.5 | 16.9 |
| Percentage of total loss to full-time weekly wage | 40.6 | 49.3 | 58.5 | 66.9 |

partial unemployment appears to be the mode, but cases of longer duration are quite frequent, and some go to astonishing extremes. The two workers who were partially unemployed for 50 weeks of the year might have been part-time workers, but perhaps they were not voluntarily so; in two weeks they manifested their willingness to work full time by earning a wage greatly in excess of their usual wage.⁷

The loss of earnings occasioned by partial unemployment is seen by comparing the earnings in the weeks of partial unemployment with the "critical" fraction of the average full-time weekly wage—80, 70, 60, or 50 per cent, according to the degree of incidence taken into account.⁸

Again, it may be asserted that in the book and job printing industry in New York City in 1936, in those weeks of partial unemployment in which earnings fell by more than 20 per cent of the full-time weekly wage, not more than \$6.03 nor less than \$4.99 was lost, on the average, in addition to the initial loss of \$4.85 to \$5.85 which is equivalent to the unprotected 20 per cent of the average full-time weekly wage; that in those weeks in which earnings fell by more than 30 per cent, not more than \$5.71 nor less than \$4.59 was lost, in addition to the initial 30 per cent loss of \$7.48 to \$8.56; that in those weeks in which earnings fell by more than 40 per cent, not more than \$5.58 nor less than \$4.34 was lost, on the average, in addition to the initial loss of \$10.15 to \$11.31; and that in those weeks in which earnings fell short of the average total unemployment benefit rate, not more than \$5.21 nor less than \$3.89 was lost, by reason of partial unemployment in addition to the initial loss of \$12.81 to \$14.05.

Some estimates of the total loss occasioned by partial unemployment may be arrived at on the basis of the established measures of the extent, duration, and intensity of the incidence of this hazard in the book and job printing industry in New York City in 1936. It may be said that since two-thirds of full-time weekly wages were lost in 4 weeks by 36 per cent of the workers exposed to such a loss for 52 weeks (in 50 per cent degree of compensable partial unemployment), partial unemployment of this extreme degree was equivalent to the loss of more than 5½ full days' work per man per year; or that, since 41 per cent of full-time weekly wages were lost in 11 weeks by 57 per cent of the workers (in an 80 per cent degree of compensable partial unemployment), the ensuing loss amounted to about 16 full days' work per man per year. But such computations tend to minimize the loss by leaving necessarily out of account the loss sustained by those workers whose

⁷ Bona-fide part time workers were automatically excluded from this analysis of partial unemployment by the circumstances that their usual (part-time) wage did not vary from their statutory "full-time" wage computed by the New York Law formula. However, there were 7 workers whose statutory wage was \$14.00 a week, that being the legal minimum; and one or two of these may have been part-time workers, although the presumption is that they were full-time employees receiving a low variable wage (apprentices, messengers, and helpers).

⁸ It should be noted that the average full-time weekly wage shown in Table VII is not a weighted average. If the difference between this average and a weighted average had been significant, the latter would have been used instead. In that case the corresponding entry in Table VII would have read, "Average full-time weekly wage, per week of partial unemployment."

TABLE VIII

Weekly Variation in the Incidence of Partial Unemployment, Book and Job Printing Industry, New York City, 1936

| Number of Week | Attached to Industry | Number of Workers | | | Partially Un-employed | Per Cent of Those Employed Partially Un-employed |
|----------------|----------------------|------------------------------------|----------|----------------|-----------------------|--|
| | | Temporarily Separated from Payroll | Employed | Fully Employed | | |
| 1 | 659 | | 659 | 589 | 70 | 10.6 |
| 2 | 686 | 28 | 658 | 574 | 84 | 12.8 |
| 3 | 722 | 42 | 680 | 606 | 74 | 10.9 |
| 4 | 734 | 47 | 687 | 616 | 71 | 10.3 |
| 5 | 757 | 67 | 690 | 616 | 74 | 10.7 |
| 6 | 750 | 84 | 666 | 517 | 149 | 22.4 |
| 7 | 763 | 83 | 680 | 612 | 68 | 10.0 |
| 8 | 781 | 80 | 701 | 629 | 72 | 10.3 |
| 9 | 788 | 81 | 707 | 655 | 52 | 7.4 |
| 10 | 810 | 79 | 731 | 668 | 63 | 8.6 |
| 11 | 825 | 85 | 740 | 677 | 63 | 8.5 |
| 12 | 833 | 84 | 749 | 679 | 70 | 9.3 |
| 13 | 835 | 103 | 732 | 661 | 71 | 9.7 |
| 14 | 835 | 107 | 728 | 666 | 62 | 8.5 |
| 15 | 827 | 147 | 680 | 575 | 105 | 15.4 |
| 16 | 826 | 139 | 687 | 598 | 89 | 13.0 |
| 17 | 828 | 137 | 691 | 605 | 86 | 12.4 |
| 18 | 836 | 140 | 696 | 610 | 86 | 12.4 |
| 19 | 850 | 149 | 701 | 593 | 108 | 15.4 |
| 20 | 863 | 156 | 707 | 610 | 97 | 13.7 |
| 21 | 878 | 171 | 707 | 622 | 85 | 12.0 |
| 22 | 868 | 164 | 704 | 613 | 91 | 12.9 |
| 23 | 858 | 181 | 677 | 578 | 99 | 14.6 |
| 24 | 851 | 178 | 673 | 580 | 93 | 13.8 |
| 25 | 844 | 183 | 661 | 569 | 92 | 13.9 |
| 26 | 850 | 169 | 681 | 600 | 81 | 11.9 |
| 27 | 842 | 161 | 681 | 574 | 107 | 15.7 |
| 28 | 842 | 173 | 669 | 574 | 95 | 14.2 |
| 29 | 849 | 174 | 675 | 568 | 107 | 15.9 |
| 30 | 838 | 164 | 674 | 587 | 87 | 12.9 |
| 31 | 825 | 172 | 653 | 543 | 110 | 16.8 |
| 32 | 808 | 180 | 628 | 530 | 98 | 15.6 |
| 33 | 823 | 178 | 645 | 540 | 105 | 16.3 |
| 34 | 821 | 154 | 667 | 577 | 90 | 13.5 |
| 35 | 821 | 152 | 669 | 570 | 99 | 14.8 |
| 36 | 828 | 155 | 673 | 480 | 193 | 28.7 |
| 37 | 831 | 168 | 663 | 569 | 94 | 14.2 |
| 38 | 826 | 144 | 682 | 597 | 85 | 12.5 |
| 39 | 808 | 125 | 683 | 613 | 70 | 10.2 |
| 40 | 803 | 149 | 654 | 575 | 79 | 12.1 |
| 41 | 798 | 145 | 653 | 521 | 132 | 20.2 |
| 42 | 807 | 135 | 672 | 621 | 51 | 7.6 |
| 43 | 813 | 117 | 696 | 651 | 45 | 6.5 |
| 44 | 802 | 99 | 703 | 566 | 137 | 19.5 |
| 45 | 793 | 89 | 704 | 646 | 58 | 8.2 |
| 46 | 797 | 88 | 709 | 664 | 45 | 6.3 |
| 47 | 819 | 73 | 746 | 660 | 86 | 11.5 |
| 48 | 801 | 74 | 727 | 666 | 61 | 8.4 |
| 49 | 783 | 45 | 738 | 700 | 38 | 5.1 |
| 50 | 767 | 26 | 741 | 701 | 40 | 5.4 |
| 51 | 751 | 14 | 737 | 691 | 46 | 6.2 |
| 52 | 688 | | 688 | 556 | 132 | 19.2 |
| Total | | | 35,903 | 31,458 | 4,445 | |
| Average | | | 690.44 | 604.96 | 85.48 | 12.4 |

earnings never fell below the critical point, and by spreading the loss suffered by a few among all.

A better picture is obtained when the number of workers on part time is contrasted with the total number of workers employed in each week of the year. Such a picture is presented in Table VIII.

The first two columns of Table VIII are somewhat fictitious in character. The first column shows how many workers had jobs in one or another of the thirty firms investigated, while the second column states how many of these workers were temporarily separated from the payroll. A temporary separation is defined as a separation followed by a rehiring in the same year. Since the payroll records which were used began in January, nothing was known about the number of workers having jobs but temporarily out of work at that time; and, since the payroll records ended in December, nothing could be surmised concerning those workers who were separated at some time in the course of the year but not rehired before the end of the year; they may or may not have kept their jobs. However, the data for the middle two quarters of the year (from week Number 14 to Number 39) may perhaps have some value. If it is assumed, as it is reasonable to do, that the great majority of the workers temporarily separated from the payroll were not employed elsewhere nor otherwise removed from the labor market, then the temporary separations from the payroll represent, in effect, persons totally unemployed. A comparison of the two columns in the table would indicate that the number of workers partially unemployed in the course of the year 1936, in the book and job printing industry, was of the same order of magnitude as the number of workers totally unemployed for short periods of time.

The number of partially unemployed workers is based on the 80 per cent degree of the incidence of this hazard; that is, these are the workers who, in the particular week in question, earned wages amounting to less than 80 per cent of their full-time weekly wage. The reason for such a loss of wages was not investigated, though the evidence of the concomitant volume of total unemployment suggests that shortage of work was the prime cause. There may have been a few cases of sickness and perhaps a few instances of a change of employment or the termination of employment in the middle of the week; but a careful inspection of the individual records, in which the whole earnings history of the worker, before and after a week of an apparent wage loss, could be weighed in the balance, failed to disclose any cases in which these circumstances could have been established beyond reasonable doubt. It is unlikely that any error of inclusion could have equalled the original possible error of exclusion;⁹ and it must be concluded, therefore, that the final statistics err, if at all, somewhat on the side of under-stating the severity of the incidence of the hazard of partial unemployment.

⁹ See footnote 5, on p. 38, *supra*.

The year 1936 was a year of rising employment in the book and job printing industry in New York City.¹⁰ Nevertheless, partial unemployment was chronic. On the average, over 12 per cent of the working force was constantly on part time. There occurred, of course, notable fluctuations from week to week. The presumption is (although this cannot be proved on the basis of one year's experience only) that these fluctuations were caused, for the most part, by the regular progress of seasons. Table IX, which summarizes part of the information furnished by Table VIII, on a monthly basis, confirms this presumption.

TABLE IX

Monthly Variation in the Number of Workers Partially Unemployed, Book and Job Printing Industry, New York City, 1936

| Month | Number of Workers | | | Per Cent of Those Employed Partially Unemployed |
|-----------|-------------------|----------------|----------------------|---|
| | Employed | Fully Employed | Partially Unemployed | |
| January | 671 | 596 | 75 | 11.2 |
| February | 684 | 594 | 90 | 13.2 |
| March | 732 | 670 | 62 | 8.5 |
| April | 707 | 625 | 82 | 11.6 |
| May | 700 | 608 | 92 | 13.1 |
| June | 679 | 585 | 94 | 13.8 |
| July | 676 | 581 | 95 | 14.1 |
| August | 648 | 548 | 100 | 15.4 |
| September | 672 | 554 | 118 | 17.6 |
| October | 672 | 597 | 75 | 11.2 |
| November | 716 | 634 | 82 | 11.5 |
| December | 726 | 663 | 63 | 8.7 |
| Total | 690 | 605 | 85 | 12.3 |

Table IX suggests that there is a tendency for employment to increase from January to a pre-Easter peak in March; that this is followed by a gradual decline till a low point is reached in August; that there is a pick-up after Labor Day, and a busy pre-holiday season in December.

Partial unemployment tends to increase as employment declines, and vice versa. This movement is best portrayed by an index number based on the percentages shown in the right-hand column of Table IX.

Table X gives the impression that, to some extent, partial unemployment in the book and job printing industry may be associated with a prospective increase in orders rather than an actual slowing-up of business. Men seem to have been carried on the payroll at part-time in February in anticipation of the March trade; and some men were hired in September and put on part-time so that they would be available for full-time work in October. However, from March till August the index of the proportionate incidence

¹⁰ According to the statistics collected by the Division of Statistics and Information of the New York State Department of Labor, employment in this industry rose, in 1936, by 6 per cent, on the average, as compared with the average employment in 1935. This refers to the State as a whole. A separate figure for New York City is not available.

TABLE X

Index of Seasonal Variation in the Incidence of Partial Unemployment in the Book and Job Printing Industry, New York City, 1936

| Month | Average 1936=100 |
|-----------|------------------|
| January | 91 |
| February | 107 |
| March | 69 |
| April | 94 |
| May | 107 |
| June | 112 |
| July | 115 |
| August | 125 |
| September | 143 |
| October | 91 |
| November | 94 |
| December | 71 |

of partial unemployment behaves just as might be expected; and, in any case, the impression derived from the table cannot be confirmed merely by an analysis of statistical material.

The picture of partial unemployment in the book and job printing industry in New York City in 1936, presented above, on the basis of the standard of measurement chosen is complete for the purposes of this study. Measures of the extent, duration, and intensity of the incidence of this hazard, as well as of the seasonal variations in its incidence, have been established, subject to some margins of error which appear to be conveniently small.

It may be advisable, however, to emphasize the technically arbitrary nature of the standard of measurement used—the statutory definition of the full-time weekly wage—which itself is not an integral part of the underlying statistical material.

A measure of the full-time weekly wage is of necessity arbitrary. There is no absolute way of determining the full-time wage of an individual worker, merely by inspecting his weekly record of earnings. Recourse must be had to some sort of mathematical formula. In this study the New York formula is the only pertinent formula since it was desired to subject the sample to an actuarial analysis yielding an estimate of the cost of partial unemployment insurance in the State of New York.¹¹ But it is also important to know whether and how far the statistical results of the study differ from the results which would have been obtained had some other formula for the computation of the full-time wage been used. Specifically, it is important to know how far these statistics and the actuarial estimates derived from them may have general applicability, or whether their meaning is restricted to the present Unemployment Insurance Law and procedures of New York State.

To clarify this matter, the earnings records of the 394 workers affected by partial unemployment were reviewed and four trial

¹¹ It should be noted that the New York formula was applied to the year 1936 which was regarded both as a base year and as a benefit year. Under the Law, however, the benefit year lags after the base year. Since only one year's records are available the procedure used in the study was the only one available. It is probable that this procedure does not affect the validity of the results.

measures of their statutory wages were applied, one of them being the New York statutory wage. Three other outstanding formulae which admit of mathematical determination were taken into account: the Draft Bill formula, the Wisconsin formula, and the Delaware formula. The Draft Bill formula purports to be a full-time wage formula, the Wisconsin formula determines average wages in weeks of employment, and the Delaware formula computes average wages in weeks of employment as well as in weeks of no employment. It should be noted that the Draft Bill and the Delaware formulae refer to the earnings record of eight calendar quarters, whereas data for only four calendar quarters were available when this comparative analysis was made.¹²

The results of this analysis are shown in Table XI, in the form of a frequency distribution for one-dollar class intervals. In order to make the formulae as such fully comparable, it was supposed that the New York statutory minimum and maximum limits for benefits would apply under each of the trial definitions of the full-time wage.

TABLE XI

Trial Computations of Statutory Weekly Wages for 394
Employees of 30 Book and Job Printing Firms, New York
City, Based on 1936 Experience

| Amount (dollars and cents) | Number of Workers by Type of Statutory Weekly Wage | | | |
|----------------------------------|--|------------|-----------|----------|
| | New York | Draft Bill | Wisconsin | Delaware |
| Statutory maximum, 30.00 | 240 | 192 | 173 | 156 |
| 29.00-29.99 | 9 | 10 | 9 | 6 |
| 28.00-28.99 | 8 | 10 | 13 | 9 |
| 27.00-27.99 | 8 | 5 | 5 | 8 |
| 26.00-26.99 | 7 | 7 | 15 | 16 |
| 25.00-25.99 | 12 | 15 | 6 | 7 |
| 24.00-24.99 | 2 | 11 | 13 | 13 |
| 23.00-23.99 | 10 | 8 | 12 | 9 |
| 22.00-22.99 | 13 | 14 | 11 | 9 |
| 21.00-21.99 | 7 | 9 | 9 | 12 |
| 20.00-20.99 | 14 | 9 | 11 | 13 |
| 19.00-19.99 | 17 | 22 | 19 | 15 |
| 18.00-18.99 | 16 | 21 | 16 | 16 |
| 17.00-17.99 | 5 | 16 | 21 | 23 |
| 16.00-16.99 | 10 | 12 | 14 | 16 |
| 15.00-15.99 | 7 | 11 | 15 | 17 |
| 14.01-14.99 | 2 | 9 | 13 | 15 |
| Statutory minimum, 14.00 | 7 | 13 | 19 | 34 |
| Total number of workers. | 394 | 394 | 394 | 394 |
| Average statutory weekly wage | 26.74 | 25.32 | 24.70 | 23.87 |

The comparison in Table XI suggests that the statistics derived under any one formula may vary substantially from those which may derive from the use of another formula. Hence the data relating to the extent, duration, and intensity of partial unemployment must be interpreted against the terms of the formula used.

¹² For a discussion of these definitions, see pp. 31-32, *supra*.

and cannot properly be regarded as absolute or independent measures of partial unemployment.

The comparisons suggested by Table XI do not apply to the inherent characteristics of the four different statutory wage formulae and may not determine the point of the relative liberality or lack of liberality of the unemployment benefit rates corresponding to these wage measures. Table XI reflects merely the composition and nature of a particular sample. A study more extensive and intensive would be required if the intrinsic meaning of the formulae were to be investigated. Moreover, Table XI portrays the situation indicated by a sample drawn from the records of a single industry; nothing can be said or inferred concerning the operation of these formulae in connection with the wage records of workers engaged in other industries.

SECTION 3. THE COST OF PARTIAL UNEMPLOYMENT BENEFITS IN THE BOOK AND JOB PRINTING INDUSTRY IN NEW YORK CITY IN 1936

In order to utilize the foregoing data on partial unemployment in the book and job printing industry for an actuarial estimate of the cost of partial unemployment insurance, it is necessary to convert them into adjusted tables showing average benefits, expected number of benefit payments, and the relationships between contributions and benefits.

TABLE XII

Rates of Partial Unemployment and Rates of Benefit per Week of Partial Unemployment, Book and Job Printing Industry, New York City, 1936

| Rates | Degree of the Incidence of Partial Unemployment | | | |
|--|---|-------------|-------------|-------------|
| | 80 per cent | 70 per cent | 60 per cent | 50 per cent |
| Rate of partial unemployment ¹ | .571 | .494 | .410 | .361 |
| Loss per week of partial unemployment ² | \$5.51 | \$5.15 | \$4.96 | \$4.55 |
| Rate of benefits, per week | \$3.44 | \$3.68 | \$4.13 | \$4.55 |

¹ See Table V, p. 38.

² See Table VII, p. 40.

The rates of benefit were computed by the formula suggested by the Federal Coordinator of Transportation,¹

$$B = \frac{L}{2.d}$$

wherein the symbol B represents the rate of benefit, the symbol L loss of wages in excess of a margin determined by the degree of partial unemployment regarded as compensable ($L = d.W - E$

¹ U. S. Federal Coordinator of Transportation, *Unemployment Compensation for Transportation Employees*, (1936) p. 9

where W is the full time weekly wage and E the actual earnings in a given week), and d the degree of the incidence of partial unemployment. The formula states that the benefit rate is equal to five-eighths of the difference between actual earnings and 80 per cent of the full-time weekly wage, when 80 per cent is the degree of incidence which rules the definition of compensable partial unemployment; that the benefit rate is equal to five-sevenths of the difference between earnings and 70 per cent of the full-time weekly wage, when 70 per cent is the degree of incidence; that it is equal to five-sixths of the difference between earnings and 60 per cent of the full-time weekly wage, when the 60 per cent degree is used; and that the rate is equal to five-fifths, or the whole difference, between actual earnings and the total unemployment benefit rate, when the fifty per cent degree is used.

It will be recognized that the 60 per cent degree benefit rate is the one defined in the Draft Bill of January 1937 and of the laws of a number of states which provide that the benefit rate for partial unemployment be fixed at the difference between the benefit rate for total unemployment and five-sixths of the actual earnings.

It was assumed that in no case would a worker receive in benefits for partial unemployment more than one-sixth of his annual earnings. For this reason, the earnings record of each individual worker was reviewed, and all weeks of partial unemployment for which no benefits could have been claimed due to the one-sixth limitation were disregarded.² The remaining weeks of partial unemployment are summarized in Table XIII. A comparison of this table with Table VI in the preceding section would show how many man-weeks of partial unemployment are not compensable due to the one-sixth limitation and the distribution of these weeks among the workers.

The expected number of weekly benefit payments per worker becoming partially unemployed may be computed from Table XIII for any possible combination of waiting period requirements and maximum number of payments stipulated, by a partial summation of terms and a division of the established sum by the value of the first term which represents the total number of claimants. The formula is:

$$t = \frac{1}{N_1} \cdot \sum_{i=w+1}^{i=w+m} N_i$$

wherein the symbol t signifies the expected number of benefit checks per claimant, N_1 the number of claimants classified by

² At this point, it may be advisable to refer to the elimination, from the sample study, of the records of 1,076 workers who had remained attached to the investigated payrolls for a brief period of time only. Some of these workers may have been affected by partial unemployment; and, since this was not taken into account, the actuarial estimates fall short of the true rates. Furthermore, even among those workers whose records were used, there is a certain proportion whose record does not cover the complete year. Since these workers may have incurred partial unemployment during the portions of the year not covered by the record, the results of the application of the provisions relating to waiting period, maximum number of benefits, and the 1-6 of earnings limitation of total benefit amounts might have been different if a complete record for these workers had been utilized.

TABLE XIII

Duration of Compensable Partial Unemployment, Book and Job Printing Industry, New York City, 1936

| Number of Weeks | Number of Workers Who Suffered Partial Unemployment for Stated Number of Weeks, by Degree of Incidence | | | |
|---------------------------------------|--|-------------|-------------|-------------|
| | 80 per cent | 70 per cent | 60 per cent | 50 per cent |
| 1 or more | 394 | 341 | 283 | 249 |
| 2 or more | 342 | 275 | 211 | 161 |
| 3 or more | 315 | 235 | 167 | 111 |
| 4 or more | 286 | 200 | 129 | 87 |
| 5 or more | 262 | 167 | 102 | 66 |
| 6 or more | 240 | 143 | 90 | 51 |
| 7 or more | 216 | 120 | 71 | 41 |
| 8 or more | 191 | 106 | 57 | 32 |
| 9 or more | 169 | 89 | 49 | 26 |
| 10 or more | 151 | 78 | 45 | 21 |
| 11 or more | 136 | 70 | 36 | 19 |
| 12 or more | 122 | 60 | 32 | 14 |
| 13 or more | 117 | 52 | 29 | 9 |
| 14 or more | 114 | 47 | 23 | 8 |
| 15 or more | 103 | 42 | 21 | 7 |
| 16 or more | 93 | 41 | 20 | 6 |
| 17 or more | 89 | 41 | 17 | 5 |
| 18 or more | 82 | 37 | 14 | 5 |
| 19 or more | 78 | 32 | 12 | 4 |
| 20 or more | 73 | 29 | 10 | 4 |
| 21 or more | 65 | 28 | 10 | 3 |
| 22 or more | 62 | 26 | 10 | 3 |
| 23 or more | 60 | 25 | 9 | 3 |
| 24 or more | 57 | 24 | 8 | 3 |
| 25 or more | 55 | 22 | 8 | 2 |
| 26 or more | 51 | 21 | 6 | 1 |
| 27 or more | 49 | 20 | 5 | 1 |
| 28 or more | 45 | 18 | 4 | 1 |
| 29 or more | 41 | 18 | 2 | 1 |
| 30 or more | 39 | 18 | 2 | 1 |
| 31 or more | 36 | 16 | 2 | 1 |
| 32 or more | 35 | 15 | 2 | 1 |
| 33 or more | 31 | 11 | 2 | |
| 34 or more | 27 | 8 | 1 | |
| 35 or more | 25 | 6 | | |
| 36 or more | 22 | 4 | | |
| 37 or more | 19 | 3 | | |
| 38 or more | 16 | 1 | | |
| 39 or more | 13 | 1 | | |
| 40 or more | 9 | 1 | | |
| 41 or more | 6 | 1 | | |
| 42 or more | 4 | 1 | | |
| 43 or more | 4 | 1 | | |
| 44 or more | 2 | 1 | | |
| 45 or more | 1 | | | |
| 50 | 1 | | | |
| Total number of compensable man-weeks | 4,352 | 2,495 | 1,489 | 947 |

length of partial unemployment in Table XIII, i the numerical order of frequencies corresponding to the left-hand stub of Table XIII, w the number of weeks representing the required waiting period, and m the statutory flat maximum number of benefits.

For example, 2.64 weekly payments for a 60 per cent degree of incidence with a maximum of 16 payments and a waiting period of three weeks is obtained as follows. Table XIII shows that of a total of 1,489 man-weeks of partial unemployment 661 man-weeks will not be compensable because they constitute the waiting period and 81 man-weeks will not be compensable because they occurred after the sixteenth compensable week of partial unemployment. This leaves 747 compensable weeks for 283 workers who suffered at least one week of partial unemployment in 1936. The average

TABLE XIV

Expected Number of Weekly Partial Unemployment
Benefit Payments per Worker Becoming Partially Unem-
ployed, Book and Job Printing Industry, New York City,
1936

| Waiting Period (Weeks) | Maximum Number of Weeks of Benefits | | |
|----------------------------------|-------------------------------------|-------|-------|
| | 16 | 32 | 50 |
| Degree of Incidence: 80 per cent | | | |
| None | 8.25 | 10.58 | 11.05 |
| One | 7.48 | 9.66 | 10.05 |
| Two | 6.82 | 8.86 | 9.18 |
| Three | 6.22 | 8.12 | 8.38 |
| Four | 5.68 | 7.45 | 7.65 |
| Five | 5.18 | 6.84 | 6.99 |
| Six | 4.72 | 6.27 | 6.38 |
| Degree of Incidence: 70 per cent | | | |
| None | 6.06 | 7.20 | 7.32 |
| One | 5.18 | 6.23 | 6.32 |
| Two | 4.48 | 5.45 | 5.51 |
| Three | 3.89 | 4.78 | 4.82 |
| Four | 3.38 | 4.21 | 4.23 |
| Five | 2.98 | 3.72 | 3.74 |
| Six | 2.63 | 3.31 | 3.33 |
| Degree of Incidence: 60 per cent | | | |
| None | 4.82 | 5.25 | 5.26 |
| One | 3.88 | 4.26 | 4.26 |
| Two | 3.19 | 3.52 | 3.52 |
| Three | 2.64 | 2.93 | 2.93 |
| Four | 2.22 | 2.47 | 2.47 |
| Five | 1.89 | 2.11 | 2.11 |
| Six | 1.61 | 1.79 | 1.79 |
| Degree of Incidence: 50 per cent | | | |
| None | 3.65 | 3.80 | 3.80 |
| One | 2.67 | 2.80 | 2.80 |
| Two | 2.04 | 2.16 | 2.16 |
| Three | 1.61 | 1.71 | 1.71 |
| Four | 1.28 | 1.36 | 1.36 |
| Five | 1.02 | 1.10 | 1.10 |
| Six | .83 | .89 | .89 |

number of payments per worker becoming partially unemployed is therefore 2.64. Table XIV is based on the possible range of from 0 to 6 weeks of waiting period and on three possible maxima of benefit payments—16, 32, and 50 weeks.

Table XIV, read in conjunction with Table XII, defines the partial unemployment benefits which the average worker in the book and job printing industry in New York City might have received had any one of the many possible plans of partial unemployment insurance been in operation in the year 1936. For example, he might have received, upon becoming partially unemployed, benefits of \$3.44 a week for a period of 11.05 weeks under the most liberal, 80 per cent degree, no waiting period, 50-week maximum plan. This would have brought him a total sum of \$38.01. Or he might have received under the least liberal, 50 per cent degree, 6-week waiting period, 16-week maximum plan, an insurance income of \$4.55 a week for a period of .83 weeks; this would have given him a total yearly income of \$3.78 in compensation of the partial unemployment he had incurred. If the recommendations of the Draft Bill of January 1937 had been followed, he would have received the sum of \$4.13 for 2.47 weeks, a total of \$10.20.

The cost of partial unemployment insurance, in proportion to the base of contributions, is computed by means of the formula

$$c = 100 \cdot \frac{r \cdot t \cdot B}{A}$$

wherein the symbol c represents the cost (in per cent), r the partial unemployment rate, t the expected number of weeks of benefits, B the weekly benefit rate, and A the average annual wage of an insured worker. The product $t \cdot B$ tells how much a worker who becomes partially unemployed may expect to receive from the unemployment insurance fund, on the average, in the course of one year; when this product is multiplied by r , the whole product $r \cdot t \cdot B$ defines the sum which a worker exposed to the hazard of partial unemployment may expect to receive in the course of one year. When this product is divided by the average worker's annual wage, the quotient is the cost of partial unemployment insurance per unit of annual payroll.

Table III on page 22 presents estimates of the cost for some of the possible plans of partial unemployment insurance. It suggests that the most liberal plan of partial unemployment insurance for the book and job printing industry in New York City would have cost, in 1936, 1.3 per cent of the payroll, or about 43 per cent of the total contributions received from that industry (at the rate of 3 per cent of the annual insured payroll). The least liberal plan would have cost .1 per cent.

These estimates are based on the supposition that a separate waiting period would be served for partial unemployment. However, most states and the Draft Bills of the Social Security Board

provide for an interchangeable uniform waiting period for both partial and total unemployment, one week of total unemployment being reckoned as equivalent to two weeks of partial unemployment. It is obvious that the net cost of partial unemployment insurance must be greater under this scheme than under the separate waiting period scheme because the existence of weeks of partial unemployment tends to shorten the waiting period for total unemployment insurance and thus makes compensable weeks of total unemployment which, in the absence of partial unemployment insurance, would be counted as components of the waiting period for total unemployment benefits.

In order to test the significance of this alternative partial unemployment insurance plan, it was necessary to make an assumption which would permit an analysis of the records of partially unemployed workers from the point of view of total unemployment also. The assumption is that all weeks of temporary separation from a payroll are to be regarded as weeks of total unemployment, and that all weeks of permanent separation from the payroll are to be disregarded. Naturally, any estimates based on such an assumption are too low to be classed as estimates of the duration of total unemployment, especially as they concern only those workers who were partially unemployed at some time of the year, and not others. But they may serve to define at least the lowest possible limit of additional cost consequent upon an introduction of a partial unemployment insurance scheme of the interchangeable waiting period variety. In estimating the incidence and cost of total unemployment among the workers who experienced partial unemployment, the records were adjusted for the one-sixth limitation of the total amount of benefits for total unemployment, disregarding the benefit drain of partial unemployment.

TABLE XV

Rates of Partial and Total Unemployment, Man-weeks of Partial and Total Unemployment, and Rates of Benefit per Compound Week of Partial-Total Unemployment, Book and Job Printing Industry, New York City, 1936

| Rate | Degree of Incidence of Partial Unemployment | | | |
|---|---|-------------|-------------|-------------|
| | 80 per cent | 70 per cent | 60 per cent | 50 per cent |
| Rate of partial unemployment | .571 | .494 | .410 | .361 |
| Rate of total unemployment | .264 | .246 | .229 | .216 |
| Compensable man-weeks of partial unemployment | 4,352 | 2,495 | 1,489 | 947 |
| Compensable man-weeks of total unemployment | 1,124 | 1,089 | 1,044 | 993 |
| Rate of benefits, per week of partial unemployment | \$3.44 | \$3.68 | \$4.13 | \$4.55 |
| Rate of benefits, per week of total unemployment | \$13.58 | \$13.57 | \$13.60 | \$13.62 |
| Rate of benefits, per week of compound partial-total unemployment | \$4.58 | \$5.13 | \$5.69 | \$6.08 |

It should perhaps be reiterated that the rates of total unemployment shown in Table XV refer only to those workers who also happened to be partially unemployed. (An over-all rate of total unemployment for the book and job industry would certainly exceed unity.) The rates of benefits per week of compound partial-total unemployment were computed by averaging the rates of total and partial benefits, in proportion to the man-weeks lost or partially lost, giving the weeks of partial unemployment half the weight given to weeks of total unemployment.³

TABLE XVI
Duration of Compensable Compound Partial-Total
Unemployment, Book and Job Printing Industry, New
York City, 1936

| Number of Compound Weeks | Number of Workers Who Suffered Partial and Total Unemployment for Stated Number of Compound Weeks, by Degree of Incidence | | | |
|-----------------------------|---|-------------|-------------|-------------|
| | 80 per cent | 70 per cent | 60 per cent | 50 per cent |
| 1 or more | 394 | 341 | 283 | 248 |
| 2 or more | 362 | 301 | 242 | 198 |
| 3 or more | 347 | 274 | 211 | 172 |
| 4 or more | 317 | 241 | 177 | 144 |
| 5 or more | 303 | 221 | 162 | 135 |
| 6 or more | 281 | 202 | 149 | 125 |
| 7 or more | 259 | 184 | 140 | 122 |
| 8 or more | 246 | 177 | 134 | 117 |
| 9 or more | 234 | 168 | 130 | 109 |
| 10 or more | 220 | 157 | 124 | 102 |
| 11 or more | 206 | 150 | 119 | 98 |
| 12 or more | 196 | 141 | 114 | 94 |
| 13 or more | 191 | 136 | 111 | 93 |
| 14 or more | 189 | 129 | 105 | 88 |
| 15 or more | 180 | 122 | 99 | 79 |
| 16 or more | 172 | 116 | 94 | 75 |
| 17 or more | 165 | 109 | 91 | 72 |
| 18 or more | 158 | 107 | 86 | 68 |
| 19 or more | 153 | 102 | 79 | 65 |
| 20 or more | 145 | 96 | 77 | 61 |
| 21 or more | 135 | 91 | 72 | 57 |
| 22 or more | 130 | 89 | 70 | 56 |
| 23 or more | 128 | 84 | 63 | 51 |
| 24 or more | 120 | 78 | 62 | 50 |
| 25 or more | 115 | 76 | 59 | 48 |
| 26 or more | 106 | 69 | 49 | 40 |
| 27 or more | 97 | 64 | 46 | 36 |
| 28 or more | 92 | 60 | 44 | 33 |
| 29 or more | 89 | 59 | 40 | 32 |
| 30 or more | 86 | 58 | 36 | 29 |
| 31 or more | 79 | 52 | 33 | 27 |
| 32 or more | 74 | 49 | 31 | 25 |
| 33 or more | 67 | 44 | 28 | 20 |

³ The formula is

$$B_c = \frac{B_t \cdot T + B_p \cdot P}{2T + P}$$

where B_c = benefit rate per compound week, B_t = benefit rate for week of total unemployment, B_p = benefit rate for week of partial unemployment, T = number of man-weeks of total unemployment, and P = number of man-weeks of partial unemployment.

TABLE XVI—(Continued)

Duration of Compensable Compound Partial-Total Unemployment, Book and Job Printing Industry, New York City, 1936

| Number of Compound Weeks | Number of Workers Who Suffered Partial and Total Unemployment for Stated Number of Compound Weeks, by Degree of Incidence | | | |
|---|---|-------------|-------------|-------------|
| | 80 per cent | 70 per cent | 60 per cent | 50 per cent |
| 34 or more | 62 | 38 | 25 | 20 |
| 35 or more | 59 | 35 | 20 | 17 |
| 36 or more | 56 | 32 | 19 | 17 |
| 37 or more | 53 | 27 | 19 | 14 |
| 38 or more | 46 | 25 | 19 | 14 |
| 39 or more | 42 | 25 | 19 | 12 |
| 40 or more | 38 | 22 | 16 | 10 |
| 41 or more | 32 | 20 | 13 | 9 |
| 42 or more | 27 | 15 | 10 | 6 |
| 43 or more | 24 | 13 | 10 | 6 |
| 44 or more | 17 | 9 | 6 | 5 |
| 45 or more | 16 | 7 | 5 | 4 |
| 46 or more | 13 | 7 | 5 | 5 |
| 47 or more | 11 | 7 | 5 | 4 |
| 48 or more | 9 | 7 | 5 | 4 |
| 49 or more | 8 | 6 | 5 | 4 |
| 50 or more | 8 | 6 | 3 | 3 |
| 51 or more | 6 | 4 | 3 | 2 |
| 52 or more | 5 | 4 | 2 | 1 |
| 53 or more | 4 | 3 | 1 | 1 |
| 54 or more | 3 | 2 | 1 | 1 |
| 55 or more | 3 | 2 | 1 | 1 |
| 56 or more | 3 | 2 | 1 | 1 |
| 57 or more | 3 | 2 | 1 | 1 |
| 58 or more | 2 | 2 | 1 | 1 |
| 59 or more | 2 | 1 | 1 | |
| 60 or more | 2 | 1 | 1 | |
| 61 or more | 2 | 1 | | |
| 62 or more | 2 | 1 | | |
| 63 or more | 1 | | | |
| 64 or more | 1 | | | |
| 65 or more | 1 | | | |
| 66 or more | 1 | | | |
| 67 or more | 1 | | | |
| 68 | 1 | | | |
| Total number of com- pound man-weeks | 6,600 | 4,673 | 3,577 | 2,933 |

Table XVI could be used, in the same manner as Table XIII, to compute the expected number of benefit payments for any possible combination of waiting period and maximum duration of benefits requirements. However, only one combination, that coming closest to the provision of the New York Law, is of any interest in this connection.

TABLE XVII

Expected Number of Weekly Benefit Payments for Both Total and Partial Unemployment, per Worker Becoming Partially Unemployed, Given a Three-Week Waiting Period and a Sixteen-Week Maximum (Two Weeks of Partial Unemployment to Count as One Week of Total Unemployment), Book and Job Printing Industry, New York City, 1936

| Degree of Incidence | Benefit Rate per Compound Week | Expected Number of Compound Weeks |
|---------------------|--------------------------------|-----------------------------------|
| 80 per cent | \$4.58 | 10.93 |
| 70 per cent | \$5.13 | 8.57 |
| 60 per cent | \$5.69 | 7.91 |
| 50 per cent | \$6.08 | 7.35 |

No valid estimate can be made of the cost of this plan of insurance, but an estimate of the additional cost, as compared with the plan based on separate waiting periods for partial and total

TABLE XVIII

Duration of Compensable Total Unemployment Suffered by Partially Unemployed Workers, Book and Job Printing Industry, New York City, 1936

| Number of Weeks | Number of Workers Who Suffered Total Unemployment for Stated Number of Weeks By Degree of Incidence of Partial Unemployment | | | |
|---------------------------|---|-------------|-------------|-------------|
| | 80 per cent | 70 per cent | 60 per cent | 50 per cent |
| 1 or more | 182 | 170 | 158 | 149 |
| 2 or more | 135 | 131 | 124 | 116 |
| 3 or more | 120 | 118 | 113 | 106 |
| 4 or more | 107 | 105 | 100 | 93 |
| 5 or more | 94 | 92 | 87 | 82 |
| 6 or more | 83 | 81 | 77 | 74 |
| 7 or more | 70 | 68 | 65 | 62 |
| 8 or more | 59 | 57 | 56 | 54 |
| 9 or more | 54 | 52 | 51 | 49 |
| 10 or more | 42 | 40 | 39 | 37 |
| 11 or more | 36 | 35 | 34 | 32 |
| 12 or more | 31 | 30 | 30 | 29 |
| 13 or more | 24 | 23 | 23 | 23 |
| 14 or more | 20 | 20 | 20 | 20 |
| 15 or more | 18 | 18 | 18 | 18 |
| 16 or more | 11 | 11 | 11 | 11 |
| 17 or more | 9 | 9 | 9 | 9 |
| 18 or more | 8 | 8 | 8 | 8 |
| 19 or more | 6 | 6 | 6 | 6 |
| 20 or more | 4 | 4 | 4 | 4 |
| 21 or more | 3 | 3 | 3 | 3 |
| 22 or more | 2 | 2 | 2 | 2 |
| 23 or more | 2 | 2 | 2 | 2 |
| 24 or more | 1 | 1 | 1 | 1 |
| 25 or more | 1 | 1 | 1 | 1 |
| 26 or more | 1 | 1 | 1 | 1 |
| 27 | 1 | 1 | 1 | 1 |
| Total number of man-weeks | 1,124 | 1,089 | 1,044 | 993 |

unemployment benefits, is feasible. For this purpose it is necessary to establish an estimate of the cost of total unemployment insurance handled separately from partial unemployment insurance, subtract it from the combined plan cost, and contrast the difference with the cost of the independent partial unemployment insurance plan. The estimate obtained in this manner is subject to certain limitations due to the fact that a much larger proportion of the total load of partial than of total unemployment is taken into account.

The average duration of compensable total unemployment is shown in Table XIX. This estimate, however, has no intrinsic meaning, other than that of indicating an absolute minimum.

TABLE XIX

Expected Number of Weekly Benefit Payments for Total Unemployment, per Worker Becoming Totally and Partially Unemployed, Given a Three-Week Waiting Period and a Sixteen-Week Maximum, Book and Job Printing Industry, New York City, 1936

| Degree of Incidence | Benefit Rate | Expected Number of Weeks |
|---------------------|--------------|--------------------------|
| 80 per cent | \$13.58 | 3.69 |
| 70 per cent | \$13.57 | 3.85 |
| 60 per cent | \$13.60 | 4.01 |
| 50 per cent | \$13.62 | 4.07 |

The cost of the interchangeable waiting period plan is analyzed in the following table:

TABLE XX

Differential Cost of the Compound Waiting Period Plan of Partial Unemployment Insurance as Compared With the Cost of the Separate Waiting Period Plan of Partial Unemployment Insurance, in Per Cent of the Insured Payroll, Given a Three-Week Waiting Period and a Sixteen-Week Maximum (Two Weeks of Partial Unemployment to Count as One Week of Total Unemployment), Book and Job Printing Industry, New York City, 1936.

| Plan of Insurance | Degree of Incidence | | | |
|---|---------------------|-------------|-------------|-------------|
| | 80 per cent | 70 per cent | 60 per cent | 50 per cent |
| Partial and total (compound waiting period) | 1.7 | 1.3 | 1.1 | 1.0 |
| Total unemployment (separate waiting period) | .8 | .8 | .7 | .7 |
| Balance—net cost of partial insurance | .9 | .5 | .4 | .3 |
| Partial unemployment (separate waiting period) | .7 | .4 | .2 | .1 |
| Balance—differential cost of compound waiting period plan | .2 | .1 | .2 | .2 |

It is to be noted that the interchangeable waiting period plan increases the cost of partial unemployment insurance by about 25 to 200 per cent, according to the degree of incidence defined as compensable. For the same net cost of partial unemployment insurance as disclosed in Table XX in connection with the three-week waiting period, sixteen-week maximum plan (two weeks of partial unemployment being considered equivalent to one week of total unemployment), a number of other and possibly more desirable combinations of insurance could be achieved on the separate waiting period principle. (See Table III on page 22.)

In Wisconsin, partial unemployment will be compensated, beginning in 1938, in proportion to the difference between actual earnings and the total unemployment benefit rate which is based on average earnings. There is a separate three-week waiting period and no operative limit to the number of compensable weeks (other than the 1/8 of earnings limitation). Workers whose average wage does not exceed ten dollars a week are not entitled to partial unemployment benefits. Under such a plan, if applied to the book and job printing industry in New York City in 1936, with the limitation of benefits to workers whose average earnings exceed \$14, only 216 workers would have been eligible for partial unemployment benefits; and of these only 60 would have "survived" the waiting period. This compares with the New York figures of 249 and 87 (on the basis of the statutory total unemployment benefit rate, with no exclusions for low wage workers, three weeks waiting period, no flat maximum of benefits, and 50 per cent degree of compensable partial unemployment). Only 651 man-weeks would have been considered "lost," as against 947; and the statutory weekly wage of the workers affected would have stood at only \$25.73 instead of \$26.87. The average duration of partial unemployment would have been 3.0 weeks instead of 3.9, and the average benefit rate per week would have been \$3.84 instead of \$4.55.

The foregoing illustration lends special interest to another proposed plan of partial unemployment insurance. This is a so-called "quarterly plan." Under this plan earnings in each calendar quarter are compared with earnings in the highest quarter of the year. If in any quarter the worker's total earnings fall below 80 per cent of this highest quarter's figure, he becomes eligible for partial unemployment benefits representing the difference between actual earnings and 80 per cent of the highest earnings. However, if the worker has been totally unemployed in that quarter, it is assumed that had he been employed he would have earned a sum equal to his full-time weekly wage in each week of total unemployment, and a corresponding amount of presumed earnings is added to his actual quarterly earnings before the partial unemployment benefit rate is computed. This plan, involves of course, no required waiting period and no maximum benefit payment (other than that defined by the one-sixth of earnings limitation).

TABLE XXI

Compensable Partial Unemployment According to the
Quarterly Earnings Plan of Partial Unemployment In-
surance, Book and Job Printing Industry, New York City,
1936

| | |
|---|---------|
| Rate of partial unemployment | .059 |
| Average duration (calendar quarters) | 1.39 |
| Average benefit rate (per worker per quarter) | \$30.79 |
| Cost, in per cent of insured annual payroll | .15 |

Table XXI suggests that the quarterly earnings plan of partial unemployment insurance costs as little as the least liberal plan of those previously investigated. Only 41 workers, of the 1,737 whose records were analyzed, would have been eligible for benefits under this plan. Thirty of these 41 would have received checks covering partial unemployment in one quarter, six in two quarters, and five in three. The largest sum going to an individual worker would have amounted to \$168.99, the smallest to \$1.65, the average per beneficiary being \$42.81.

The quarterly earnings plan is somewhat comparable (for the book and job printers constituting the analyzed sample) to a plan of partial unemployment insurance providing weekly benefits at the rate of the difference between actual earnings and the total unemployment benefit rate for an indefinite number of weeks (subject only to the one-sixth of annual earnings limitation) after a waiting period of six weeks of partial unemployment. By a coincidence, exactly 41 workers would have received benefits under either one of the two plans. However, the individuals would not have been the same, and the differences among them are instructive.

Of the 41 workers who would have qualified for benefits under the quarterly earnings plan, only 14 would have qualified under the weekly plan as well. The employment experience of the two partly overlapping groups of individuals is summarized in Table XXII. The groups are labeled the "Quarterly Group," the "Weekly Group," and the "Overlap Group."

TABLE XXII

Employment Experience of 68 Book and Job Printers,
New York City, 1936

| Description of Item | Quarterly | Group Weekly | Overlap |
|---|------------|-----------------|------------|
| Number of individuals | 41 | 41 | 14 |
| Average number of weeks worked | 48.2 | 36.6 | 46.4 |
| Per capita annual earnings | \$1,101.32 | \$928.39 | \$1,061.46 |
| Annual rate of average earnings | 1,200.91 | 1,330.92 | 1,208.17 |
| Average full-time weekly wage | 26.44 | 26.51 | 26.70 |
| Per capita annual receipts of partial unemployment benefits: | | | |
| (a) Quarterly earnings plan | \$42.81 | \$15.74 | \$46.09 |
| (b) Weekly earnings plan | 23.69 | 50.46 | 69.37 |

Table XXII suggests that partial unemployment benefits, based on the quarterly earnings plan, would tend to go chiefly to workers who were not greatly affected by spells of total unemployment. This circumstance is due to the fact that, under this plan, it is supposed that a totally unemployed worker would have earned his statutory full-time weekly wage had he been employed.

SECTION 4. PARTIAL UNEMPLOYMENT IN THIRTY-FOUR MAJOR INDUSTRIES IN NEW YORK CITY IN 1936

As previously stated, a significant exploration of the problem of partial unemployment must begin with a survey of the incidence of this hazard in individual homogeneous lines of business. What has been done for the book and job printing industry should be done for each important industry group in the economy of the State of New York.

There is, however, the question of what constitutes a homogeneous industry group. Obviously, the concept of homogeneity is relative to the purpose of the study in which homogeneous universes are analyzed. For the purpose of a study of partial unemployment, any group is homogeneous if its component parts react similarly by exhibiting the same effects in the field of employment to the secular, seasonal, and cyclical economic influences. For example, it is conceivable that the manufacture of shoes and the mining of coal could be lumped together to form a homogeneous group—homogeneous from the point of view of the incidence of partial unemployment. It is conceivable, but it is not very likely. A technological or a market approach to the problem is safer, at least in the course of the initial stages of the inquiry.

There is also the question of a proper criterion of the importance of a given group. Here, again, the purposes of the investigation should define the answer. Presumably any group which is affected by partial unemployment is of some importance. The best gauge of this is the probable cost of partial unemployment benefits. But this can only be known at the end of the study. In the meantime, all that can be done is to judge the importance of each group by its mere size, that is, by the volume of employment which it normally provides.

Had it been possible to obtain from the data on file in the Division of Placement and Unemployment Insurance a detailed industrial breakdown of the employers covered by the Unemployment Insurance Law, such information could have been used in determining the relative size of the several industry groups in New York State. In the absence of such a detailed analysis it was decided to use the returns of the Census of Manufactures for 1935, the Census of Business for 1935, and the Census of Electrical Industries for 1932.

Admittedly, this procedure is not altogether satisfactory. The U. S. Census industry classification is sometimes not as detailed as might be desired. Moreover the total volume of employment

TABLE XXIII
Employment in Important Groups of Industry or Business, New York State, 1935

| Rank | Industry | Employment |
|------|---|------------|
| 1 | Manufacture of women's and children's apparel ¹ | 151,624 |
| 2 | Restaurants, cafeterias, lunch rooms ³ | 92,761 |
| 3 | Department stores ³ | 64,898 |
| 4 | Banks ⁴ | 61,645 |
| 5 | Telephone ¹¹ | 60,000 |
| 6 | Manufacture of men's and boys' clothing | 49,161 |
| 7 | Electric railways, operating companies ¹⁰ | 49,000 |
| 8 | Year-round hotels ⁸ | 48,090 |
| 9 | Financial institutions, excepting banks ⁴ | 48,066 |
| 10 | Printing and publishing, newspaper and periodical ¹ | 47,604 |
| 11 | Insurance carriers, home offices ⁴ | 45,204 |
| 12 | Manufacture of bread and other bakery products ¹ | 38,667 |
| 13 | Printing and publishing, book, music, and job ¹ | 38,348 |
| 14 | Insurance carriers, branch offices ⁴ | 36,887 |
| 15 | Manufacture of boots and shoes, other than rubber ¹ | 36,167 |
| 16 | Power laundries ⁵ | 34,627 |
| 17 | Manufacture of knit goods ¹ | 29,607 |
| 18 | Manufacture of electrical machinery, apparatus, and supplies ¹ | 29,161 |
| 19 | Combination food stores (groceries and meats) ³ | 29,102 |
| 20 | Office buildings operation ¹⁴ | 28,743 |
| 21 | Wholesaling of dry goods (specialty lines) ² | 28,511 |
| 22 | Grocery stores (without meats) ³ | 24,483 |
| 23 | Wholesaling of groceries and foods (specialty lines) ² | 23,006 |
| 24 | Wholesaling of machinery, equipment, and supplies ² | 22,677 |
| 25 | Drinking places ³ | 22,031 |
| 26 | Women's ready-to-wear stores ³ | 21,212 |
| 27 | Central electric light and power stations ¹² | 21,000 |
| 28 | Retailing of motor vehicles (new) ³ | 20,372 |
| 29 | Variety, 5 and 10c, to \$1.00 stores ³ | 19,644 |
| 30 | Wholesaling of clothing and furnishings ² | 19,178 |
| 31 | Manufacture of furniture, incl. store and office fixtures ¹ | 19,118 |
| 32 | Motor trucking for hire ⁹ | 18,236 |
| 33 | Manufacture of machinery, not elsewhere classified ¹ | 17,460 |
| 34 | Wholesaling of farm products — consumer goods ² | 16,511 |
| 35 | Motion picture theatres ⁷ | 15,436 |
| 36 | Filling stations ³ | 14,940 |
| 37 | Dairy products and milk dealers ³ | 14,924 |
| 38 | Manufacture of men's collars, shirts, and work clothing ¹ | 14,886 |
| 39 | Beauty parlors ⁶ | 14,231 |
| 40 | Manufacture of carpets and rugs ¹ | 14,117 |
| 41 | Steel works and rolling mill products ¹ | 14,116 |
| 42 | Building contractors ¹³ | 14,047 |
| 43 | Manufacture of paper ¹ | 13,744 |
| 44 | Manufacture of paper boxes ¹ | 12,692 |
| 45 | Retail meat markets ³ | 12,411 |
| 46 | Manufacture of motor vehicle bodies and parts ¹ | 12,365 |
| 47 | Fuel and ice dealers ³ | 12,332 |
| 48 | Insurance agents and brokers ⁴ | 12,220 |
| 49 | Telegraph ¹¹ | 12,000 |
| 50 | Drug stores with fountain ³ | 11,657 |
| 51 | Barber shops ⁶ | 10,989 |
| 52 | Heating and plumbing contractors ¹³ | 10,808 |

¹ Census of Manufactures, 1935, *Industry Bulletins*

² Census of Business, 1935, *Wholesale Distribution*, Vol. V

³ Census of Business, 1935, *Retail Distribution*, Vol. V

⁴ Census of Business, 1935, *Personnel and Payroll in Industry and Business, and Farm Personnel*

⁵ Census of Manufactures, 1935, *Power Laundries*

⁶ Census of Business, 1935, *Service Establishments*, Vol. III

⁷ Census of Business, 1935, *Places of Amusement*

⁸ Census of Business, 1935, *Hotels* ⁹ Census of Business, 1935, *Motor Trucking for Hire*

¹⁰ Estimated on the basis of the *Census of Electrical Industries, 1932, Electric Railways*

¹¹ Estimated on the basis of the *Census of Electrical Industries, 1932, Telephones and Telegraphs*

¹² Estimated on the basis of the *Census of Electrical Industries, 1932, Central Electric Light and Power Stations*

¹³ Census of Business, 1935, *Construction Industry*, Vol. I

¹⁴ Census of Business, 1935, *Non-Profit Organizations, Office Buildings, Miscellaneous*

in New York State in 1935 was somewhat in excess of the insured employment. This defect of the data summarized in Table XXIII is serious when one compares the relative size of such groups as the manufacture of machinery with barber shops or beauty parlors. Thus the ranking of the groups is not necessarily the rank they would have for purposes of unemployment insurance. This defect is, however, partly offset in some cases by the admitted incompleteness of the census enumeration, particularly for smaller establishments. In other fields, such as construction, the incompleteness of the census distorts the proper relation even more. Furthermore, it should be noted that Table XXIII excludes several important groups such as steam railroads for which no reliable data on employment in the State are available.

Table XXIII focuses attention on the large industry groups which no analysis of the problem of partial unemployment in New York State should overlook. There are fifty-two of them; some of these require further breakdown because as they stand they are not sufficiently homogeneous for our purposes. It was impossible to cover all these industries in the same manner in which the book and job industry was studied because the necessary source materials were not available. The duplicate payroll files of the Division of Placement and Unemployment Insurance contain an adequate number of records for only a few industries in addition to book and job printing. It was, therefore, deemed advisable to develop a makeshift method of measuring the incidence and cost of partial unemployment in at least the most important industry groups; a method in which the results of the complete analysis of the book and job industry could be used as a bench mark in estimating the incidence of unemployment in other industry groups.

The method devised relied mainly upon the information for each pay period in 1936 as furnished by covered employers on Form UI-C1, viz., the number of insured employees in each plant, total number of hours worked by these employees, and their total earnings. This material could not answer the question of the incidence of partial unemployment so far as individual workers were concerned, but it could throw some light on the fortunes of individual plants. It could be used to derive estimates of the extent, duration, and intensity of partial unemployment on a plant-unit basis.

Material was compiled for a sample of 100 plants in each of 34 industry groups adequately represented in the files of the metropolitan office of the Division of Placement and Unemployment Insurance. These data are presented in Table XXIV. It should be noted that many of these industry groups were established on the basis of a much more detailed industrial classification than that used by the various industrial censuses. From the plant data on weekly employment and payrolls an average wage per employee was computed, and from the resulting series of fifty-two figures the average full-time weekly wage was determined in accordance with the definition contained in the New York State Unemployment Insurance Law. Such an average full-time weekly

TABLE XXIV

Incidence of Partial Unemployment in 34 Important Homogeneous Industry Groups, Metropolitan Area of New York State, 1936

| Industry — Group | Extent ¹ (Per cent) | Duration ² (Weeks) | Intensity ³ (Per cent) | Overall Measure of Incidence ⁴ |
|--|-----------------------------------|----------------------------------|--------------------------------------|--|
| CONSTRUCTION | | | | |
| Building construction, general contractors | 94.6 | 13.6 | 13.6 | 1.75 |
| Heating and plumbing contractors | 86.0 | 13.9 | 11.7 | 1.40 |
| MANUFACTURING | | | | |
| Bread and bakery products | 40.0 | 8.6 | 11.8 | .41 |
| Knit goods, outerwear | 96.0 | 19.0 | 17.2 | 3.14 |
| Men's collars, shirts and underwear | 66.2 | 11.2 | 9.1 | .67 |
| Men's and boys' clothing | 64.0 | 14.5 | 16.1 | 1.49 |
| Women's coats, suits, and skirts | 91.0 | 15.7 | 21.4 | 3.06 |
| Women's dresses | 94.0 | 16.0 | 16.4 | 2.47 |
| Women's underwear, pyjamas, and nightgowns | 93.0 | 15.2 | 11.8 | 1.67 |
| Women's hats | 97.0 | 25.2 | 21.0 | 5.13 |
| Furniture | 96.0 | 16.0 | 10.8 | 1.66 |
| Paper boxes (set-up) | 96.5 | 11.3 | 8.6 | .94 |
| Book and job printing | 45.0 | 7.9 | 6.7 | .24 |
| Printing, newspapers and periodicals | 36.6 | 10.4 | 8.3 | .32 |
| Boots and shoes | 97.3 | 22.1 | 16.2 | 3.48 |
| TRANSPORTATION | | | | |
| Motor trucking for hire | 60.5 | 15.9 | 12.4 | 1.19 |
| RETAIL TRADE | | | | |
| Department stores | 54.1 | 11.0 | 5.7 | .34 |
| Dairy products and milk dealers | 10.0 | 8.5 | 2.5 | .02 |
| Grocery stores (without meats) | 51.2 | 7.4 | 6.3 | .24 |
| Combination stores (grocery and meats) | 30.4 | 8.9 | 6.4 | .17 |
| Meat markets | 37.0 | 9.3 | 5.5 | .22 |
| Motor vehicles (new) | 84.0 | 11.2 | 7.6 | .72 |
| Women's ready-to-wear stores | 82.0 | 12.2 | 8.1 | .81 |
| Millinery stores | 91.4 | 16.9 | 10.9 | 1.68 |
| Drug stores | 39.0 | 7.4 | 5.5 | .16 |
| Fuel and ice stores | 76.7 | 13.7 | 8.5 | .89 |
| SERVICE | | | | |
| Year-round hotels | 18.0 | 8.7 | 6.0 | .09 |
| Restaurants, cafeterias, lunch rooms | 53.0 | 6.8 | 7.1 | .26 |
| Power laundries | 40.0 | 6.5 | 5.5 | .14 |
| Barber shops | 74.7 | 9.4 | 8.0 | .56 |
| Beauty parlors | 67.6 | 10.5 | 8.2 | .58 |
| Advertising agencies | 33.0 | 8.4 | 6.0 | .17 |
| Filling stations | 50.0 | 8.3 | 6.2 | .26 |
| AMUSEMENT | | | | |
| Motion picture theatres | 50.5 | 10.3 | 7.5 | .39 |

¹ The percentage of plants affected by partial unemployment

² The average number of weeks partially lost, per plant affected by partial unemployment

³ The average wage loss (beyond an initial 20 per cent loss) per week of partial unemployment expressed in per cent of the average weekly full-time wage

⁴ The product of extent, duration and intensity

wage is not, of course, the average of the full-time weekly wages of the individual workers, but it may nevertheless serve as a standard of reference for the plant as a whole. It was next found in how many of the fifty-two weeks of the year 1936 average wages fell below eighty per cent of the average full-time weekly wage; these were tallied as weeks of partial unemployment. The average loss per week of partial unemployment—the loss in excess of twenty per cent of the full-time weekly wage—was calculated to obtain a measure of intensity. These steps were followed for each plant separately. The whole sample (100 plants in each industry group) was then summarized. The number of plants affected by partial unemployment in at least one week of 1936, divided by 100, gave a figure comparable to the rate of partial unemployment; this was a measure of the extent of the incidence of partial unemployment. The average number of weeks partially lost per plant affected yielded a measure of average duration of partial unemployment in each particular industry. Finally, the average proportion of weekly wages lost—wages lost in excess of the initial loss of 20 per cent—to full-time weekly wages per plant affected furnished an indication of the average intensity of partial unemployment per week partially lost. The statistics thus arrived at are shown in Table XXIV.

The product of the extent, duration, and intensity measures stated in Table XXIV is of an uncertain significance when taken by itself. It could be regarded as a gauge of earnings lost on account of partial unemployment beyond a twenty per cent tolerance margin of which no account was taken. Thus the loss caused by partial unemployment in the millinery industry exceeds the equivalent of five full weeks of employment per year. Such an interpretation, however, is dangerously misleading. The plant average effaces the variation in the experience of individual workers, so that any resulting statistics reflect only the irrepressible highlights characterizing the situation of an industry as a whole. The product is somewhat more reliable if interpreted as a comparative measure. It affords a rough approximation to the comparative incidence of partial unemployment in the various industries. All industries were treated exactly alike when the computations were made, and however much may be left unsaid concerning the severity of partial unemployment in the millinery industry, for example, it can still be said that partial unemployment in this industry was, in 1936, many times as serious as it was in the book and job printing industry.

No undue importance should be attached to the exact numerical relationship of the over-all measure of incidence for one industry as compared with the similar measure for another industry. There are at least two reasons why the precise value of these rates are not trustworthy. First, it must be emphasized that the measure of the extent of partial unemployment is simply the unweighted quotient of the number of plants affected by partial unemployment to the total number of plants in the sample. If in one industry partial unemployment affected mainly the smaller

plants and in another mainly the larger plants, the measures of extent obtained for the two industries are not really comparable; the reliability of the rates of the over-all measures of incidence for the two industries is impaired accordingly. Second, the larger the plant the smaller is the effect of any individual worker's earnings upon the average earnings for the plant and hence the smaller is the chance, other conditions being equal, of the partial unemployment of individual workers being reflected in the averages for the plant. Therefore, an over-all measure of incidence for an industry in which most of the plants are small is not directly comparable with a similar measure for an industry in which most of the plants are large in terms of the employment which they provide.

Despite these limitations in the comparability of the over-all measures of incidence for the different industries, they must be used—in the absence of any other data—in arriving at a tentative estimate of the losses sustained through partial unemployment. It will be observed that the measure of incidence as such offers no clue to the amount of the losses in earnings or to the potential cost of partial unemployment benefits. It is only by using the experience in the book and job printing industry as a bench mark that a factor is obtained which bridges the gap between an over-all measure of incidence of partial unemployment and the probable cost of partial unemployment insurance. This is possible because the experience of the book and job printing industry was submitted to two different types of analysis: one, an intensive study of the payroll records, which yielded an actuarial estimate of the cost of partial unemployment insurance; the other, a study of the plant reports on weekly employment and earnings, which yielded an over-all measure of the incidence of partial unemployment, more or less comparable with similar measures of incidence obtained by the same measures used for the other thirty-three industry groups.

The cost of partial unemployment benefit payments depends, of course, on a specific plan of partial unemployment insurance. As has been shown in the preceding section, the cost of partial unemployment insurance for the book and job printing industry would have ranged, in 1936, from one-tenth of one per cent of the insured payroll to 1.3 per cent of the insured payroll, according to the liberality of the plan adopted. The cost used in the further discussion as a bench mark is three-tenths of one per cent of the insured payroll. It may be regarded as the cost of plans which are reasonably liberal and yet not too expensive. This is the cost of a plan paying benefits amounting to five-sixths of the difference between earnings and sixty per cent of the full-time weekly wage, for a maximum of 16 weeks with a two-week waiting period independent of the waiting period for total unemployment benefits. This is also the cost of a plan paying benefits amounting to the difference between earnings and fifty per cent of the full-time weekly wage for an indefinite number of weeks (subject to the one-sixth of annual earnings limitation) with a one-week inde-

TABLE XXV
Estimated Cost of Partial Unemployment Insurance in
34 Industry Groups, New York State, 1936

| Industry Group | Annual Payroll (000 Omitted) | Per cent (Payroll) | Cost in Dollars (000 Omitted) |
|---|------------------------------------|-----------------------|-------------------------------------|
| CONSTRUCTION | | | |
| Building construction, general contractors ¹ | 21,424 | 2.2 | 471 |
| Heating and plumbing contractors | 15,783 | 1.8 | 284 |
| MANUFACTURING | | | |
| Bread and bakery products ² | 53,312 | .5 | 267 |
| Knit goods, outerwear ³ | 27,782 | 4.0 | 1,111 |
| Men's collars, shirts, and underwear ² | 12,325 | .8 | 99 |
| Men's and boys' clothing ² | 58,326 | 1.9 | 1,108 |
| Women's coats, suits, and skirts ⁴ | 33,293 | 3.9 | 1,298 |
| Women's dresses ⁴ | 92,394 | 3.1 | 2,864 |
| Women's underwear, pyjamas, and nightgowns ⁴ | 27,070 | 2.1 | 568 |
| Women's hats ⁴ | 17,795 | 6.5 | 1,157 |
| Furniture ² | 22,436 | 2.1 | 471 |
| Paper boxes (set-up) ⁵ | 14,628 | 1.2 | 176 |
| Book and job printing ² | 65,447 | .3 | 196 |
| Printing, newspapers and periodicals ² | 100,295 | .4 | 401 |
| Boots and shoes ² | 39,578 | 4.4 | 1,741 |
| TRANSPORTATION | | | |
| Motor trucking for hire ⁶ | 24,245 | 1.5 | 364 |
| RETAIL TRADE | | | |
| Department stores ⁷ | 69,709 | .4 | 279 |
| Dairy products and milk dealers ⁷ | 27,037 | * | 8 |
| RETAIL TRADE | | | |
| Grocery stores (without meats) ⁷ | 24,297 | .3 | 73 |
| Combination stores (grocery and meats) ⁷ | 29,890 | .2 | 60 |
| Meat markets ⁷ | 14,096 | .3 | 42 |
| Motor vehicles (new) ⁷ | 28,317 | .9 | 255 |
| Women's ready-to-wear stores ⁷ | 21,212 | 1.0 | 212 |
| Millinery stores ⁷ | 3,108 | 2.1 | 65 |
| Drug stores ⁷ | 17,191 | .2 | 34 |
| Fuel and ice stores ⁷ | 19,318 | 1.1 | 212 |
| SERVICE | | | |
| Year-round hotels ⁸ | 40,168 | .1 | 40 |
| Restaurants, cafeterias, lunchrooms ⁷ | 72,654 | .3 | 218 |
| Power laundries ⁹ | 34,672 | .2 | 69 |
| Barber shops ¹⁰ | 7,968 | .7 | 56 |
| Beauty parlors ¹⁰ | 12,816 | .7 | 90 |
| Advertising agencies ¹¹ | 22,361 | .2 | 45 |
| Filling stations ⁷ | 15,982 | .3 | 48 |
| AMUSEMENT | | | |
| Motion picture theatres ¹² | 21,211 | .5 | 106 |
| Total | 1,108,140 | 1.3 | 14,488 |

¹ Census of Business, 1935, Construction, Vol. I

² Census of Manufactures, 1935, Industry Bulletins

³ Census of Manufactures, 1935. Covers all knit goods.

⁴ Estimated on the basis of the total reported for the women's and children's apparel industry, Census of Manufactures, 1935

⁵ Census of Manufactures, 1935. Covers all paper boxes.

⁶ Census of Business, 1935, Motor Trucking for Hire

⁷ Census of Business, 1935, Retail Distribution, Vol. III

⁸ Census of Business, 1935, Hotels

⁹ Census of Manufactures, 1935, Power Laundries

¹⁰ Census of Business, 1935, Service establishments, Vol. III

¹¹ Census of Business, 1935, Advertising Agencies

¹² Census of Business, 1935, Places of Amusement

* Less than one-tenth of one per cent

pendent waiting period. This, furthermore, is the net cost of partial unemployment insurance under a plan which pays partial unemployment benefits amounting to the difference between earnings and fifty per cent of the full-time weekly wage for a maximum of 32 weeks with a six-week waiting period which may be served when the worker is totally unemployed, two weeks of partial unemployment being reckoned as equivalent to one week of total unemployment.

Since, however, the New York State unemployment insurance fund is a pooled one, it is desirable not only to estimate the cost of protecting each industry taken separately, but also the total average cost of protection for all industries. For this reason, Table XXV has been supplemented by estimates of the fiscal importance of each of the 34 industry groups. These estimates are based on Census data for 1935. They do not pretend to approximate the total insured payroll in 1936 but merely to serve as reasonable weights for the several percentage estimates of cost.

The variations in the estimated cost of partial unemployment insurance among the several industries are marked. The whole pattern shows clearly that seasonal fluctuations in business are the main cost-generating factor. This, of course, could not be otherwise, because the records of only one year were used, and that year, 1936, was a year of considerable cyclical upswing. But the details are, nevertheless, highly suggestive. The making of men's shirts is less influenced by seasonal style changes than the manufacture of men's clothing, and so the cost of partial unemployment in the former industry is only half of that in the latter. A similar observation applies to women's underwear as compared with women's dresses, coats and suits, and the most seasonal of all apparel industries, millinery. At first glance it may seem surprising that the cost of partial unemployment insurance in the construction trades is less than in some of the needle trades. But wages in the construction industries are high and partial benefit payments are limited; a mason who earns \$18 a week for part-time work is not eligible for partial unemployment benefits, even though he is seriously affected in proportion to his full-time wage as reckoned on the union scale.

The foregoing remarks are merely intended to call attention to the fact that many of the variations shown in Table XXV can be reasonably explained on the basis of well-known characteristics of the industry. As to the significance of the actual estimates of cost for each industry, that is another story. They are the best estimates now obtainable, but they may or may not approach the truth. In fact there are definite reasons to believe that they are affected to a serious degree by a cumulative bias which tends to make them too low.

The components of the downward bias are traceable to diverse sources. First, there are the errors inherent in the bench-mark estimate. It was derived from records of 1,806 book and job printers, but the records of 1,076 were disregarded when the rate of partial unemployment was computed although the contributions paid for them were taken into account. Some of these may

have been partially unemployed. Again, only partial unemployment occurring within the closed universe of the thirty firms was measured; some workers may have been partially unemployed before or after their connection with one of these firms. Second, there are the errors arising from the nature of the statistical material used in the case of the 34 industries. The material deals with plants and not with individual workers and so some individual variations are suppressed in the plant average. To illustrate: Suppose there are two employees whose full-time wage is \$30. If one of them earns \$10 while the other earns \$30, one of them is eligible for partial benefits; the other one is not. Yet, on the average, they both earned \$20. Neither one appears to be eligible if only the average is known. Third, there are the errors arising from the method which was used in applying the bench mark to the set of data. The method assumes a linear proportionality between the incidence of partial unemployment and the cost of partial unemployment benefits. The average annual earnings of workers employed in each of the 34 industries were not considered. Yet it seems, although this could not be proved on the basis of the available statistical material, that most of the industries seriously affected by partial unemployment are those in which low annual earnings prevail, so that the cost of partial unemployment insurance might be a complex function of its incidence—rising, let us say, not in direct proportion, but in proportion to a multiple, or a square of the incidence factor. If the bench-mark industry had been a poorly paid one, the bias would have been reversed. However, the book and job printing industry happens to be one of the higher wage scale and higher annual earnings industries.

The underestimate in the cost figures, introduced by the above defects of the data and methods used, is probably much larger than the influence of a number of factors which tend to make the cost figures too high. One of them is the treatment of all types of partial losses of earnings as potentially compensable. There is no question but that a certain number of cases of reduction in weekly earnings is due to sickness or other invalidity, absence from work for personal reasons, and similar causes which would make the loss of earnings non-compensable. There is no information on this subject in the records studied, but evidence from other sources and the close relationship of the movement of partial unemployment to the seasonal fluctuations in total employment suggest that the proportion of such cases is likely to be relatively small. Another factor which may tend to inflate the estimated cost is that in the plant-unit study. The extent of the incidence of partial unemployment was measured on a plant basis without regard to the number of workers employed. A quantitative evaluation of the various downward and upward biases in the tentative estimates of the cost of partial unemployment would be a laborious and rather futile operation. The tentative estimates should be replaced by a much more thorough study, the nature of which is elucidated in the program of proposed research presented in Section 5 of this Report.

APPENDIX A: STATISTICAL DATA

SECTION 1. SEMI-ANNUAL SURVEYS OF OPERATING TIME IN FACTORIES, 1921-1927, NEW YORK STATE DEPARTMENT OF LABOR

Surveys were made in one week each in December 1921, June and December 1922, June and December 1923, June and December 1924, and in June 1927, covering all factory industries for which monthly data on employment were being collected. The survey samples were large—from 686 to 45,852 workers for each industry group. Tables were published in the *Industrial Bulletin* in the issue following each survey, stating the number of workers employed, the number working overtime, and the number working five days, four days, and three days or less, in the course of the calendar week surveyed (the middle week of the month). The number of days was obtained either directly or by a conversion of actual hours worked in that week into the equivalent number of days. The chief interest evoked by these post-war surveys today lies in the fact that they represent the only semi-annual continuous record in existence. The following tables present the original material in a modified form, suitable to the purpose of a study of partial unemployment.

TABLE XXVI

Percentage of Workers Employed in New York State Major Manufacturing Industries, Five Days or Less, in a Middle-of-the-month Week, June and December 1921, 1924, and 1927

| Average Rank | Industry | 1921 | | 1922 | | 1923 | | 1924 | | 1927 |
|--------------|---------------------------------|------|------|------|------|------|------|------|------|------|
| | | Dec. | June | Dec. | June | Dec. | June | Dec. | June | |
| 4.1 | Clothing, millinery, laundering | 15 | 21 | 21 | 23 | 28 | 43 | 21 | 22 | |
| 4.4 | Furs leather, rubber | 34 | 13 | 11 | 23 | 23 | 36 | 25 | 24 | |
| 4.5 | Food beverages, tobacco | 26 | 21 | 25 | 20 | 15 | 14 | 21 | 38 | |
| 4.7 | Metals, machinery, conveyances | 33 | 24 | 15 | 18 | 15 | 32 | 19 | 22 | |
| 5.0 | Textiles | 16 | 22 | 16 | 17 | 24 | 54 | 18 | 24 | |
| 5.1 | Wood manufactures | 22 | 24 | 15 | 21 | 15 | 29 | 13 | 30 | |
| 5.1 | Stone, clay, glass | 25 | 26 | 32 | 27 | 15 | 28 | 2 | 4 | |
| 5.9 | Paper | 20 | 21 | 19 | 20 | 15 | 28 | 11 | 23 | |
| 7.8 | Chemicals, oils, paints | 22 | 17 | 13 | 17 | 12 | 16 | 19 | 3 | |
| 8.8 | Printing and paper goods | 17 | 13 | 11 | 14 | 11 | 19 | 14 | 13 | |
| 10.6 | Water, light and power | 9 | 5 | 12 | 5 | 4 | 7 | 5 | 0 | |

SOURCE: New York State Department of Labor, *Industrial Bulletin*

The ranking in Table XXVI was done simply by averaging the ranks recorded in each one of the eight weeks under review. The ranking is, on the whole, stable, but the seasons and the cycle produce surprising variations. The table suggests (though this cannot be proved) that there is more partial unemployment when business declines slightly than when it is sharply curtailed. (Witness the data for 1924 as compared with 1921, and for June as compared with December.) On general economic principles, the suggestion seems eminently reasonable, since it is easier to attempt

to spread work when the prospect is not too gloomy than when the dislocation of the markets has gone so far that all hope of a speedy improvement in business is lost.

But the most interesting feature of Table XXVI is the behavior of groups producing consumers' goods, producers' goods, or both. This is best seen when the three classes are summarized.

TABLE XXVII

Percentage of Workers Employed in New York State by Classes of Manufacturing Industries, Five Days or Less in a middle-of-the-month Week in June and December 1921, 1924 and 1927

| Industry Class | 1921 | | 1922 | | 1923 | | 1924 | | 1927 | |
|---|------|------|------|------|------|------|------|------|------|------|
| | Dec. | June | Dec. | June | Dec. | June | Dec. | June | Dec. | June |
| Consumers' goods: Clothing, millinery, laundering, furs, leather, rubber, food, beverages, tobacco | 22 | 19 | 19 | 22 | 23 | 32 | 22 | 28 | | |
| Producers' goods: Metals, machinery conveyances, textiles, wood manufactures, stone, clay, glass, paper | 27 | 24 | 16 | 18 | 17 | 35 | 18 | 22 | | |
| Consumers'-producers' goods: Chemicals, oils, paints, printing and paper goods, water, light and power | 18 | 14 | 12 | 15 | 11 | 17 | 15 | 8 | | |

SOURCE: New York State Department of Labor, *Industrial Bulletin*

Table XXVII indicates that partial unemployment characterizes the cyclical movement in both producers' goods and consumers' goods; but, while producers' goods are more affected by the hazard of partial unemployment in the trough of the cycle than consumers' goods, in periods of relative prosperity the reverse is true.

TABLE XXVIII

Percentage of Workers Employed in New York State Manufacturing Industries, Three Days or Less, in a Middle-of-the-month Week, June and December 1921-1923

| Average Rank | Industry | 1921 | | 1922 | | 1923 | |
|--------------|--|------|------|------|------|------|------|
| | | Dec. | June | Dec. | June | Dec. | June |
| 3.1 | Men's shirts and furnishings | 4.8 | 5.3 | 4.7 | 6.1 | | |
| 4.1 | Women's clothing | 3.1 | 5.1 | 9.3 | 7.8 | | |
| 5.1 | Cotton and woolen hose and knit goods | 4.3 | 5.1 | 4.7 | 4.1 | | |
| 6.3 | Paper | 3.3 | 4.8 | 4.4 | 4.3 | | |
| 6.9 | Furniture and cabinet work | 9.4 | 3.6 | 2.7 | 4.6 | | |
| 7.6 | Printing and book making | 3.1 | 3.8 | 3.1 | 4.7 | | |
| 7.8 | Machinery (including electrical apparatus) | 3.2 | 4.6 | 3.0 | 4.4 | | |
| 8.5 | Automobiles, carriages, airplanes | 16.2 | 2.1 | 4.0 | 2.6 | | |
| 8.6 | Pig iron and rolling mill products | 10.2 | 5.1 | 1.6 | 2.4 | | |
| 8.9 | Men's clothing | 3.5 | 2.6 | 6.6 | 2.4 | | |
| 10.0 | Women's headwear | 1.3 | 7.7 | .1 | 3.8 | | |
| 10.1 | Paper boxes and tubes | 1.1 | 3.6 | 4.2 | 3.1 | | |
| 11.9 | Boots and shoes | 5.4 | .9 | .8 | 2.8 | | |
| 12.0 | Women's underwear and furnishings | 2.3 | 2.7 | 3.5 | 1.3 | | |
| 12.0 | Bread and other bakery products | 2.0 | 2.0 | 2.1 | 3.2 | | |
| 14.9 | Laundering, cleaning and dyeing | .6 | 1.0 | .8 | 2.7 | | |
| 15.3 | Water, light and power | .1 | 1.3 | 1.7 | 1.4 | | |

SOURCE: New York State Department of Labor, *Industrial Bulletin*

Statistics of the number of workers who were employed for three days or less in the week sampled were collected only in December 1921, June and December 1922, and June 1923. Only the seventeen most important industry groups are represented in Table XXVIII above.

It would be hazardous to draw any conclusions as to the incidence of partial unemployment from Table XXVIII. The period covered is brief and now in the distant past. Moreover, only one dimension of the incidence of partial unemployment, its extent, is hinted at, and that with reference to only four individual weeks which may or may not have been typical.

SECTION 2. BUFFALO AND SYRACUSE SURVEYS, 1929-1933

The annual surveys of employment and unemployment in Buffalo began in 1929 and ended in 1933. Workers were counted in their residences, in the course of a few days in the month of November of each year. The statistics, however, were meant to be an inventory "as of" a single day, at the very beginning of that month. The samples ranged from 10,256 in 1932 to 13,655 in 1929.

Part-time workers were counted with regard to the fraction of full time for which they were employed, the critical points

TABLE XXIX

Per cent of Employed Workers on Part Time, Buffalo, 1929-1933

| | November | Degree of Incidence | | | |
|------|----------|---------------------|------|-----|-----|
| | | 100% | 66% | 50% | 33% |
| 1929 | 7.2 | 3.8 | 1.0 | .5 | |
| 1930 | 20.8 | 12.0 | 3.9 | 1.2 | |
| 1931 | 28.6 | 18.9 | 8.3 | 4.0 | |
| 1932 | 32.7 | 23.1 | 10.2 | 4.7 | |
| 1933 | 19.0 | 13.7 | 6.1 | 2.7 | |

SOURCE: New York State Department of Labor, *Special Bulletin No. 179*

being one-third, one-half, two-thirds, and any fraction of full time in excess of two-thirds. The resulting statistics have been re-computed so as to show the extent of part-time employment by degree of incidence.

TABLE XXX

Per cent of Employed Male Workers on Part Time, by Occupation or Industry, Buffalo, 1929-1933

| Average Rank | Occupation or Industry | November | | |
|--------------|--|----------|------|------|
| | | 1930 | 1931 | 1932 |
| 1.0 | Iron, steel, and their products | 49.1 | 71.8 | 75.1 |
| 2.3 | Building trades (wage earners) | 27.6 | 47.6 | 54.4 |
| 2.7 | Automobiles, parts and tires, mfg. | 45.8 | 42.4 | 51.4 |
| 4.3 | Railway, express, gas, electric light | 17.8 | 32.5 | 40.6 |
| 4.7 | Paper, printing and publishing | 22.0 | 22.8 | 37.1 |
| 6.7 | Food and kindred products, mfg. | 15.2 | 17.4 | 22.8 |
| 7.0 | Domestic and personal service | 10.3 | 21.2 | 20.0 |
| 7.7 | Government employees (other than teachers) | 6.8 | 14.7 | 23.2 |
| 8.7 | Retail and wholesale trade | 9.7 | 13.3 | 17.6 |
| 10.0 | Professional | 2.5 | 4.5 | 8.4 |

SOURCE: New York State Department of Labor, *Special Bulletin No. 179*

An occupational breakdown was prepared only in 1930, 1931, and 1932, and then only for males. Some of the occupational classes were so scantily represented that no trustworthy percentage of the number of workers partially unemployed could be obtained.

There was only one survey in Syracuse made in November 1931. The part-time workers were counted with reference to the same degrees of incidence as in Buffalo; the corresponding percentages stood at 24.6, 16.7, 8.2, and 4.3. The occupational breakdown is shown in Table XXXI.

TABLE XXXI

Per cent of Employed Workers on Part Time, by Occupation or Industry, Syracuse, November, 1931

| Rank | Occupation or Industry | Degree of Incidence | | | |
|------|---------------------------------------|---------------------|------|------|------|
| | | 100% | 66% | 50% | 33% |
| 1 | Iron, steel, and their products | 52.3 | 41.5 | 24.2 | 10.2 |
| 2 | Chemicals | 38.8 | 14.0 | 2.5 | 1.7 |
| 3 | Government employees | 33.5 | 13.5 | 2.9 | 1.2 |
| 4 | Railway, express, gas, electric light | 29.1 | 11.8 | 3.8 | 1.6 |
| 5 | Paper, printing and publishing | 24.3 | 17.1 | 6.4 | 3.6 |
| 6 | Domestic and personal service | 21.1 | 17.7 | 8.5 | 4.6 |
| 7 | Food and kindred products, mfg. | 19.1 | 11.1 | 8.0 | 1.9 |
| 8 | Retail and wholesale trade | 10.5 | 8.2 | 3.0 | 2.0 |
| 9 | Professional | 7.1 | 4.6 | 2.1 | 1.0 |
| 10 | Insurance and real estate | 4.5 | 2.8 | 1.1 | 1.1 |

SOURCE: New York State Department of Labor, *Special Bulletin No. 173*

Tables XXX and XXXI are suggestive but not conclusive. The Buffalo and Syracuse surveys, being of a residential character, did not bear directly on the problem of the distribution of the labor force as between fully employed and partially unemployed workers. This is best done by an enumeration performed at the source of employment, although the sample used in these surveys may have come close to reflecting correctly the prevailing industrial pattern of employment. But, again, only one of the required three dimensions of partial unemployment was touched upon and that only on a single day in each year.

SECTION 3. FEDERAL CENSUS OF BUSINESS

In 1935, part-time employees (those who worked less than half the regular scheduled hours in the week ending October 26 or other representative week) were counted in connection with some subdivisions of the Census of Business. The material relevant to this study is gathered in Table XXXII.

It is not possible to draw any clear-cut conclusions from such census returns. Part-time workers, casuals, and partially unemployed workers cannot be identified separately when "part-time" work is the only criterion. The factor of duration of partial unemployment cannot be considered when a census as of a certain date is taken. Moreover, the date chosen, the last week in

TABLE XXXII

Part-time Employment in 29 Lines of Business, New York State, Week Ending October 26, 1935

| Rank | Line of Business | Number of Workers | | Per cent |
|------|--|-------------------|--------------|----------|
| | | Employed | On Part-time | |
| 1 | Funeral directors | 2,697 | 1,138 | 42.20 |
| 2 | Variety, 5 and 10c to \$1.00 stores ¹ | 7,855 | 2,958 | 37.66 |
| 3 | Cleaning and repair shops | 4,682 | 1,565 | 33.42 |
| 4 | Combination grocery and meat stores ¹ | 16,492 | 3,738 | 22.67 |
| 5 | Fuel and ice dealers ² | 7,138 | 1,529 | 21.42 |
| 6 | Shoe repair shops | 2,912 | 598 | 20.54 |
| 7 | Barber shops | 9,191 | 1,844 | 20.06 |
| 8 | Drinking places ¹ | 23,738 | 4,712 | 19.85 |
| 9 | Public warehousing ² | 5,275 | 1,035 | 19.62 |
| 10 | Drug stores with fountain ¹ | 8,151 | 1,585 | 19.45 |
| 11 | Men's furnishings and clothing stores ¹ | 8,075 | 1,531 | 18.96 |
| 12 | Grocery stores (without meats) ¹ | 17,511 | 3,264 | 18.64 |
| 13 | Motor trucking for hire ² | 24,008 | 4,447 | 18.52 |
| 14 | Women's ready-to-wear stores ¹ | 17,143 | 2,990 | 17.44 |
| 15 | Meat markets ¹ | 11,312 | 1,958 | 17.31 |
| 16 | Filling stations ¹ | 11,764 | 1,894 | 16.10 |
| 17 | Department stores ¹ | 44,412 | 7,113 | 16.02 |
| 18 | Restaurants, cafeterias, lunchrooms ¹ | 78,493 | 12,347 | 15.73 |
| 19 | Beauty parlors | 10,564 | 1,324 | 12.55 |
| 20 | Motion picture theaters ¹ | 15,272 | 1,377 | 9.02 |
| 21 | Motor bus transportation ² | 8,846 | 547 | 6.18 |
| 22 | Sales agents and brokers | 20,772 | 959 | 4.62 |
| 23 | Wholesalers | 160,252 | 6,793 | 4.24 |
| 24 | Dairy product stores and milk dealers ¹ | 8,496 | 348 | 4.10 |
| 25 | Motor vehicle dealers (new) ¹ | 16,818 | 546 | 3.25 |
| 26 | Manufacturers' sales branches | 48,237 | 658 | 1.36 |
| 27 | Manufacturers' sales offices | 14,914 | 191 | 1.28 |
| 28 | Insurance: home offices ¹ | 43,756 | 252 | .58 |
| 29 | Insurance: branch offices ¹ | 124,668 | 544 | .44 |

¹ Exclusive of executives

² Data cover the whole Middle Atlantic census area.

SOURCE: U. S. Department of Commerce, Bureau of Census, *Census of Business*

October 1935, was probably not one on which partial unemployment would be normally at the point of its highest incidence. Partial unemployment is highly seasonal and the month of October is a month of better-than-average employment in most industries.

SECTION 4. STATISTICS OF AVERAGE HOURS PER EMPLOYEE, DIVISION OF STATISTICS AND INFORMATION OF THE NEW YORK STATE DEPARTMENT OF LABOR

Since April 1933 the Division of Statistics and Information of the New York State Department of Labor has been reporting the average hours per employee in selected manufactures in the Industrial Bulletin. The data refer to hours worked in one week centered around the middle of the month. Twenty of the selected series are of importance for the purpose of this study.

It may be assumed as a working hypothesis that an industry in which average hours vary considerably is more likely to be

susceptible to the hazard of partial unemployment than an industry in which such variations are slight. Since the period covered by these series is rather short, cyclical and secular fluctuations cannot be investigated; but pronounced seasonal changes deserve some attention. If "normal" seasonal indices of variation in average hours per employee can be established, then their amplitude, as measured by their standard deviation from their average (which is by definition 100), may give some information concerning the relative standing of the several industry groups from the point of view of the incidence of partial unemployment.

TABLE XXXIII

Ranking of Twenty Manufacturing Industries According to Normal Seasonal Variation in Average Hours per Employee, New York State, 1933-1937

| Rank | Industry | Standard Deviation |
|------|-------------------------------------|--------------------|
| 1 | Men's clothing | 7.2 |
| 2 | Women's headwear | 7.1 |
| 3 | Automobiles and parts | 5.6 |
| 4 | Women's clothing | 5.2 |
| 5 | Shoes | 3.5 |
| 6 | Women's underwear | 3.4 |
| 7 | Carpets and rugs | 3.4 |
| 8 | Furniture | 3.2 |
| 9 | Men's furnishings | 2.9 |
| 10 | Iron and steel | 2.6 |
| 11 | Railroad equipment and repair shops | 2.4 |
| 12 | Bakery products | 2.4 |
| 13 | Knit goods except silk | 2.4 |
| 14 | Paper boxes and tubes | 1.7 |
| 15 | Printing, book and job | 1.7 |
| 16 | Pulp and paper | 1.5 |
| 17 | Laundering and cleaning | 1.3 |
| 18 | Water, light and power | 1.2 |
| 19 | Electrical machinery and apparatus | 1.2 |
| 20 | Printing, newspaper | .7 |

SOURCE: New York State Department of Labor, *Industrial Bulletin*

The indices of seasonal variation, whose dispersion is shown in Table XXXIII, were computed by the link relative method from data covering the four-year period 1933-1937. It is of interest to compare these "normal" seasonal fluctuations with the fluctuations experienced in the year 1936 alone, because that is the only year for which other more significant materials for a study of partial unemployment are available.

The ranking shown in Table XXXIV does not agree with the ranking indicated in Table XXXIII. The coefficient of linear correlation between the two sets of figures equals .79 with a standard error of .08. It is obvious from this that some industries maintained their relative position throughout the period 1933-1937 while others did not.

The variation in each individual industry in 1936 was, therefore, correlated with the average variation exhibited throughout 1933-1937. The results of this analysis appear in Table XXXV.

TABLE XXXIV

Ranking of Twenty Manufacturing Industries According to Variation in Average Hours per Employee, New York State, 1936

| Rank | Industry | Standard Deviation |
|------|-------------------------------------|--------------------|
| 1 | Carpets and rugs | 10.8 |
| 2 | Women's headwear | 9.5 |
| 3 | Men's clothing | 7.4 |
| 4 | Automobiles and parts | 7.3 |
| 5 | Shoes | 7.2 |
| 6 | Paper boxes and tubes | 5.7 |
| 7 | Women's clothing | 5.7 |
| 8 | Furniture | 5.5 |
| 9 | Electrical machinery and apparatus | 4.0 |
| 10 | Women's underwear | 3.9 |
| 11 | Knit goods except silk | 3.9 |
| 12 | Men's furnishings | 3.9 |
| 13 | Railroad equipment and repair shops | 3.4 |
| 14 | Iron and steel | 3.2 |
| 15 | Bakery products | 3.1 |
| 16 | Water, light and power | 2.4 |
| 17 | Pulp and paper | 2.4 |
| 18 | Printing, book and job | 2.1 |
| 19 | Laundrying and cleaning | 1.8 |
| 20 | Printing, newspaper | 1.4 |

SOURCE: New York State Department of Labor, *Industrial Bulletin*

TABLE XXXV

Coefficients of Linear Correlation Between Normal Variations in Average Hours per Employee and Variations Experienced in 1936, Twenty New York State Manufacturing Industries

| Rank | Industry | Coefficient of Correlation | Standard Error |
|------|-------------------------------------|----------------------------|----------------|
| 1 | Women's clothing | .92 | .04 |
| 2 | Paper boxes and tubes | .90 | .05 |
| 3 | Furniture | .89 | .06 |
| 4 | Laundrying and cleaning | .84 | .08 |
| 5 | Women's underwear | .84 | .08 |
| 6 | Women's headwear | .82 | .09 |
| 7 | Printing, book and job | .80 | .10 |
| 8 | Bakery products | .79 | .11 |
| 9 | Men's clothing | .73 | .13 |
| 10 | Men's furnishings | .67 | .16 |
| 11 | Water, light and power | .59 | .19 |
| 12 | Pulp and paper | .44 | .23 |
| 13 | Printing, newspapers | .44 | .23 |
| 14 | Knit goods except silk | .40 | .24 |
| 15 | Electrical machinery and apparatus | .38 | .25 |
| 16 | Railroad equipment and repair shops | .32 | .26 |
| 17 | Automobiles and parts | .32 | .26 |
| 18 | Shoes | -.05 | .29 |
| 19 | Iron and steel | -.15 | .22 |
| 20 | Carpets and rugs | -.27 | .21 |

SOURCE: New York State Department of Labor, *Industrial Bulletin*

According to Table V. A. of R. A. Fisher's *Statistical Methods for Research Workers*, the minimum level of significance (where $P = .01$) for a set of twelve pairs of related items corresponds to a coefficient of linear correlation equal to .7079. So it could be said that the 1936 experience of the workers employed in the top nine

industry groups (as ranked in Table XXXV) was typical of their experience over a number of years. If a coefficient of determination equal to .5 is used as a criterion, the same nine groups heading the list show a sufficient agreement between their customary behavior and their behavior in 1936.

All twenty groups show a relatively greater variation in average hours in 1936 than in a "typical" year. The groups ranked 10 to 20 in Table XXXV show a seasonal pattern quite unlike the normal one. Three groups, shoes, iron and steel, and carpets and rugs, experienced a seasonal development in 1936 exactly the reverse of the customary seasonal swing.

No trustworthy conclusions are to be drawn from the statistics of average hours per employee. If it could be assumed that all workers engaged in each industry were affected by a curtailment of hours in exactly the same degree, then the ranking of the industries might have some definite meaning. But in one industry a few workers may have been affected considerably, while in another industry a great many may have been affected only slightly; yet the average loss may have been the same in both.

TABLE XXXVI
Average Partial Employment at Bottom of Slack Season,
Twenty Manufacturing Industries, New York State, 1936

| Rank | Industry | Average Hours Per Week | | |
|------|-------------------------------------|------------------------|-----------------|--|
| | | Full-time Week | Minimum Week | Per cent Minimum of Full- time Week |
| 1 | Shoes | 37.7 | 30.3 | 80 |
| 2 | Women's headwear | 37.7 | 30.6 | 81 |
| 3 | Carpets and rugs | 37.4 | 30.8 | 82 |
| 4 | Men's clothing | 33.8 | 28.4 | 84 |
| 5 | Automobiles and parts | 39.5 | 33.4 | 85 |
| 6 | Women's clothing | 34.5 | 30.0 | 87 |
| 7 | Paper boxes and tubes | 43.4 | 38.4 | 88 |
| 8 | Men's furnishings | 36.3 | 32.4 | 89 |
| 9 | Railroad equipment and repair shops | 44.5 | 40.2 | 90 |
| 10 | Women's underwear | 38.0 | 34.2 | 90 |
| 11 | Bakery products | 40.9 | 37.1 | 91 |
| 12 | Iron and steel | 47.7 | 43.5 | 91 |
| 13 | Furniture | 41.3 | 37.8 | 92 |
| 14 | Electrical machinery and apparatus | 39.7 | 36.8 | 93 |
| 15 | Knit goods except silk | 37.7 | 35.3 | 94 |
| 16 | Printing, book and job | 39.2 | 37.3 | 95 |
| 17 | Water, light and power | 42.6 | 40.5 | 95 |
| 18 | Laundry and cleaning | 43.9 | 41.4 | 96 |
| 19 | Pulp and paper | 43.4 | 41.8 | 96 |
| 20 | Printing, newspaper | 37.5 | 36.6 | 98 |

SOURCE: New York State Department of Labor, *Industrial Bulletin*

Still, in a difficult quest such as this one, no stone ought to be left unturned. Table XXXVI is presented for whatever it may be worth. It contrasts the full-time week (computed from the mid-month weekly figures by means of the New York State Law full-time weekly wage formula) with the minimum week recorded in 1936. The percentage ratio shown in the third column is a patent underestimate, because it is likely that more hours were worked

in some of the weeks which did not fall into the middle of the month (thus making the computed full-time figure too low) and that fewer hours were worked in some other weeks (thus making the recorded minimum too high).

The ranking of Table XXXVI agrees well with the ranking of Table XXXIV ($r = .90 \pm .04$) but it cannot be said that it gives a ranking of the twenty industries in respect to the cost of partial unemployment insurance. Suppose, for example, that the rate of partial unemployment in the manufacture of shoes is equal to .900; then out of a total of 100 workers, 10 were fully employed during the slack month while 90 lost, on the average, 22 per cent of their full-time earnings. If the loss was evenly distributed and it were the rule to insure workers against a loss exceeding 40% of their full-time weekly earnings, the 90 might be entitled to no compensation. On the other hand, suppose that the rate of partial unemployment in newspaper printing is equal to .040; then out of a total of 100 workers, 96 were fully employed while 4 lost, on the average, 50% of their earnings. Under the same rule, these four would be entitled to benefits. Thus, a relatively "stable" industry might cause a greater drain on the fund than a relatively "unstable" one.

SECTION 5. MONTHLY STATISTICS OF EMPLOYMENT AND PAYROLLS,
DIVISION OF STATISTICS AND INFORMATION, NEW YORK STATE
DEPARTMENT OF LABOR

The only available statistical materials which bear on the problem of the cyclical behavior of partial unemployment are the monthly indices of employment and payrolls. Some of these cover the complete major cycle from 1921 to 1932; others cover at least the period from 1924 to date.

Indices of average wages were computed from the two series of data for a selected number of industries. Such indices of average wages are admittedly imperfect. They reflect changes in wage rates even more than changes in the proportion of part-time employment to full employment.

However, it is possible to compute from an index of average wages, a measure (in index form) of average statutory full-time wages, by means of the New York State Law formula. This has been done for 26 industries, and corresponding charts of this material have been prepared. They are reproduced in this Report.

The charts indicate the variation in the spread between the full-time weekly wage and the actual average wage. The area between the two lines measures loss in wages (perhaps due to partial unemployment) or differential gain consequent upon overtime work. The chief virtue of the charts is the striking illustration of the time lag in statutory full-time wages as compared with actual wages, owing to the use of the rolling base year, and of the varying margin between average wages and full-time wages, average wages being lower than the full-time wages in periods of recession and seasonal downswing and higher than the full-time wages in periods of recovery and seasonal upswing.

LIST OF CHARTS

Monthly Indices of Average Weekly Wages and Average Full-Time Weekly Wages in Selected New York State Manufacturing Industries

METALS AND MACHINERY

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| 5 Automobiles and Parts | 83 |
| 6 Railroad Equipment and Repair Shops | 84 |
| 7 Railroad Repair Shops | 85 |

WOOD MANUFACTURES

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|------------------------------|----|
| 8 Furniture and Cabinet Work | 86 |
| 9 Furniture | 87 |

FURS, LEATHER AND RUBBER GOODS

| | |
|----------|----|
| 10 Shoes | 88 |
|----------|----|

PULP, PAPER, PRINTING AND PAPER GOODS

| | |
|----------------------------|----|
| 11 Pulp and Paper | 89 |
| 12 Paper Boxes and Tubes | 90 |
| 13 Printing and Bookmaking | 91 |
| 14 Printing, Book and Job | 92 |
| 15 Printing, Newspapers | 93 |

TEXTILES

| | |
|----------------------------|----|
| 16 Carpets and Rugs | 94 |
| 17 Knit Goods, Except Silk | 95 |

CLOTHING AND MILLINERY

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| 20 Men's Clothing | 98 |
| 21 Women's Clothing | 99 |
| 22 Women's Underwear | 100 |
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FOOD AND TOBACCO

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| 25 Bakery Products | 103 |
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PUBLIC UTILITIES

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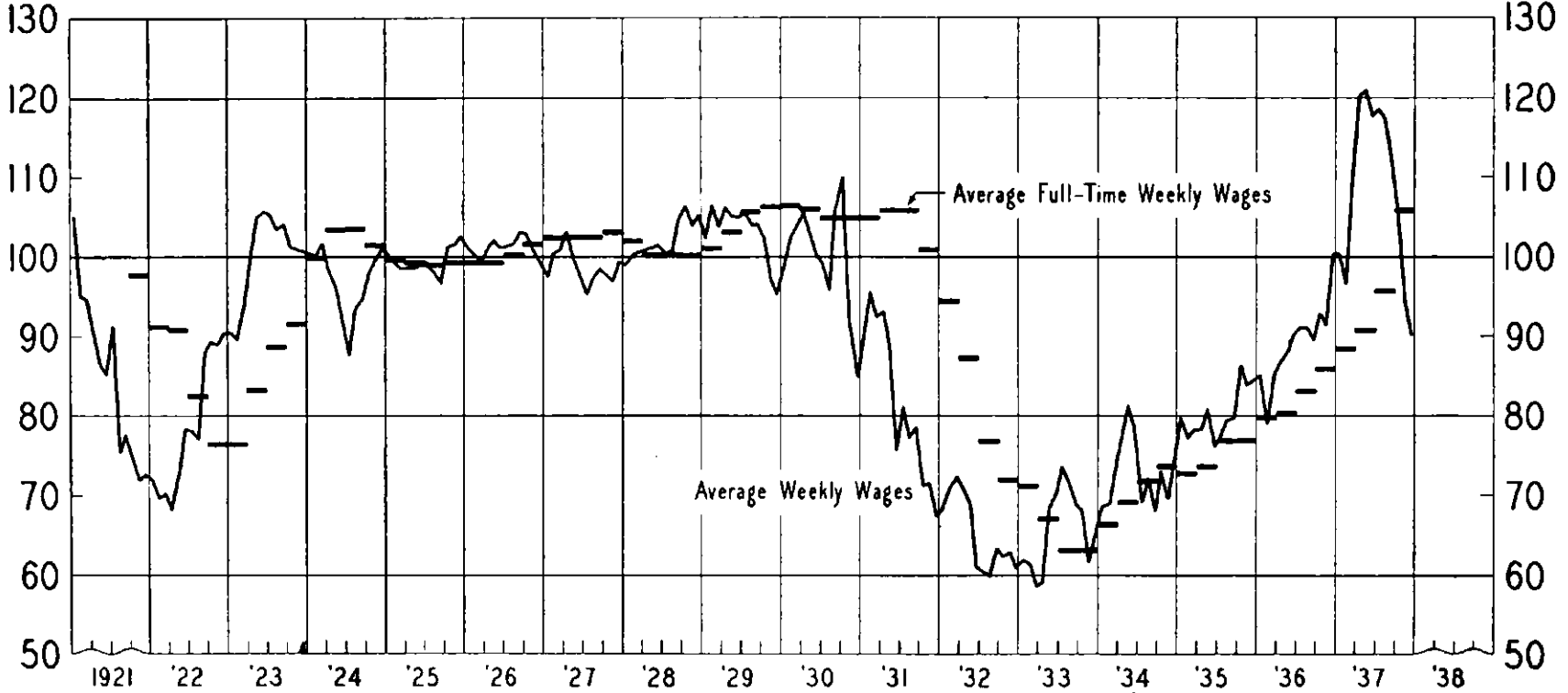
MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE

IRON AND STEEL

1925-27=100

INDEX NUMBERS

INDEX NUMBERS



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DEPARTMENT OF LABOR, STATE OF NEW YORK

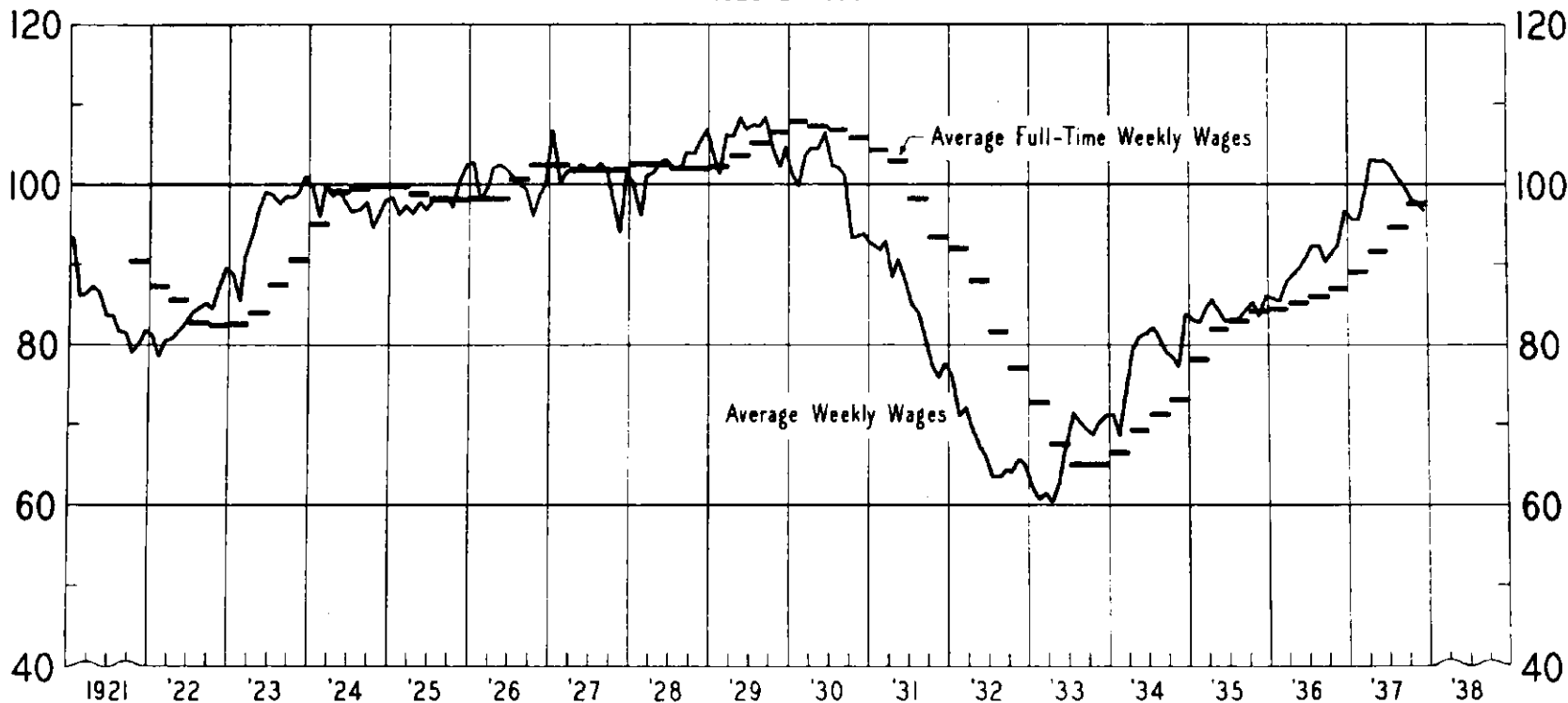
CHART 2

MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE
MACHINERY AND ELECTRICAL APPARATUS

INDEX NUMBERS

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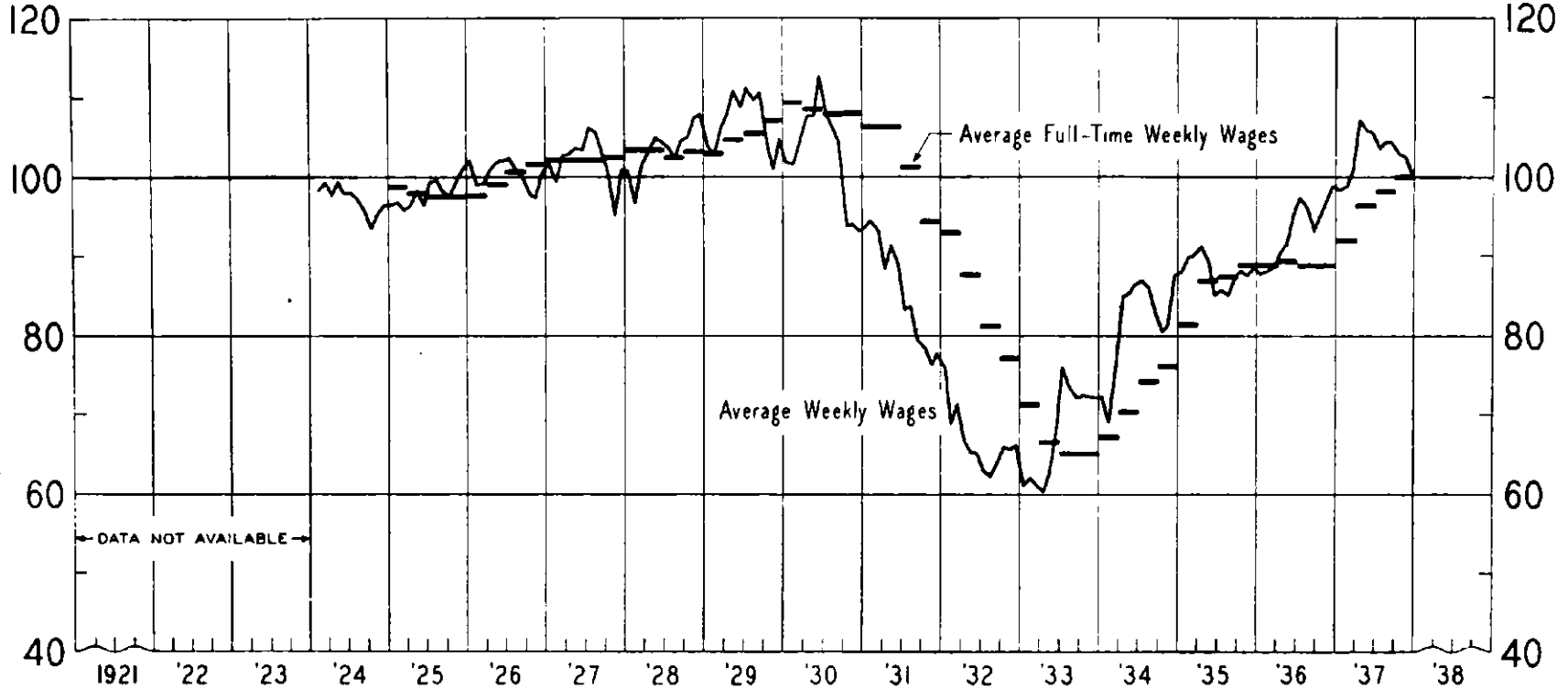
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MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
 SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE
ELECTRICAL MACHINERY AND APPARATUS

INDEX NUMBERS

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INDEX NUMBERS



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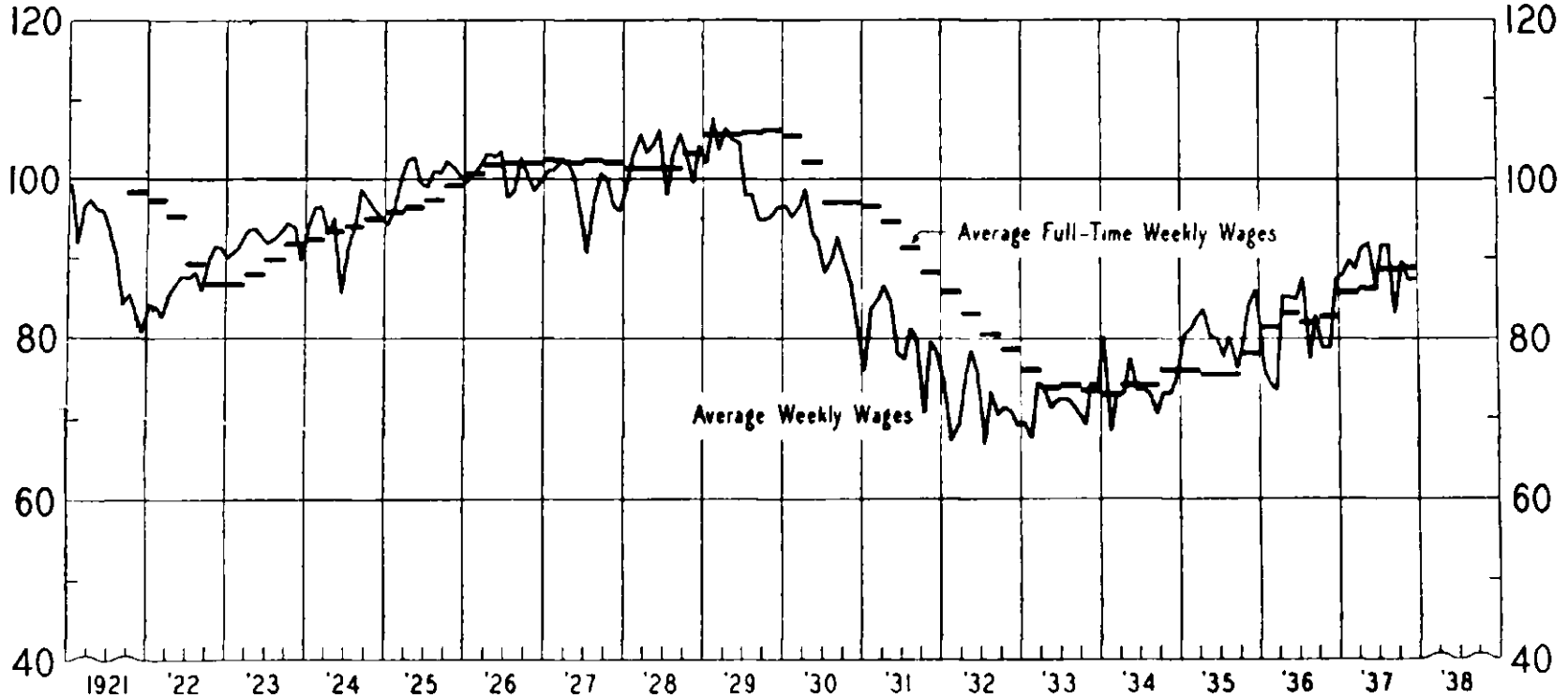
CHART 4

MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE
AUTOMOBILES, AIRPLANES, ETC.

INDEX NUMBERS

1925-27-100

INDEX NUMBERS



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DIVISION OF RECEIPTS AND UNEMPLOYMENT INSURANCE
DEPARTMENT OF LABOR STATE OF NEW YORK

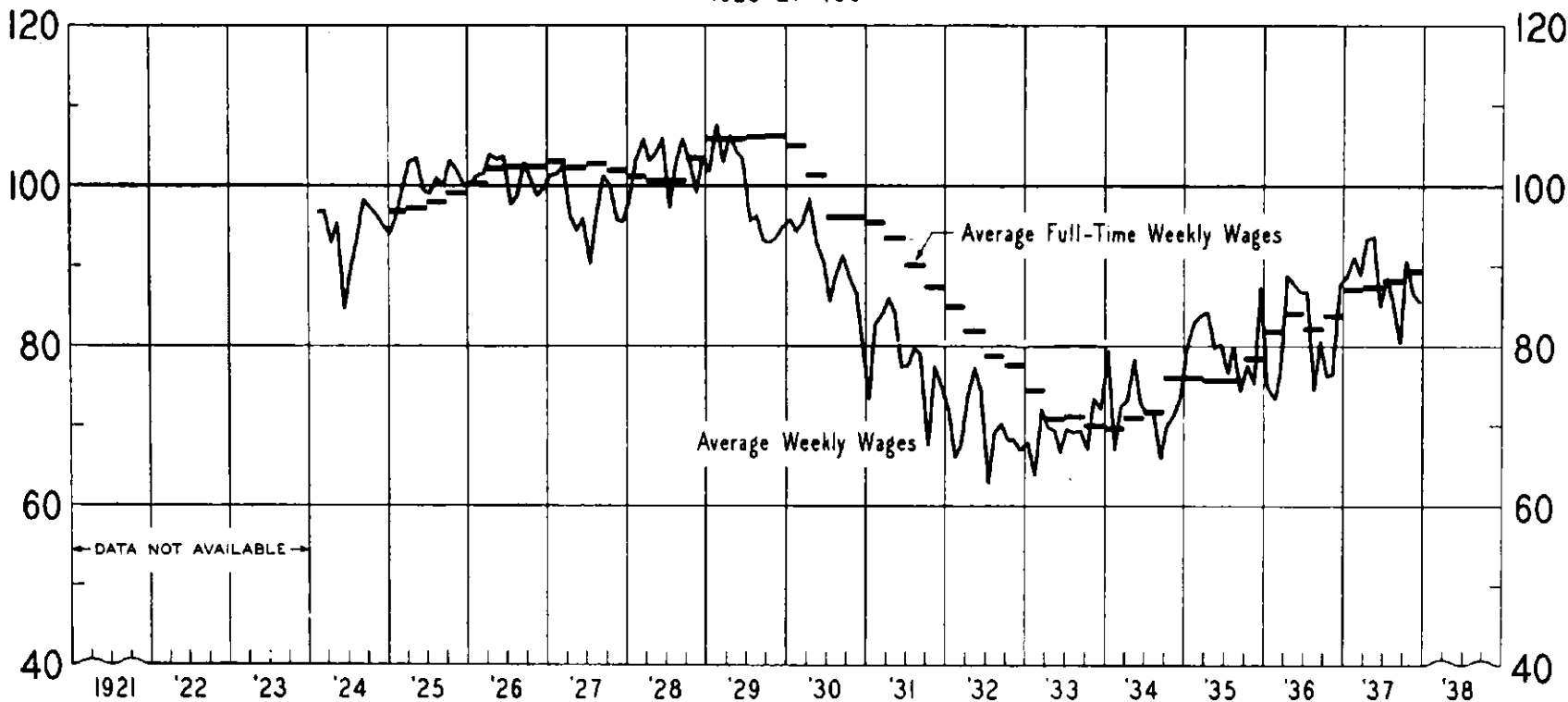
CHART 5

MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE
AUTOMOBILES AND PARTS

INDEX NUMBERS

1925-27=100

INDEX NUMBERS

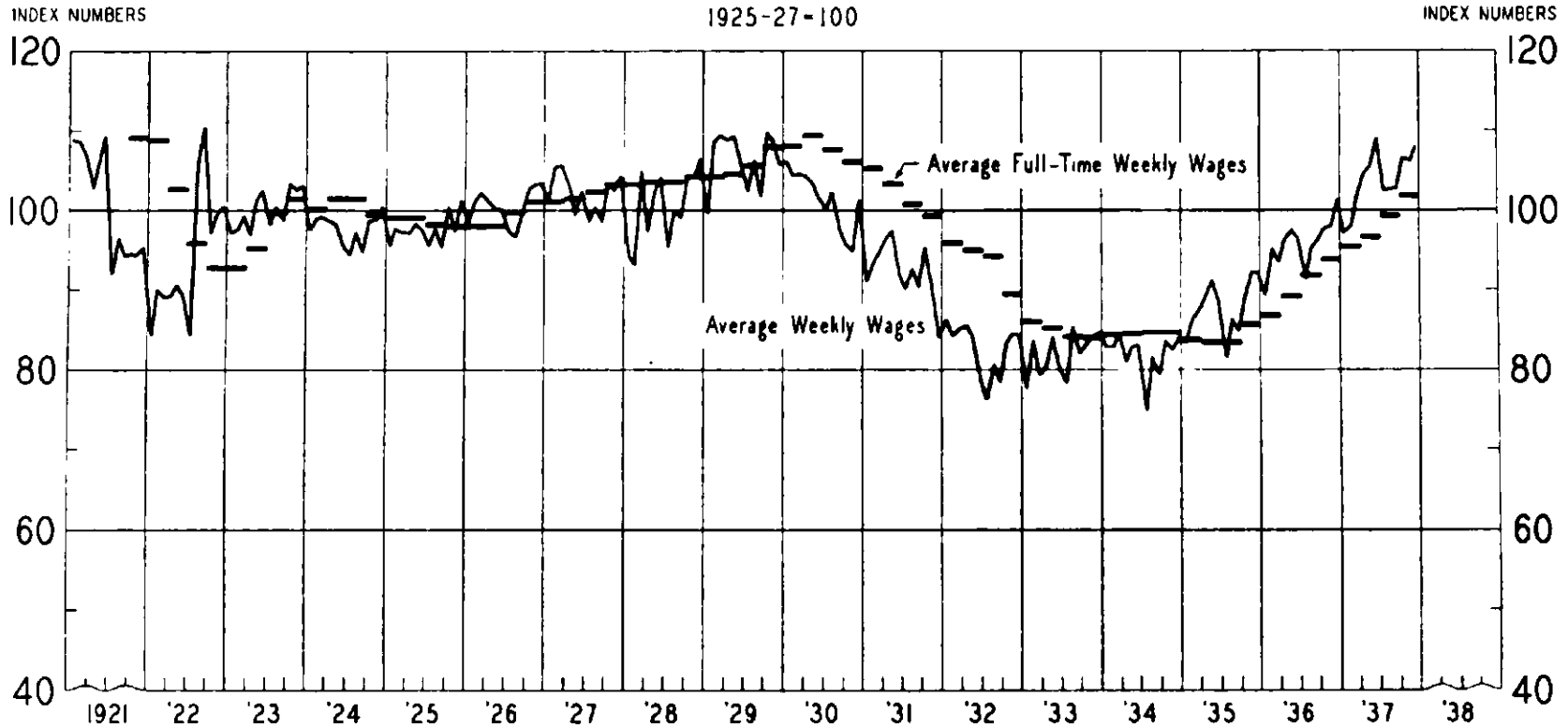


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DEPARTMENT OF LABOR, STATE OF NEW YORK

CHART 6

MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE
RAILROAD EQUIPMENT AND REPAIR SHOPS



SOURCE INDUSTRIAL BULLETIN, NEW YORK STATE DEPARTMENT OF LABOR

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DEPARTMENT OF LABOR, STATE OF NEW YORK

CHART 7

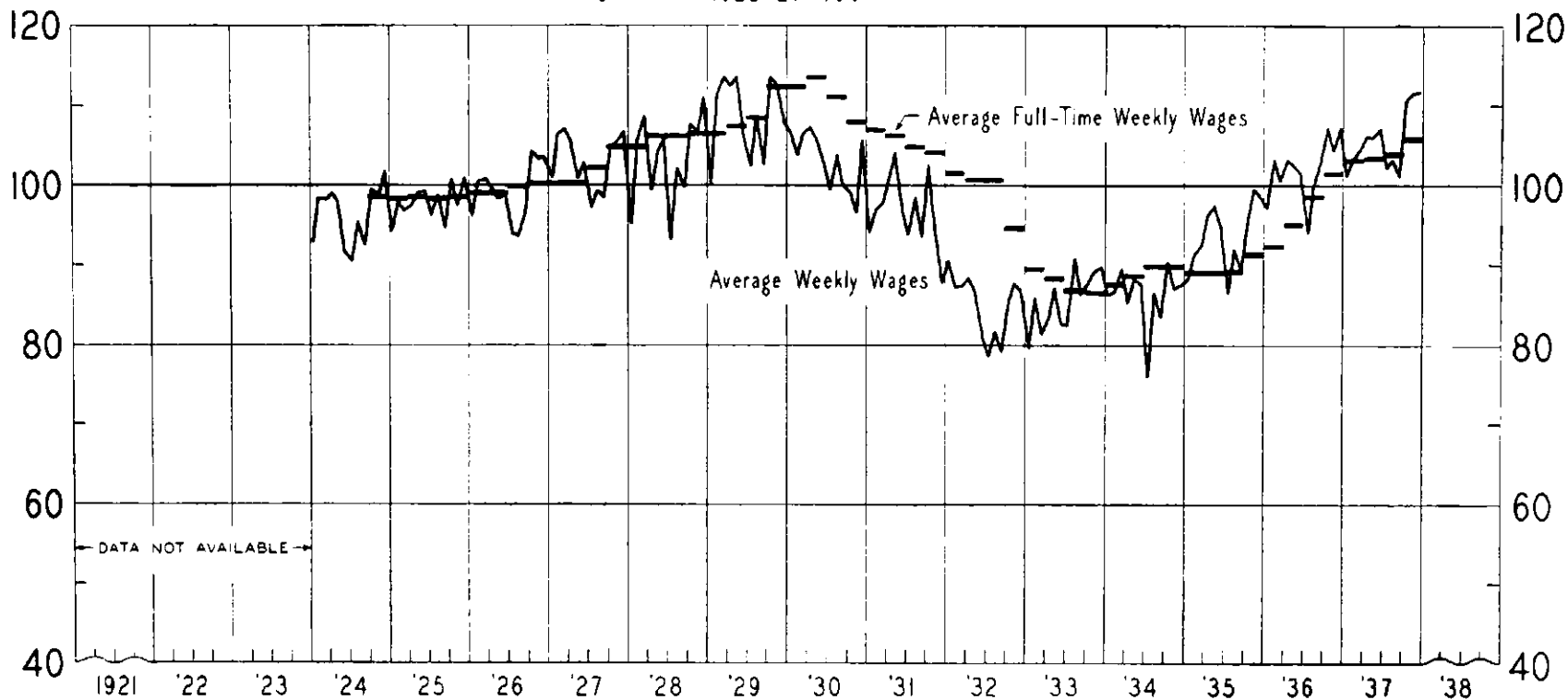
MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE

RAILROAD REPAIR SHOPS

INDEX NUMBERS

1925-27=100

INDEX NUMBERS

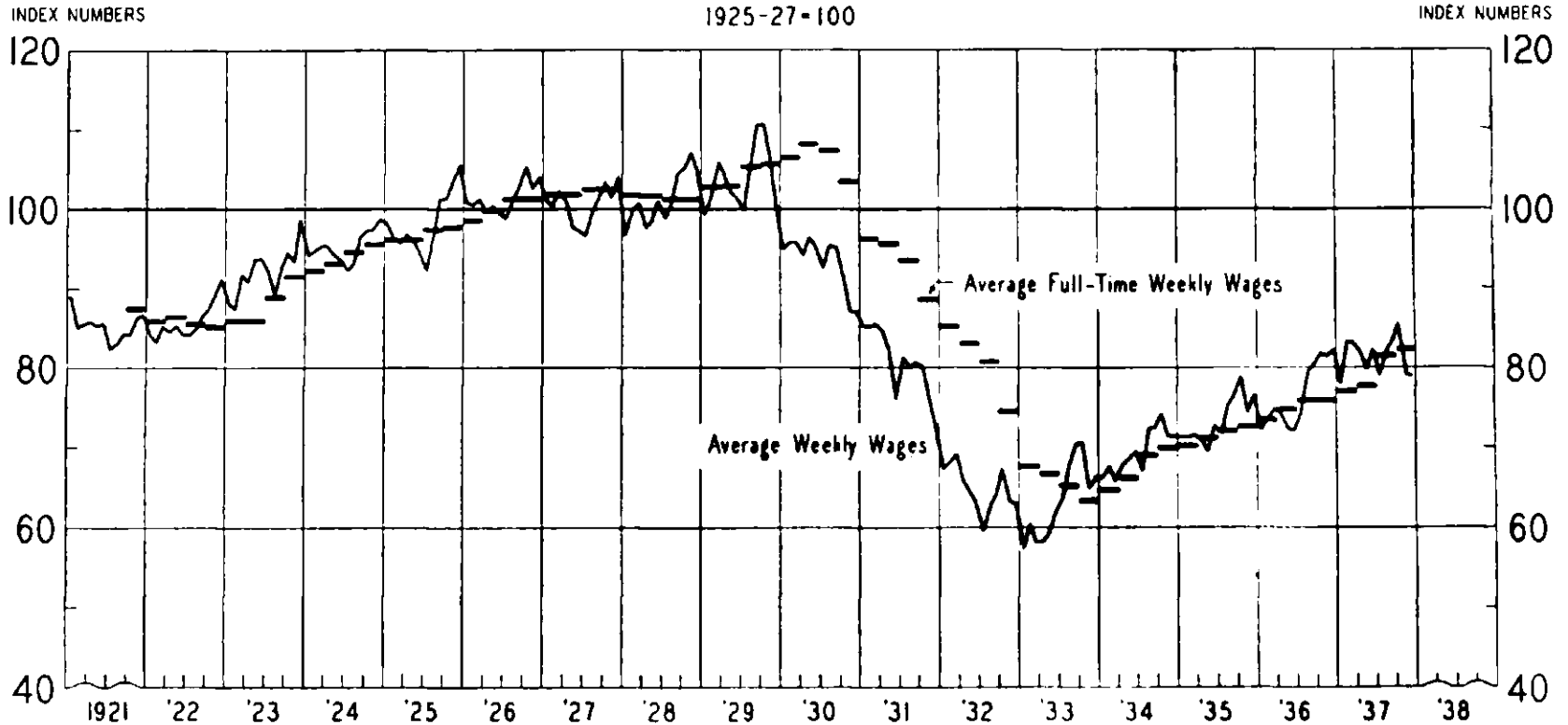


SOURCE INDUSTRIAL BULLETIN, NEW YORK STATE DEPARTMENT OF LABOR

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DIVISION OF PLACEMENT AND UNEMPLOYMENT INSURANCE
DEPARTMENT OF LABOR, STATE OF NEW YORK

CHART 8

MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE
FURNITURE AND CABINET WORK



SOURCE: INDUSTRIAL BULLETIN, NEW YORK STATE DEPARTMENT OF LABOR

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DEPARTMENT OF LABOR, STATE OF NEW YORK

CHART 9

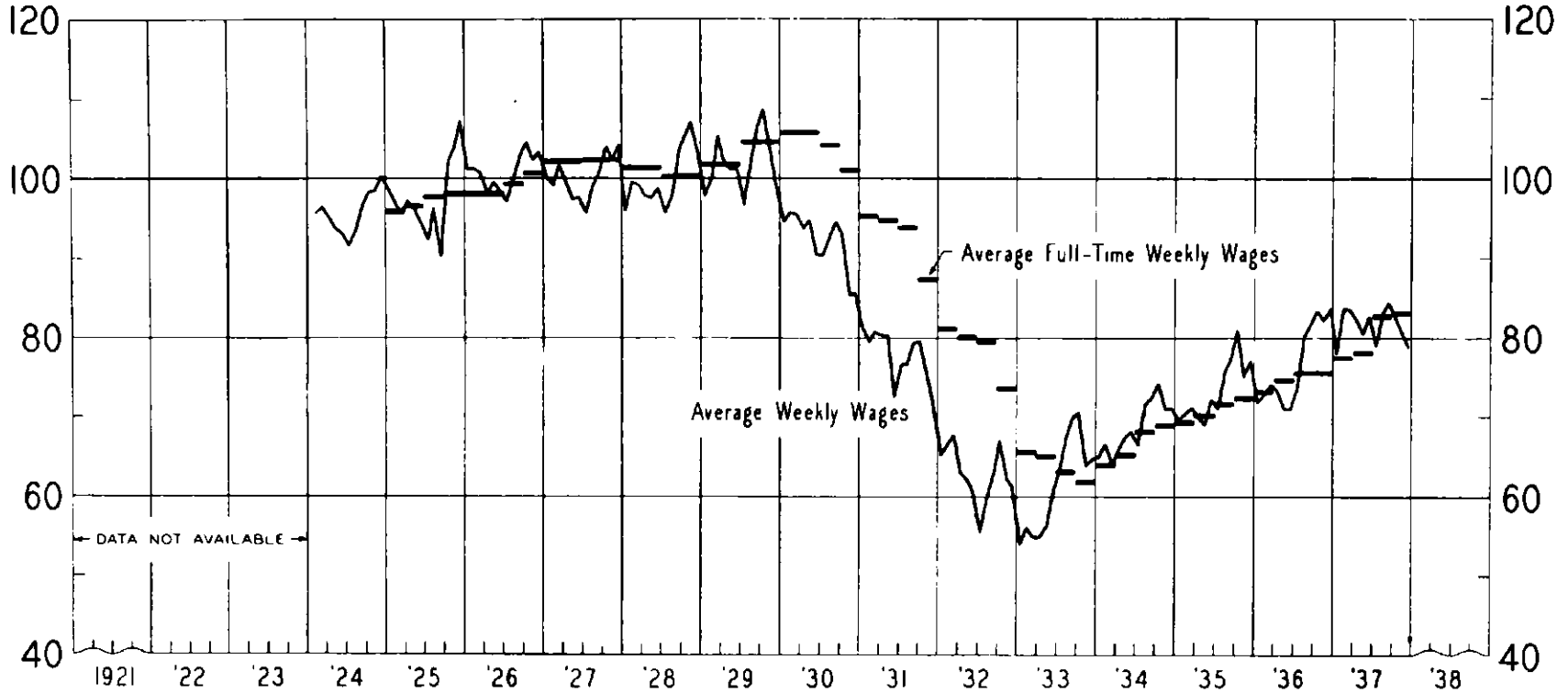
MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE

FURNITURE

1925-27=100

INDEX NUMBERS

INDEX NUMBERS



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DIVISION OF PLACEMENT AND UNEMPLOYMENT INSURANCE
DEPARTMENT OF LABOR, STATE OF NEW YORK

CHART 10

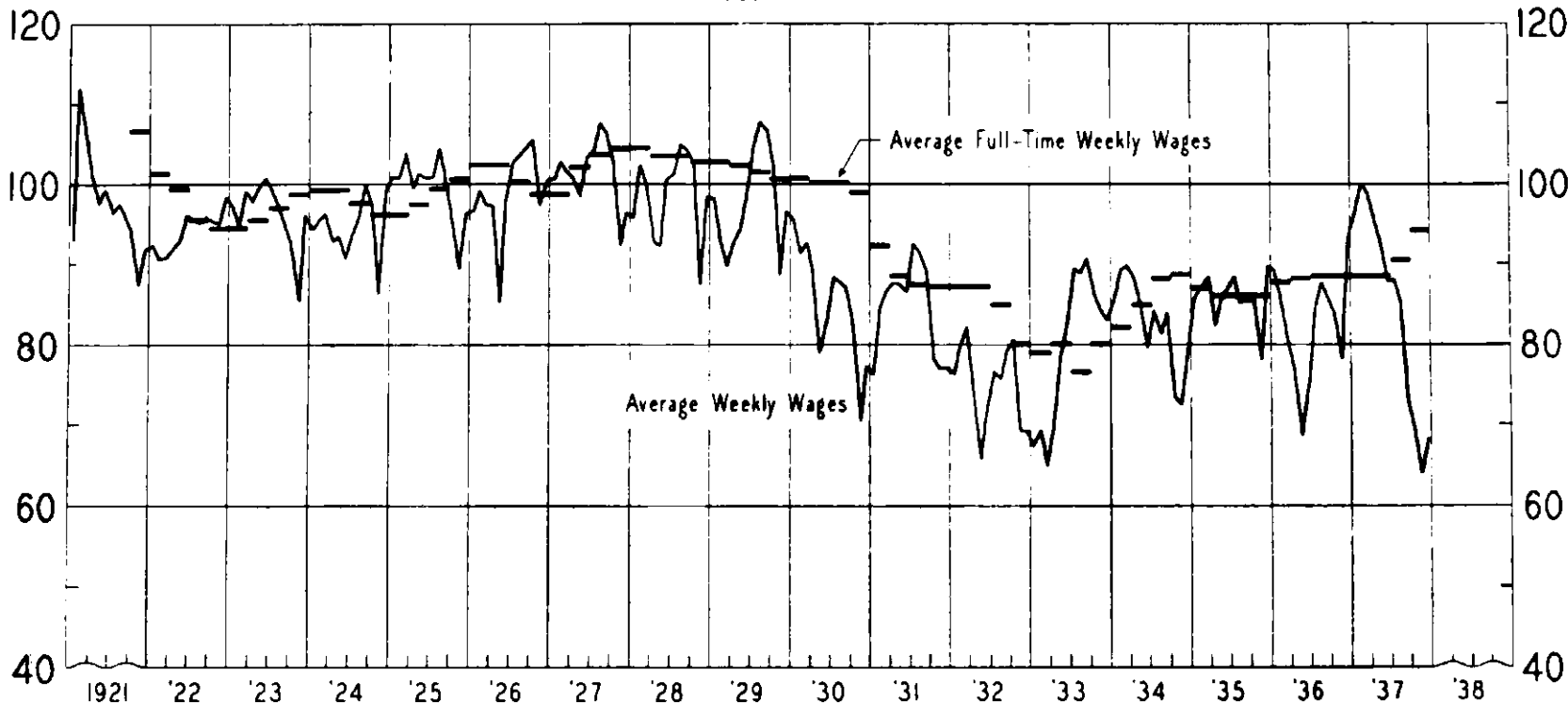
MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE

SHOES

1925-27=100

INDEX NUMBERS

INDEX NUMBERS



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DIVISION OF PLACEMENT AND UNEMPLOYMENT INSURANCE
DEPARTMENT OF LABOR, STATE OF NEW YORK

CHART II

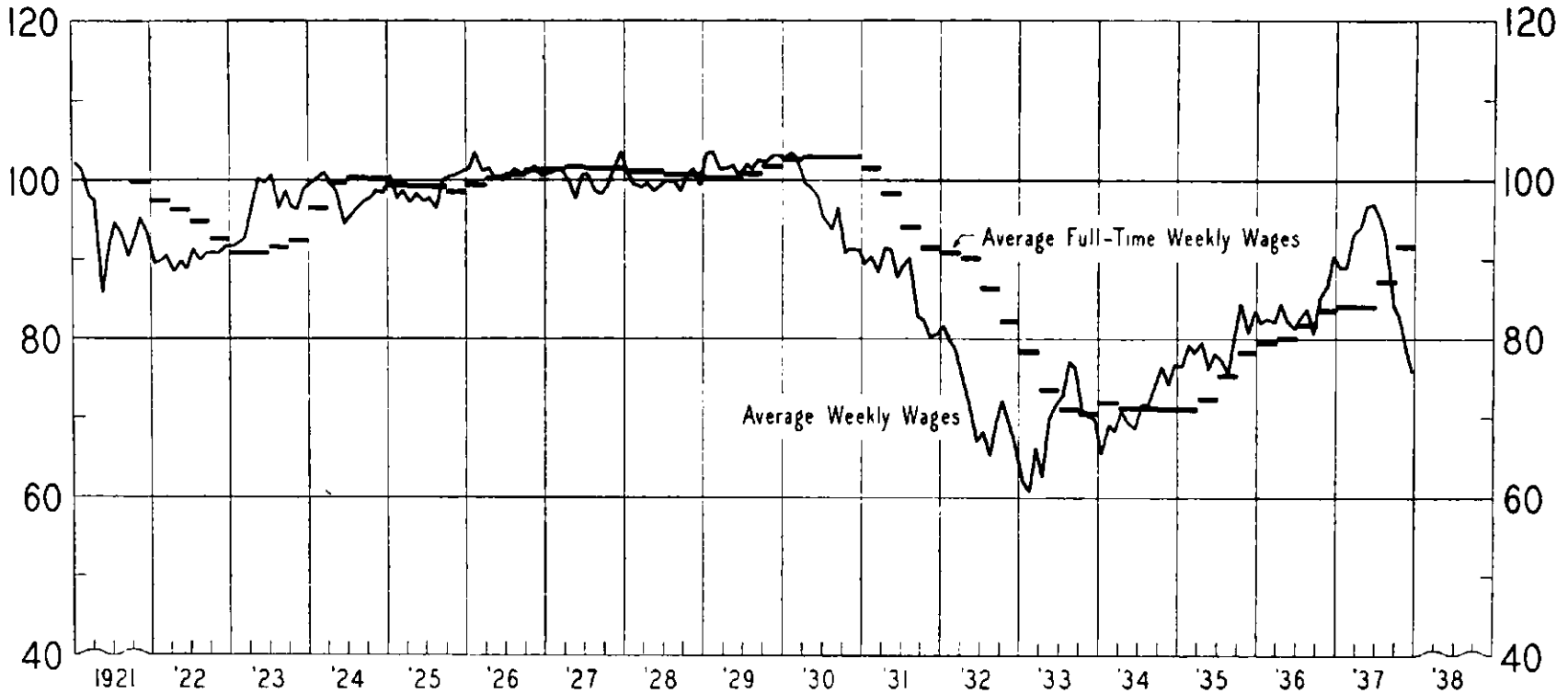
MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE

PULP AND PAPER

1925-27=100

INDEX NUMBERS

INDEX NUMBERS



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DIVISION OF PLACEMENT AND UNEMPLOYMENT INSURANCE
DEPARTMENT OF LABOR, STATE OF NEW YORK

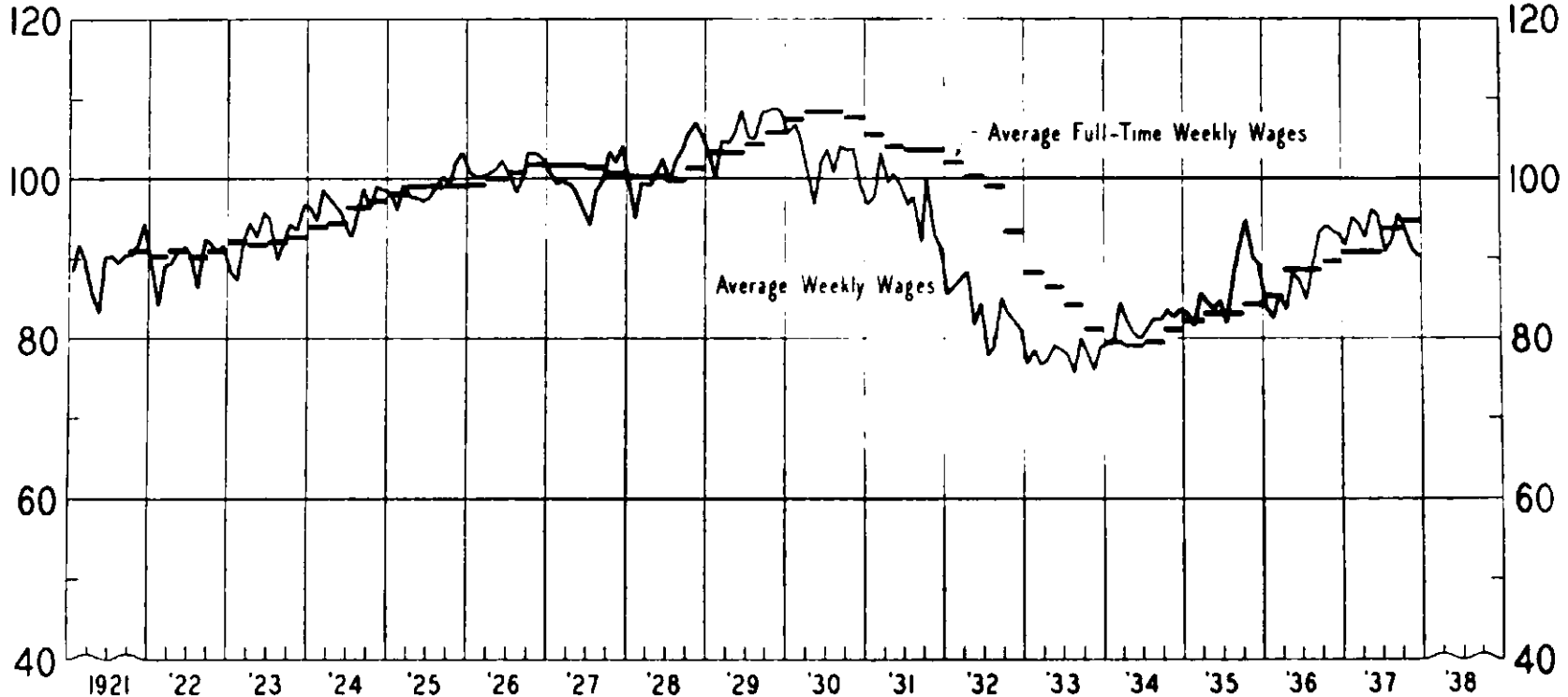
CHART 12

MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE
PAPER BOXES AND TUBES

INDEX NUMBERS

1925-27=100

INDEX NUMBERS

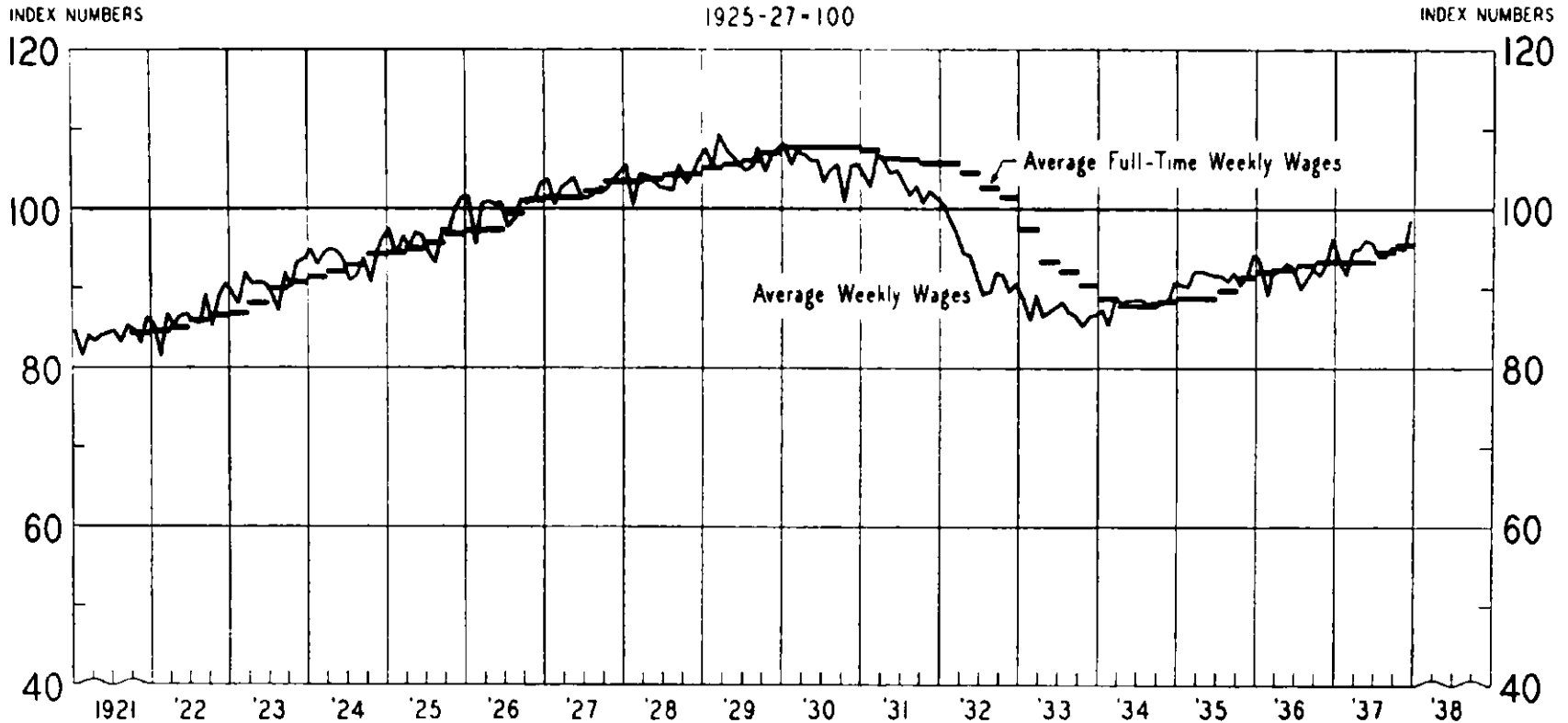


SOURCE: INDUSTRIAL BULLETIN, NEW YORK STATE DEPARTMENT OF LABOR

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DIVISION OF PLACEMENT AND UNEMPLOYMENT INSURANCE
DEPARTMENT OF LABOR STATE OF NEW YORK

CHART 13

MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE
PRINTING AND BOOKMAKING

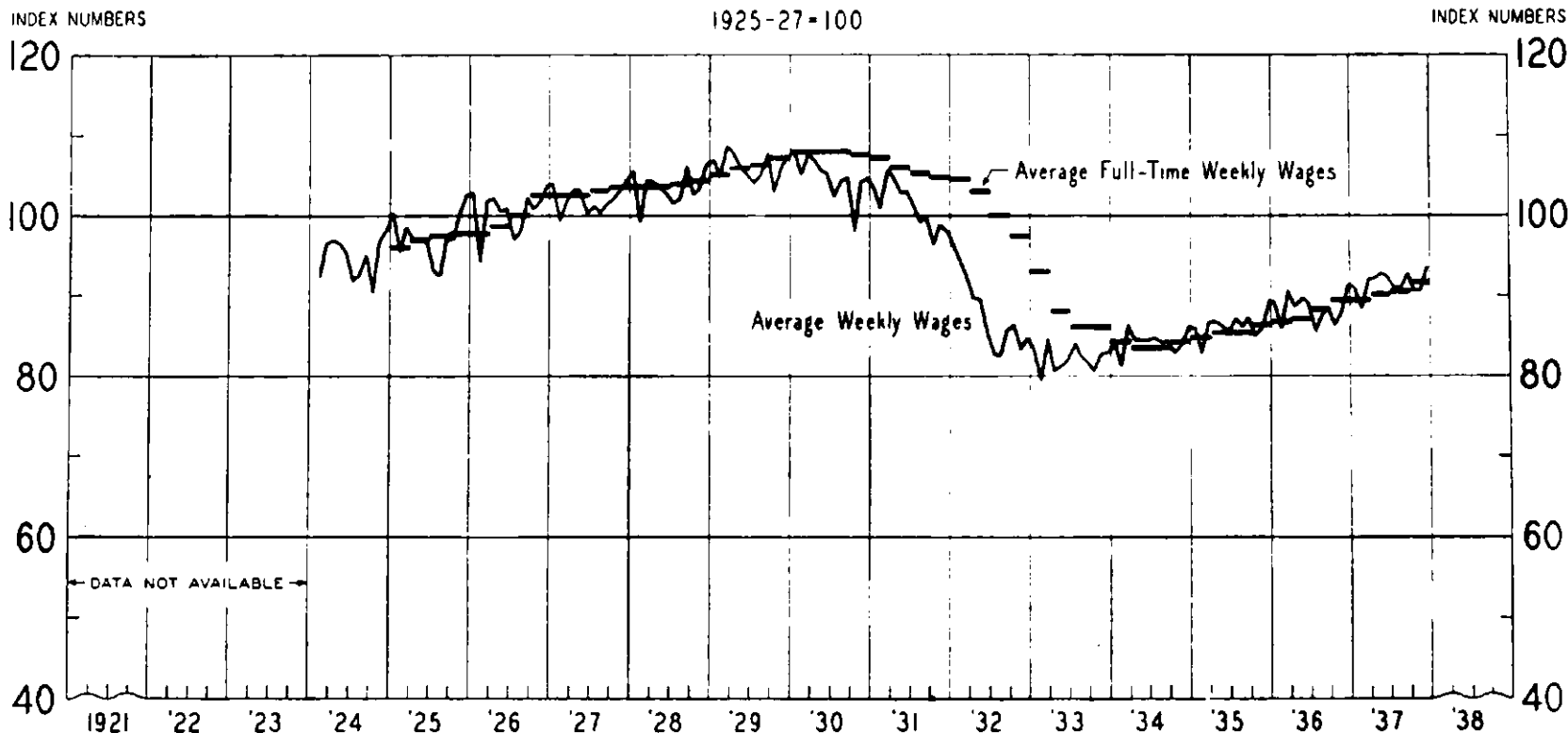


SOURCE INDUSTRIAL BULLETIN, NEW YORK STATE DEPARTMENT OF LABOR

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DIVISION OF PLACEMENT AND UNEMPLOYMENT INSURANCE
DEPARTMENT OF LABOR, STATE OF NEW YORK

CHART 14

MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE
PRINTING, BOOK AND JOB

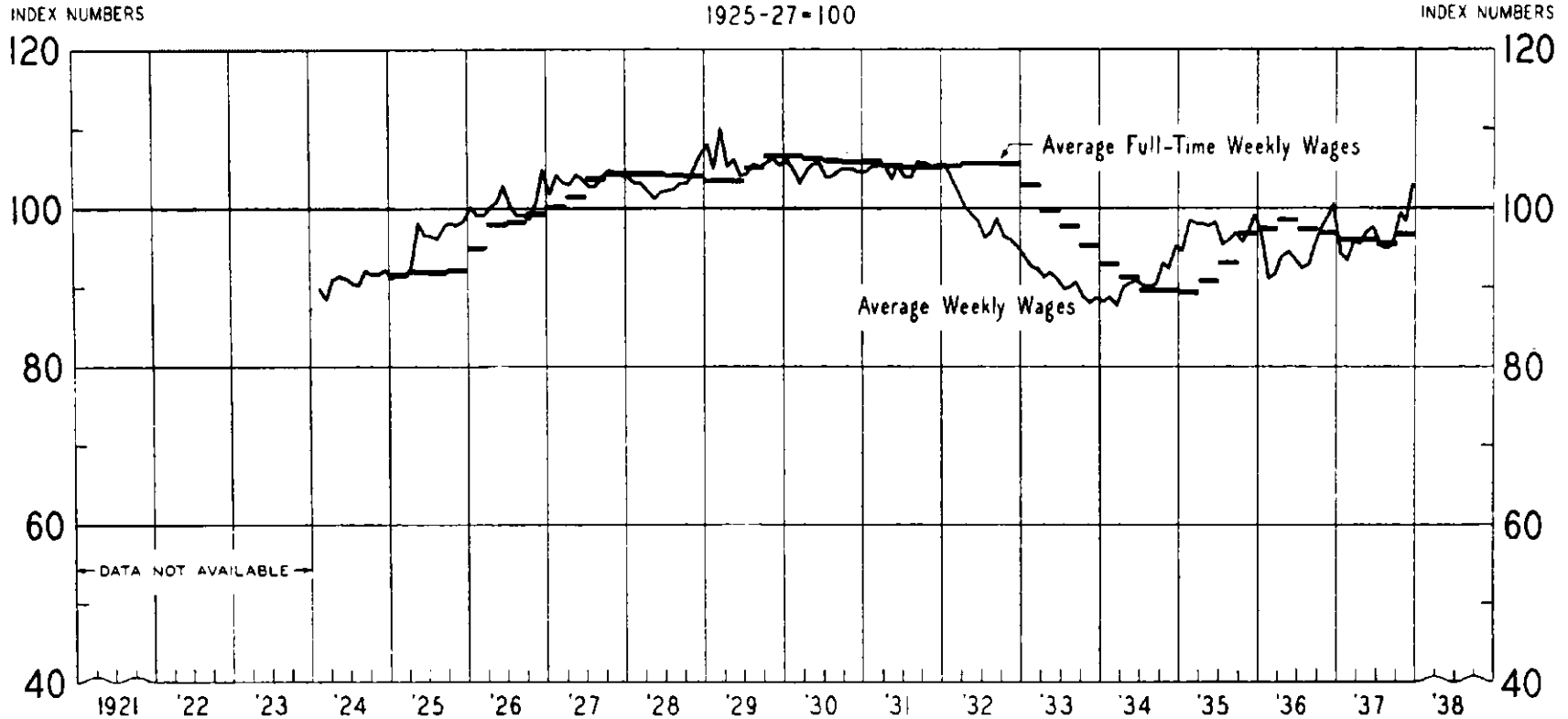


SOURCE: INDUSTRIAL BULLETIN, NEW YORK STATE DEPARTMENT OF LABOR

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DIVISION OF PLACEMENT AND UNEMPLOYMENT INSURANCE
DEPARTMENT OF LABOR, STATE OF NEW YORK

CHART 15

MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE
PRINTING, NEWSPAPERS



SOURCE: INDUSTRIAL BULLETIN, NEW YORK STATE DEPARTMENT OF LABOR

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DIVISION OF PLACEMENT AND UNEMPLOYMENT INSURANCE
DEPARTMENT OF LABOR, STATE OF NEW YORK

CHART 16

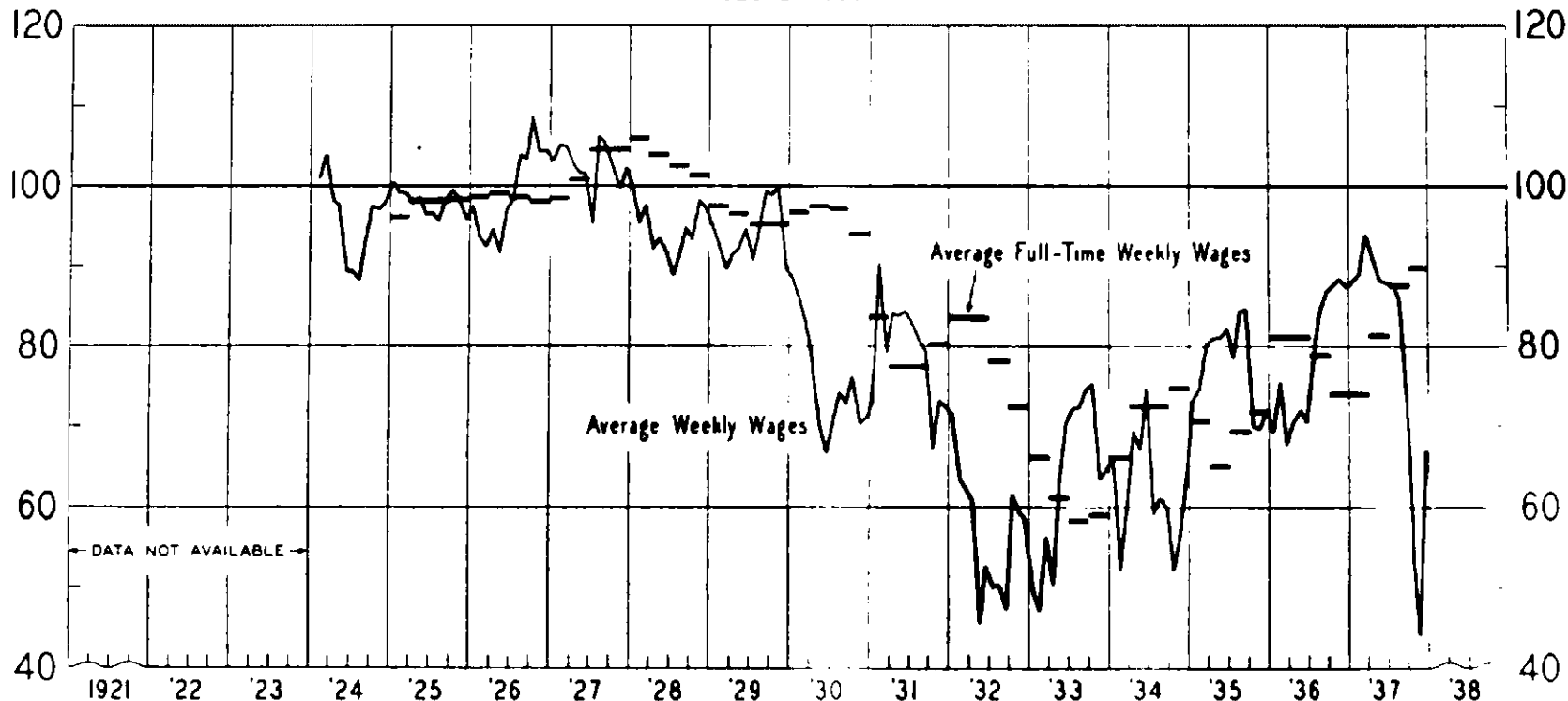
MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE

CARPETS AND RUGS

1925-27-100

INDEX NUMBERS

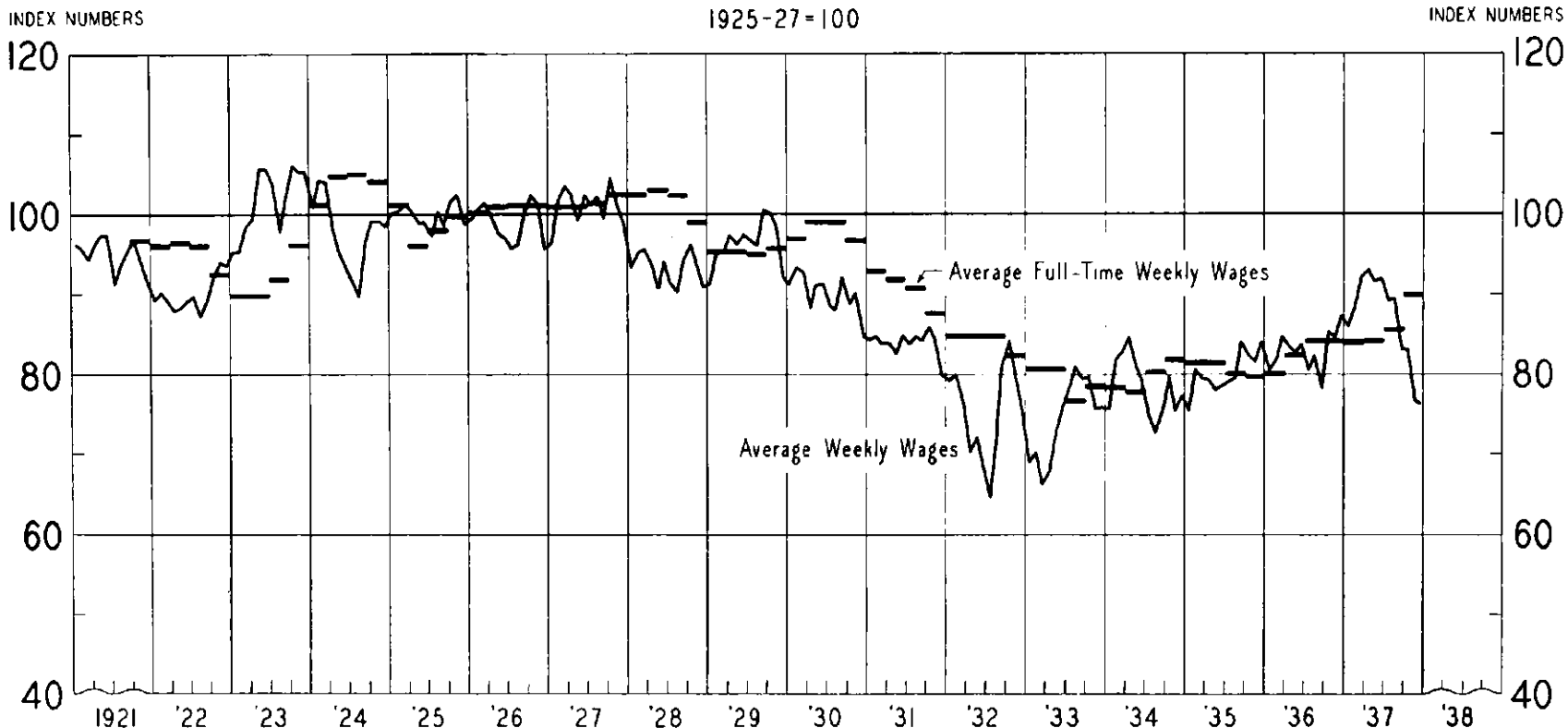
INDEX NUMBERS



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DIVISION OF RESEARCH AND UNEMPLOYMENT INSURANCE
DEPARTMENT OF LABOR, STATE OF NEW YORK

MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE
KNIT GOODS, EXCEPT SILK



SOURCE: INDUSTRIAL BULLETIN, NEW YORK STATE DEPARTMENT OF LABOR

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DIVISION OF PLACEMENT AND UNEMPLOYMENT INSURANCE
DEPARTMENT OF LABOR, STATE OF NEW YORK

CHART 18

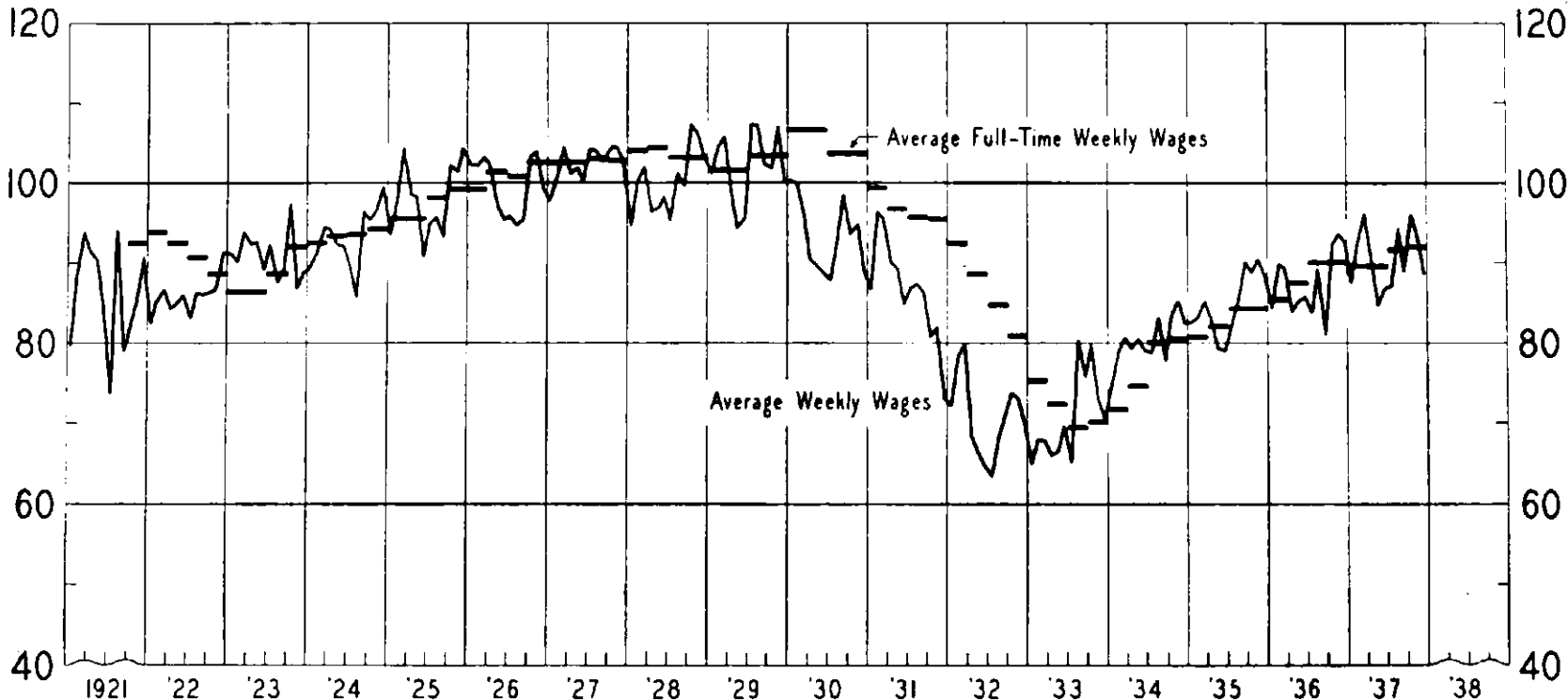
MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE

MEN'S FURNISHINGS

1925-27=100

INDEX NUMBERS

INDEX NUMBERS



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DIVISION OF PLACEMENT AND UNEMPLOYMENT INSURANCE
DEPARTMENT OF LABOR, STATE OF NEW YORK

CHART 19

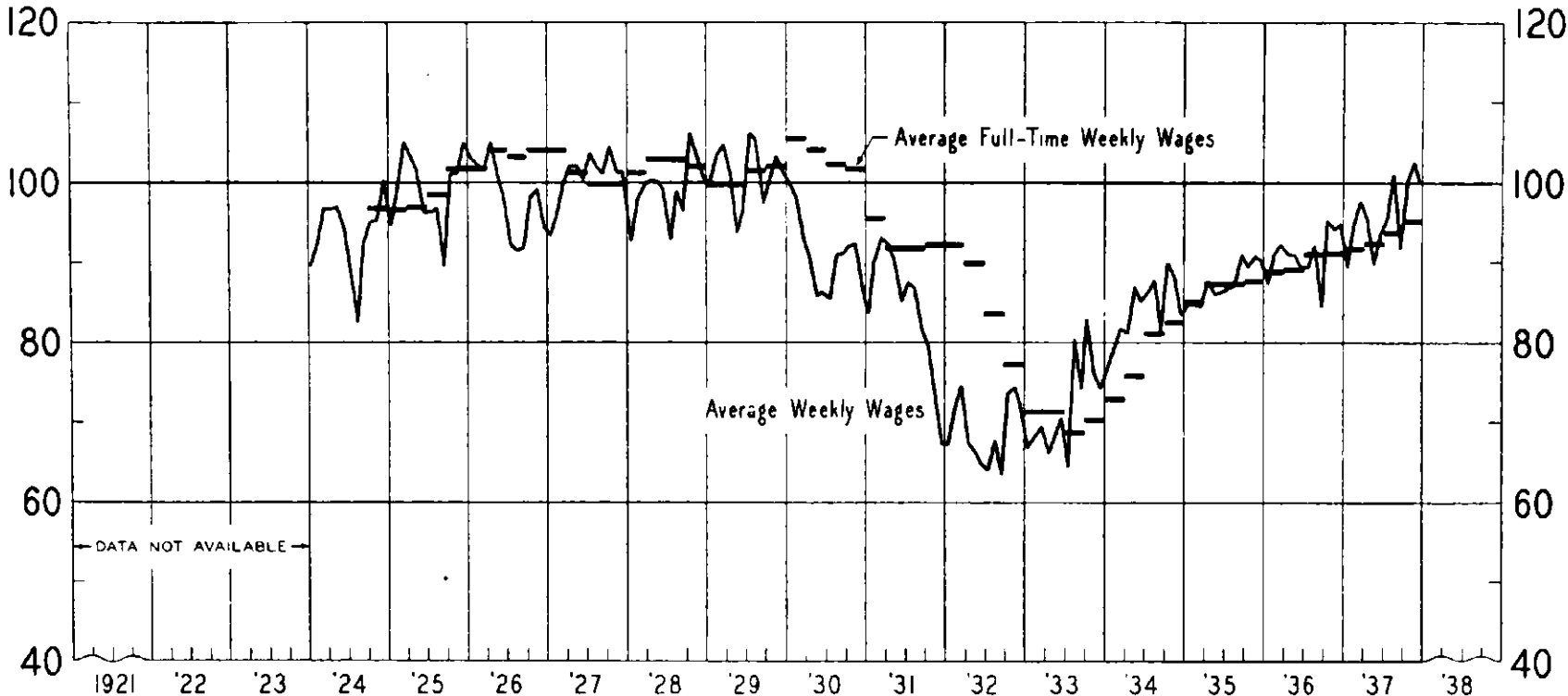
MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE

SHIRTS AND COLLARS

1925-27=100

INDEX NUMBERS

INDEX NUMBERS



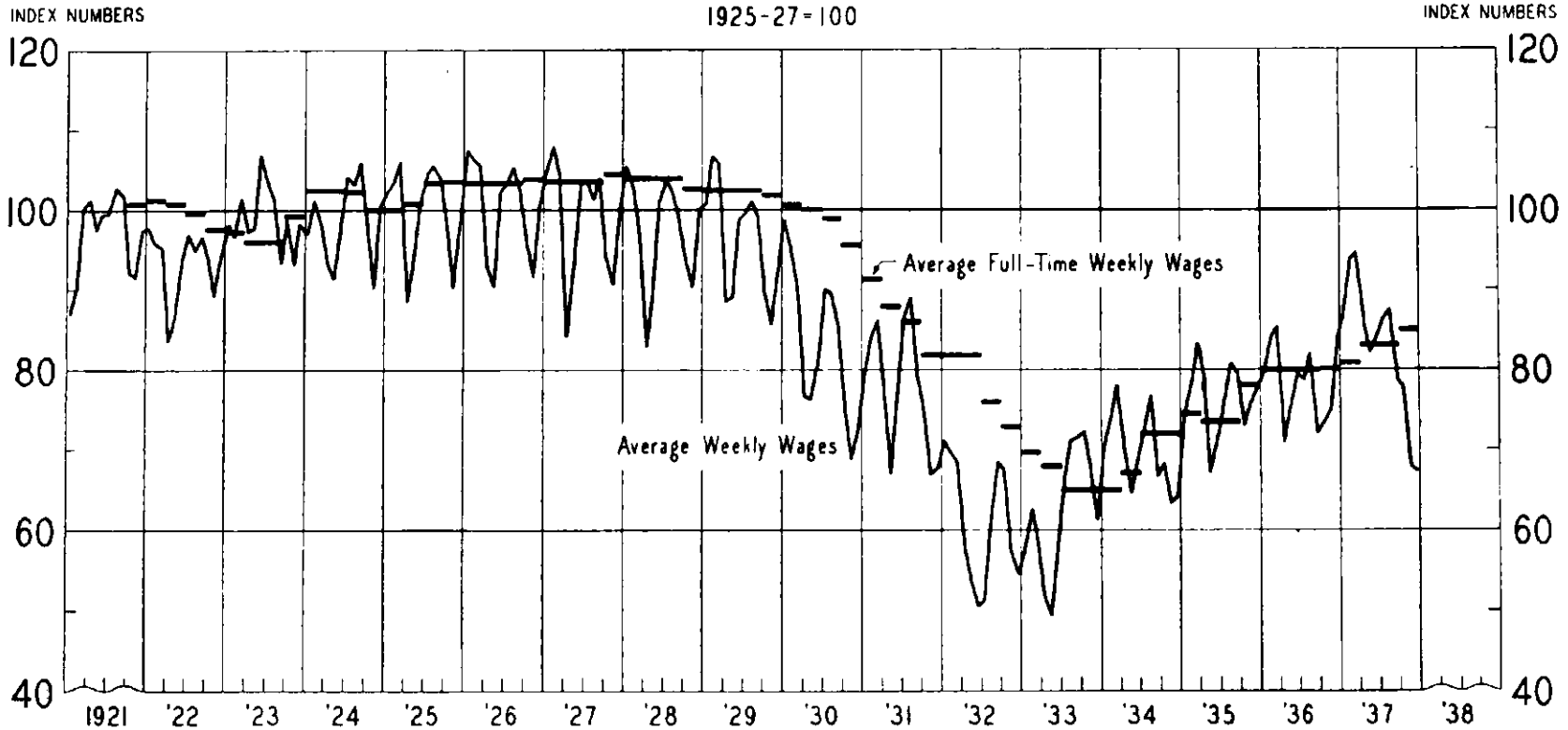
SOURCE: INDUSTRIAL BULLETIN, NEW YORK STATE DEPARTMENT OF LABOR

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DIVISION OF PLACEMENT AND UNEMPLOYMENT INSURANCE
DEPARTMENT OF LABOR, STATE OF NEW YORK

CHART 20

MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE

MEN'S CLOTHING



SOURCE: INDUSTRIAL BULLETIN, NEW YORK STATE DEPARTMENT OF LABOR

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DIVISION OF PLACEMENT AND UNEMPLOYMENT INSURANCE
DEPARTMENT OF LABOR, STATE OF NEW YORK

CHART 21

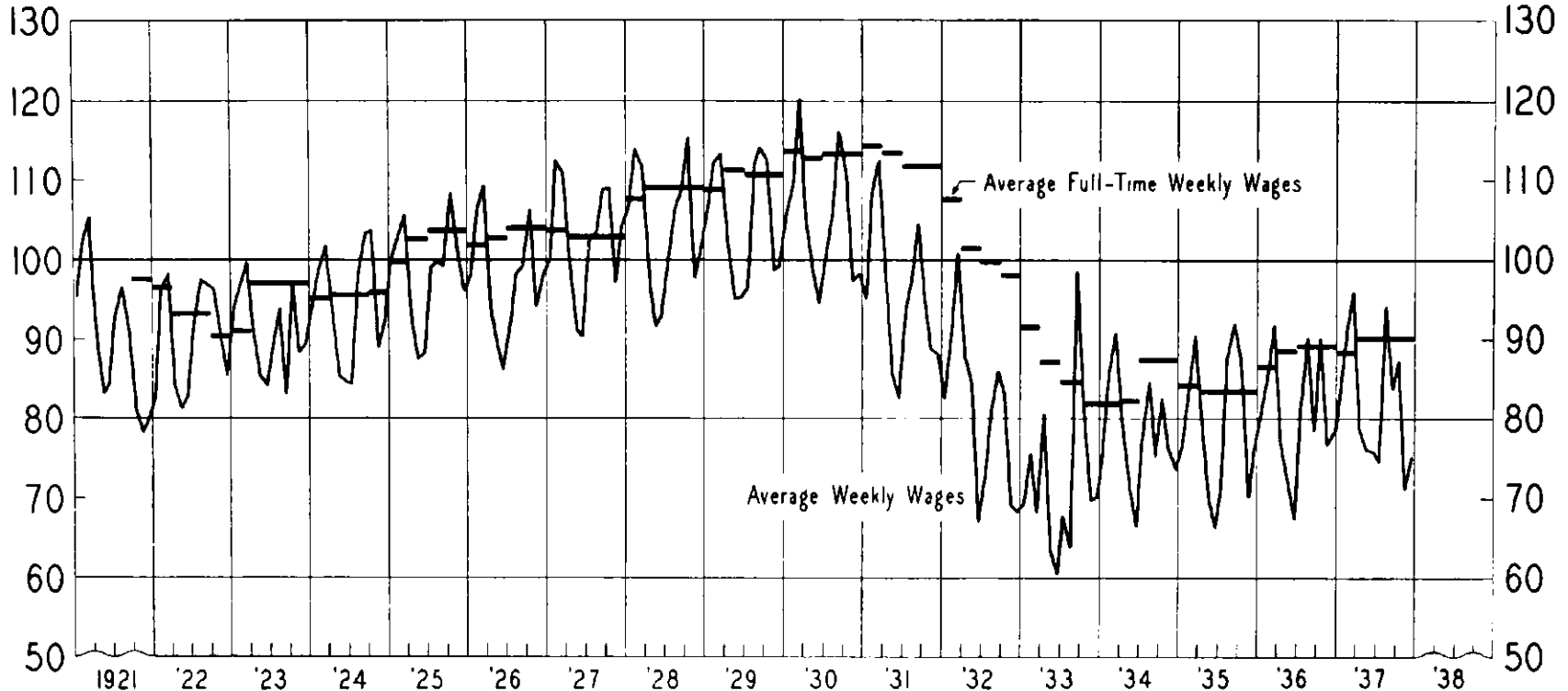
MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE

WOMEN'S CLOTHING

1925-27=100

INDEX NUMBERS

INDEX NUMBERS



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DIVISION OF PLACEMENT AND UNEMPLOYMENT INSURANCE
DEPARTMENT OF LABOR, STATE OF NEW YORK

CHART 22

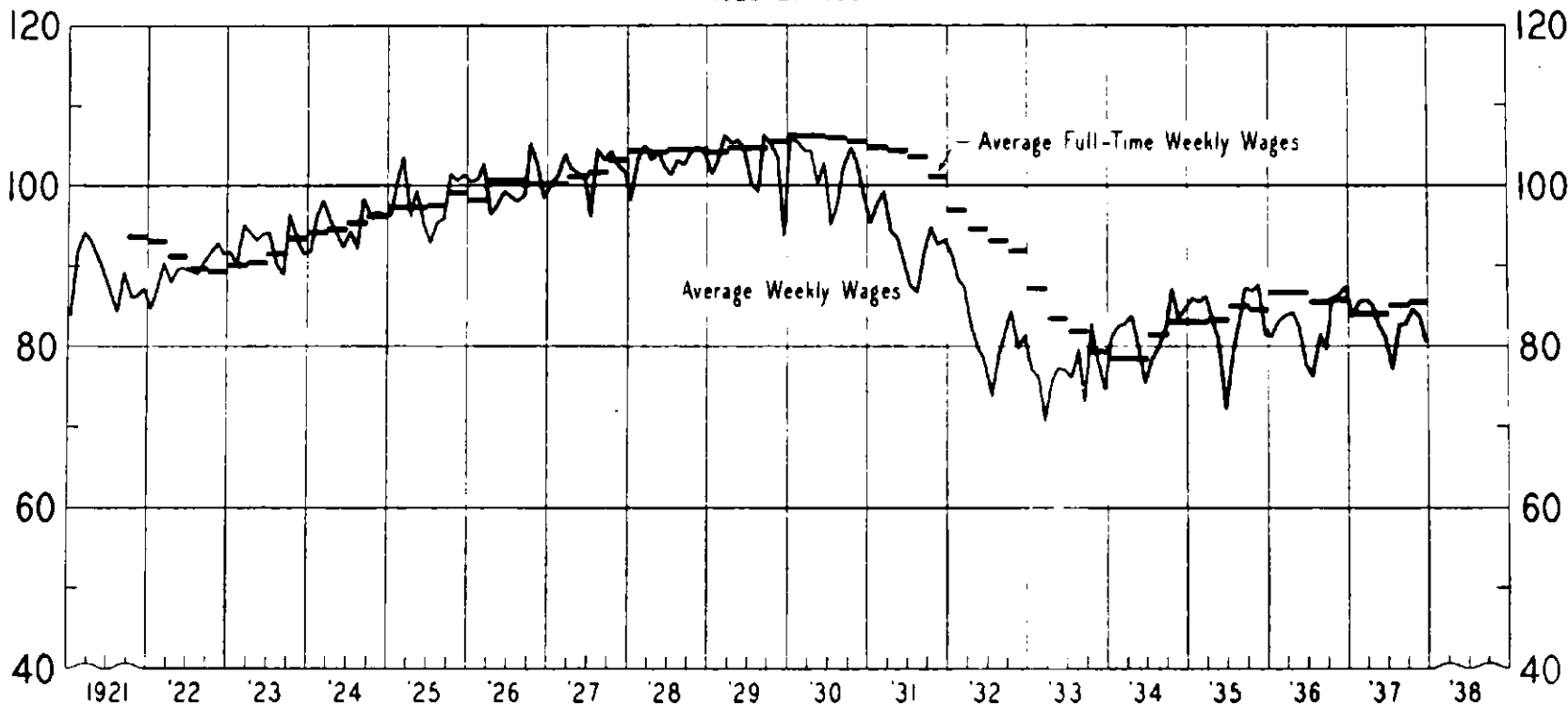
MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE

WOMEN'S UNDERWEAR

1925-27=100

INDEX NUMBERS

INDEX NUMBERS



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DIVISION OF PLACEMENT AND UNEMPLOYMENT INSURANCE
DEPARTMENT OF LABOR, STATE OF NEW YORK

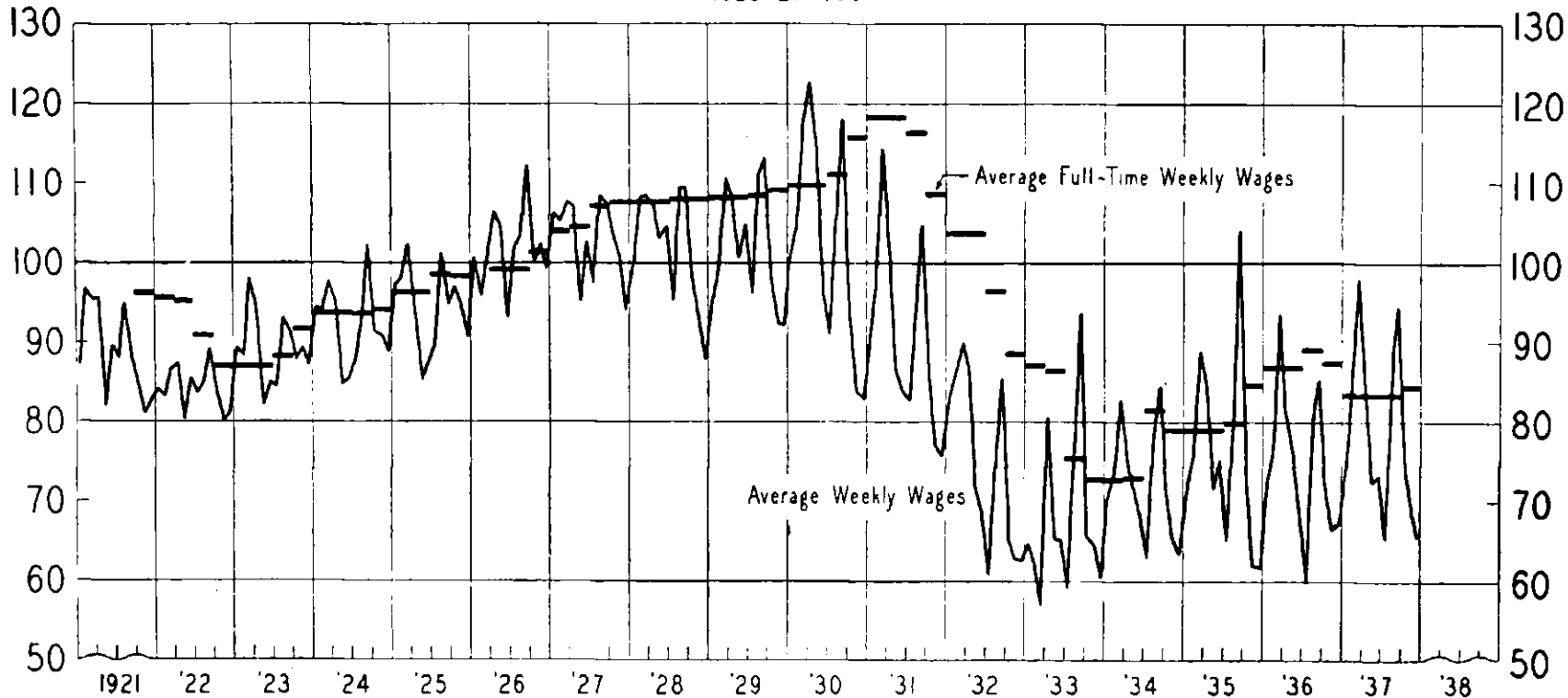
MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
 SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE

WOMEN'S HEADWEAR

1925-27=100

INDEX NUMBERS

INDEX NUMBERS

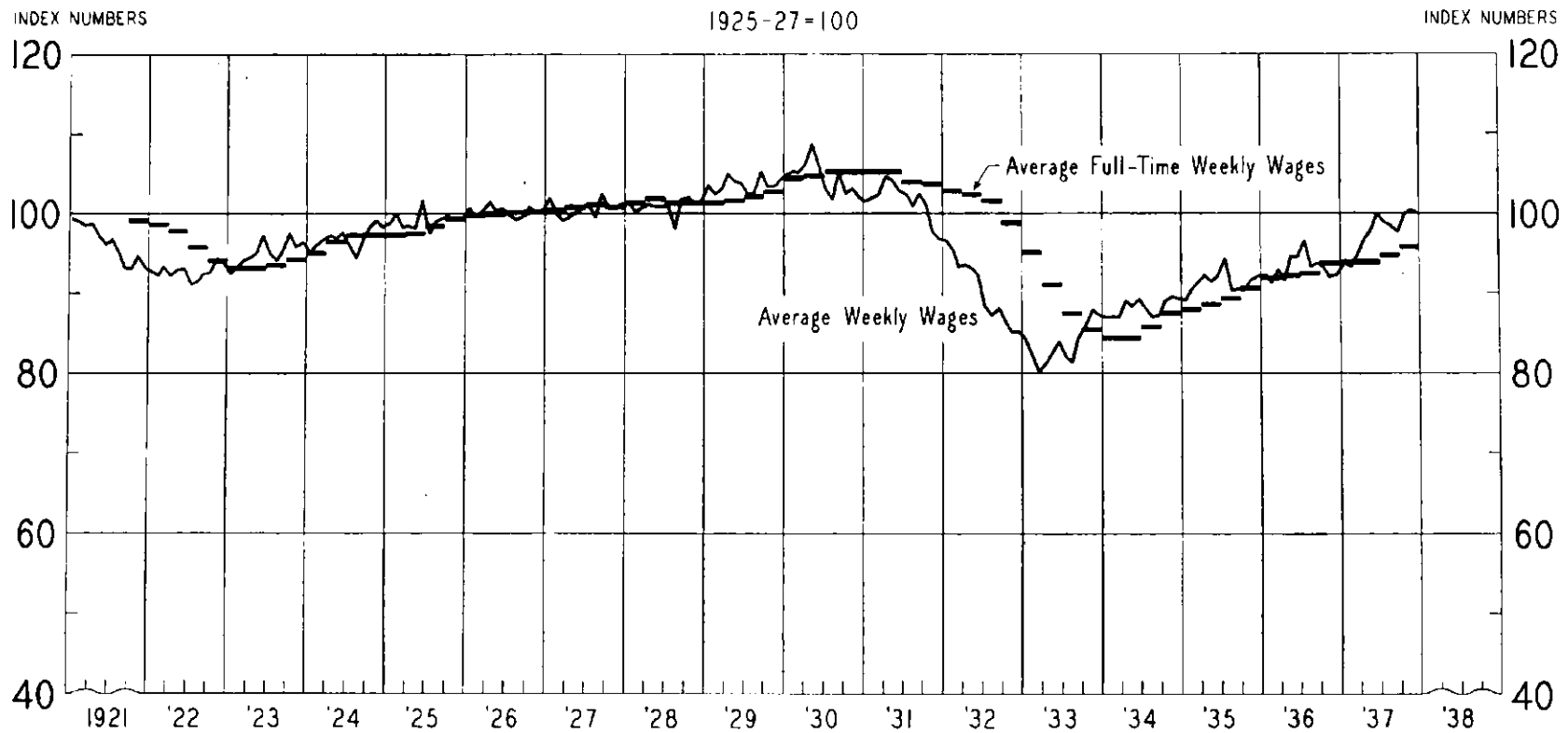


SOURCE INDUSTRIAL BULLETIN, NEW YORK STATE DEPARTMENT OF LABOR

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 DIVISION OF PLACEMENT AND UNEMPLOYMENT INSURANCE
 DEPARTMENT OF LABOR, STATE OF NEW YORK

CHART 24

MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE
LAUNDRING AND CLEANING



SOURCE: INDUSTRIAL BULLETIN, NEW YORK STATE DEPARTMENT OF LABOR

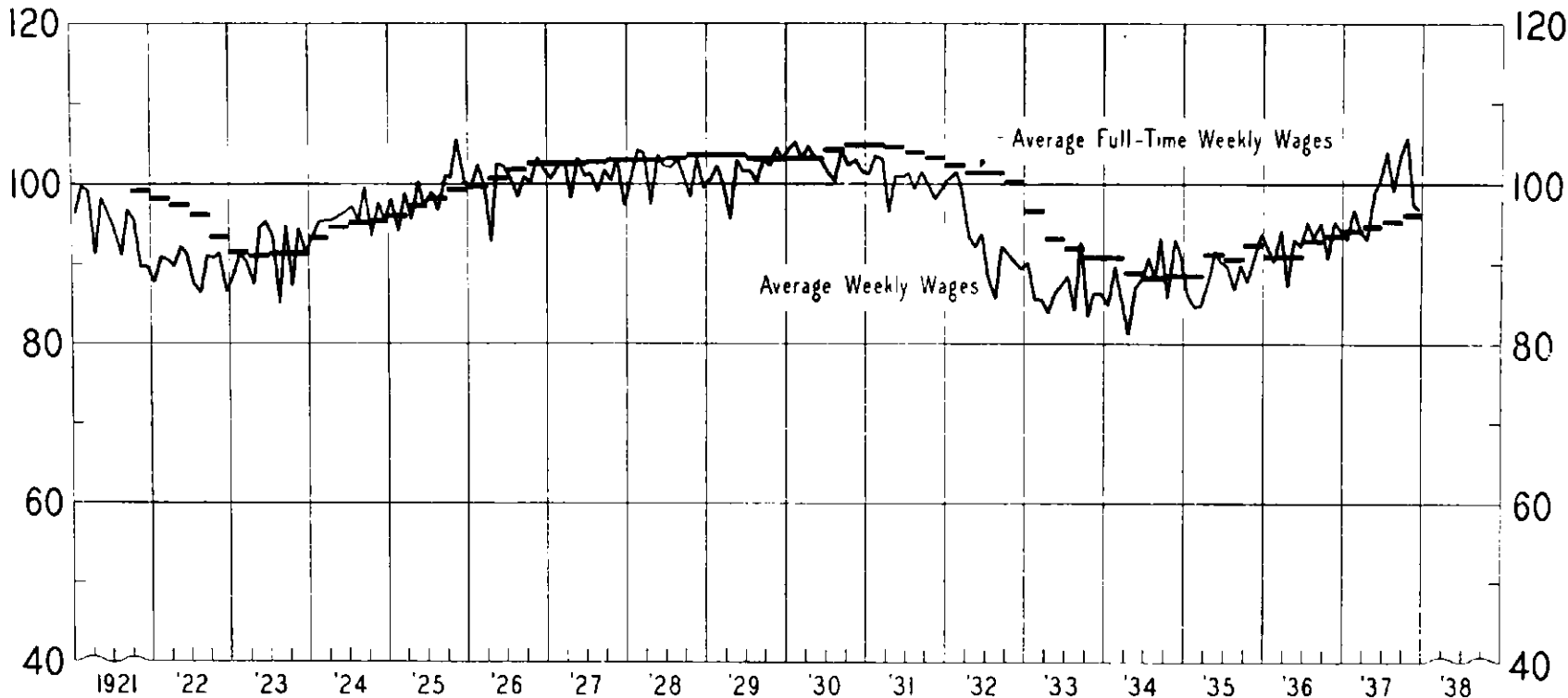
BUREAU OF RESEARCH AND STATISTICS
DIVISION OF PLACEMENT AND UNEMPLOYMENT INSURANCE
DEPARTMENT OF LABOR, STATE OF NEW YORK

MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
 SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE
BAKERY PRODUCTS

1925-27=100

INDEX NUMBERS

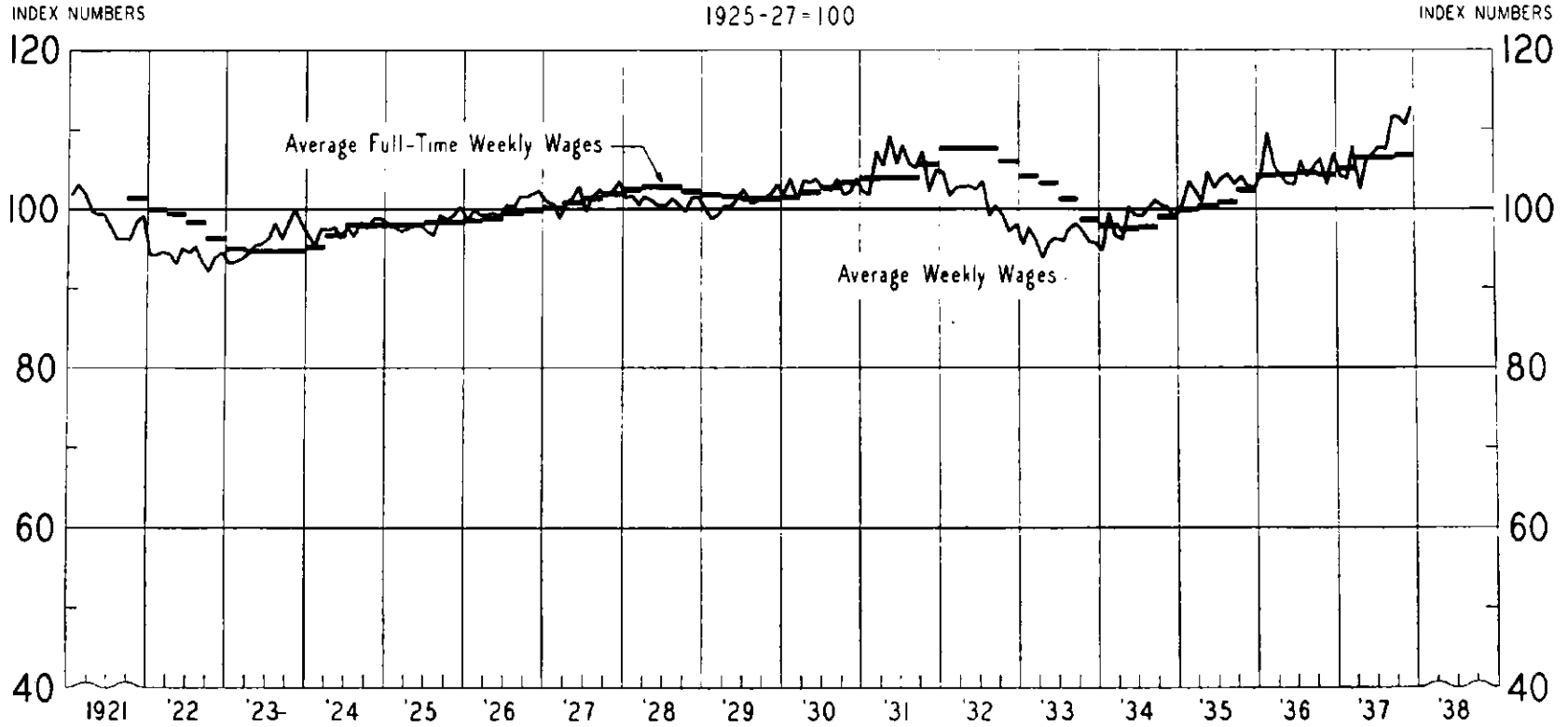
INDEX NUMBERS



SOURCE: INDUSTRIAL BULLETIN, NEW YORK STATE DEPARTMENT OF LABOR

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 DIVISION OF PLACEMENT AND UNEMPLOYMENT INSURANCE
 DEPARTMENT OF LABOR, STATE OF NEW YORK

MONTHLY INDICES OF AVERAGE WEEKLY WAGES AND AVERAGE FULL-TIME WEEKLY WAGES
SELECTED MANUFACTURING INDUSTRIES, NEW YORK STATE
WATER, LIGHT AND POWER
1925-27=100



SOURCE: INDUSTRIAL BULLETIN, NEW YORK STATE DEPARTMENT OF LABOR

BUREAU OF RESEARCH AND STATISTICS
DIVISION OF PLACEMENT AND UNEMPLOYMENT INSURANCE
DEPARTMENT OF LABOR, STATE OF NEW YORK

SECTION 6. STATISTICS COLLECTED BY THE DIVISION OF WOMEN IN
INDUSTRY AND MINIMUM WAGE, NEW YORK STATE
DEPARTMENT OF LABOR

The Bureau of Research of the Division of Women in Industry made several surveys of hours of work and wages which throw light on the problem of part-time work in certain spheres of employment.

a. Hotels

TABLE XXXVII

Weekly Hours of Work, Women Employees in Hotels,
New York State, 1934

| Number of Hours Scheduled per Week | New York State | | New York City | | Outside New York City | |
|--|----------------------|----------|----------------------|----------|--------------------------|----------|
| | Number of Workers | Per cent | Number of Workers | Per cent | Number of Workers | Per cent |
| Under 24 | 106 | 1.6 | 62 | 2.2 | 44 | 1.2 |
| Under 30 | 304 | 4.6 | 187 | 6.6 | 117 | 3.1 |
| Under 48 | 3,380 | 51.1 | 1,904 | 67.4 | 1,476 | 38.9 |
| Under 60 | 6,167 | 93.2 | 2,799 | 99.1 | 3,368 | 88.8 |
| 60 and over | 449 | 6.8 | 25 | .9 | 424 | 11.2 |
| Total | 6,616 | 100.0 | 2,824 | 100.0 | 3,792 | 100.0 |

SOURCE: New York State Department of Labor, Division of Women in Industry and Minimum Wage

It is difficult to compare the extent of part-time employment in New York City and outside of New York City because the majority of the workers in the metropolitan area worked 45 hours a week or less while the majority of the workers upstate worked 48 hours or more.

b. Restaurants

TABLE XXXVIII

Weekly Hours of Work, Women Employees in
Restaurants, New York State, 1934

| Number of Hours Scheduled per Week | New York State | | New York City | | Outside New York City | |
|--|----------------------|----------|----------------------|----------|--------------------------|----------|
| | Number of Workers | Per cent | Number of Workers | Per cent | Number of Workers | Per cent |
| Under 24 | 1,314 | 14.6 | 1,124 | 17.7 | 190 | 7.1 |
| Under 30 | 2,044 | 22.7 | 1,731 | 27.3 | 313 | 11.7 |
| Under 48 | 4,810 | 53.4 | 3,738 | 58.9 | 1,072 | 40.2 |
| Under 60 | 8,877 | 98.6 | 6,314 | 99.6 | 2,563 | 96.2 |
| 60 and over | 128 | 1.4 | 27 | .4 | 101 | 3.8 |
| Total | 9,005 | 100.0 | 6,341 | 100.0 | 2,664 | 100.0 |

SOURCE: New York State Department of Labor, Division of Women in Industry and Minimum Wage

The majority of the restaurant employees in New York City were scheduled to work 42 hours or less, while the majority upstate were scheduled to work 48 hours or more. It appears that part-time employment was more widespread in the metropolitan area than in the upstate region.

c. Beauty Shops

The beauty shop study covered 4,665 workers, of whom 2,979 were employed in New York City and 1,686 outside of New York City. The questionnaire called for information on the number of regularly scheduled hours and the number of hours actually worked. All workers regularly scheduled to work 30 hours or more per week were classified as full-time employees; all workers regularly scheduled to work fewer than 30 hours per week were classified as part-time employees.

TABLE XXXIX
Partial Unemployment of Full-Time Women Employees
in Beauty Shops, New York State, 1936

| Number of Hours Worked per Week | New York State | | New York City | | Outside New York City | |
|------------------------------------|----------------|----------|---------------|----------|--------------------------|----------|
| | Number | Per Cent | Number | Per Cent | Number | Per Cent |
| Under 12 | 4 | .1 | 4 | .1 | 0 | 0 |
| Under 18 | 27 | .6 | 22 | .8 | 5 | .3 |
| Under 24 | 52 | 1.2 | 43 | 1.6 | 9 | .6 |
| Under 30 | 86 | 2.0 | 64 | 2.3 | 22 | 1.4 |
| 30 and over | 4,269 | 98.0 | 2,697 | 97.7 | 1,572 | 98.6 |
| Total | 4,355 | 100.0 | 2,761 | 100.0 | 1,594 | 100.0 |

SOURCE: New York State Department of Labor, Division of Women in Industry and Minimum Wage

The survey covered 4,355 full-time and 310 part-time workers, the latter being 7.1 per cent of all workers. Two per cent of the full-time workers were partially unemployed; 3.9 per cent of the part-time employees worked overtime.

TABLE XL
Overtime of Part-Time Women Employees in Beauty
Shops, New York State, 1936

| Number of Hours Worked per Week | New York State | | New York City | | Outside New York City | |
|------------------------------------|----------------|----------|---------------|----------|--------------------------|----------|
| | Number | Per Cent | Number | Per Cent | Number | Per Cent |
| 48 and over | 1 | .3 | 1 | .5 | 0 | 0 |
| 42 and over | 5 | 1.6 | 1 | .5 | 4 | 4.3 |
| 36 and over | 8 | 2.6 | 3 | 1.4 | 5 | 5.4 |
| 30 and over | 12 | 3.9 | 6 | 2.8 | 6 | 6.5 |
| Under 30 | 298 | 96.1 | 212 | 97.2 | 86 | 93.5 |
| Total | 310 | 100.0 | 218 | 100.0 | 92 | 100.0 |

SOURCE: New York State Department of Labor, Division of Women in Industry and Minimum Wage

This material suggests the following interesting conclusions:

1. Partial unemployment in beauty shops is more severe in New York City than outside of New York City.
2. Some part-time employees might properly be included in a plan for partial unemployment compensation, since by working "overtime" they presumably signify their willingness to accept full-time employment and might earn a full-time wage in at least three weeks in three different calendar quarters.
3. Statistics of actual hours worked give only an indication of the extent of part-time employment.

TABLE XLI
Operating Time of Full-Time and Part-Time Women
Employees in Beauty Shops, New York State, 1936

| Number of Hours Worked per Week | New York State | | New York City | | Outside New York City | |
|------------------------------------|----------------|--------------|---------------|--------------|--------------------------|--------------|
| | Number | Per Cent | Number | Per Cent | Number | Per Cent |
| Under 24 | 283 | 6.1 | 209 | 7.0 | 74 | 4.4 |
| Under 30 | 384 | 8.2 | 276 | 9.3 | 108 | 6.4 |
| Under 48 | 1,532 | 32.8 | 981 | 32.9 | 551 | 32.7 |
| 48 and over | 3,133 | 67.2 | 1,998 | 67.1 | 1,135 | 67.3 |
| Total | 4,665 | 100.0 | 2,979 | 100.0 | 1,686 | 100.0 |

SOURCE: New York State Department of Labor, Division of Women in Industry and Minimum Wage

Two-thirds of all workers were employed for 48 hours a week or longer. Those employed for fewer than 24 hours might, therefore, be regarded as definitely under-employed. Under-employment was more severe in New York City than outside of New York City.

The results of the beauty shop study do not agree with the returns of the United States Census of Business. Thirteen per cent of all employees of beauty parlors were classified as part-time employees by the United States Bureau of the Census. This exceeds the 7.1 per cent mentioned above and the 6.1 per cent found in Table XLI.

d. Candy Industry

TABLE XLII
Part-Time Employment of Women in the Candy Industry,
New York State, Fall Season, 1936

| Size of Plant | Number of Women Employed On Part-Time | | Per Cent Part-Time |
|---------------------|--|-----|-----------------------|
| Under 100 employees | 1,665 | 170 | 10.2 |
| 100 and over | 2,100 | 107 | 5.1 |
| All plants | 3,765 | 277 | 7.4 |

SOURCE: New York State Department of Labor, Division of Women in Industry and Minimum Wage

It is interesting to note that part-time employment (which may be equivalent to partial unemployment) is twice as serious in plants employing fewer than 100 women as in plants employing 100 or more.

e. Packaging

The packaging statistics are valuable chiefly because they furnish a testing ground for the concept of a group "homogeneous from the point of view of the incidence of partial unemployment."

TABLE XLIII

Part-Time Employment of Women in Packaging, New York State, 1936

| Rank | Product | Number of Workers | | Per Cent |
|-------|-----------------------------|-------------------|--------------|-----------|
| | | Total | On Part-Time | Part-Time |
| 1 | Olives | 533 | 95 | 17.8 |
| 2 | Fruits and preserves | 316 | 55 | 17.4 |
| 3 | Dates and figs | 398 | 52 | 13.1 |
| 4 | Cosmetics | 2,120 | 276 | 13.0 |
| 5 | Powder puffs | 216 | 27 | 12.5 |
| 6 | Miscellaneous food products | 965 | 85 | 8.6 |
| 7 | Candy | 2,340 | 198 | 8.5 |
| 8 | Coffee and tea | 506 | 20 | 4.0 |
| 9 | Macaroni and noodles | 332 | 13 | 3.9 |
| 10 | Spices | 239 | 9 | 3.8 |
| 11 | Drugs and chemicals | 1,719 | 57 | 3.3 |
| 12 | Sausage casings | 213 | 6 | 2.8 |
| Total | | 9,897 | 893 | 9.0 |

SOURCE: New York State Department of Labor, Division of Women in Industry and Minimum Wage

The Lexis Ratio (a measure of homogeneity) for the first three groups is 1.167; for the fourth and fifth group, .258; and for the eighth, ninth, tenth and twelfth group, .462. Consequently, these groups may be combined.

TABLE XLIV

Part-Time Employment of Women in Packaging, Special Groups, New York State, 1936

| Rank | Product | Number of Workers | | Per Cent |
|-------|--|-------------------|--------------|-----------|
| | | Total | On Part-Time | Part-Time |
| 1 | Olives, fruits, preserves, dates and figs | 1,247 | 202 | 16.2 |
| 2 | Cosmetics and powder puffs | 2,336 | 303 | 13.0 |
| 3 | Candy | 2,340 | 198 | 8.5 |
| 4 | Coffee, tea, macaroni, noodles, spices and sausage casings | 1,290 | 48 | 3.7 |
| 5 | Drugs and chemicals | 1,719 | 57 | 3.3 |
| Total | | 8,932 | 808 | 9.0 |

SOURCE: New York State Department of Labor, Division of Women in Industry and Minimum Wage

The Lexis Ratio for the five major groups is equal to 7.51. This shows that the fortunes of the special operation, packaging, follow the fortunes of the industry for which the operation is performed.

f. Laundries

This study, conducted in 1937, is the most significant of all the investigations of the Division of Women in Industry, so far as the problem of partial unemployment is concerned. For a single week, August 30 to September 4, 1937, payroll records of hours and earnings in large and small laundries in cities and towns of various sizes in 56 communities of the State were studied. The sample covered 136 power laundries employing 3,505 women. It was found that 25.1 per cent of the women employees worked less than 40 hours in that week, while 9.3 per cent worked less than 32 hours. This compares with the basic week, as defined by the Minimum Wage Law of 1933, of 40-45 hours of employment.

But the study went deeper than this. The annual records of 670 women who worked at least 44 weeks in the year ended September 4, 1937, or thereabout, were reviewed, and the number of short weeks was determined. This material admits of the computation of rates of partial unemployment as well as of a duration distribution. Table XLV presents the data recast in cumulative percentage form.

TABLE XLV

Partial Unemployment Among Women Employed in
Power Laundries, New York State, Year Ending
September 4, 1937

| Rate and Duration | New York State | New York City | Upstate |
|--|-------------------|------------------|---------|
| Rate of partial unemployment | .952 | .959 | .942 |
| Number of short weeks worked by stated percentage of partially unemployed women workers: | | | |
| 1 or more | 100.0 | 100.0 | 100.0 |
| 2 or more | 96.6 | 96.5 | 96.7 |
| 3 or more | 91.4 | 90.4 | 93.0 |
| 4 or more | 86.2 | 85.1 | 88.0 |
| 5 or more | 81.2 | 79.8 | 83.5 |
| 6 or more | 76.2 | 74.0 | 79.8 |
| 7 or more | 70.8 | 67.9 | 75.6 |
| 8 or more | 66.8 | 63.9 | 71.5 |
| 9 or more | 62.4 | 59.1 | 67.8 |
| 10 or more | 56.3 | 53.8 | 60.3 |
| 11 or more | 52.7 | 49.5 | 57.9 |
| 12 or more | 49.1 | 44.9 | 55.8 |
| 13 or more | 45.5 | 40.7 | 53.3 |
| 14 or more | 43.1 | 38.4 | 50.8 |
| 15 or more | 41.1 | 35.9 | 49.6 |
| 16 or more | 39.3 | 34.1 | 47.9 |
| 17 or more | 37.5 | 32.6 | 45.5 |
| 18 or more | 35.7 | 30.6 | 44.2 |
| 19 or more | 34.6 | 29.8 | 42.6 |
| 20 or more | 32.8 | 27.8 | 40.9 |
| 21 or more | 31.5 | 26.8 | 39.3 |
| 22 or more | 30.3 | 25.0 | 38.8 |
| 23 or more | 29.2 | 24.0 | 37.6 |
| 24 or more | 29.0 | 23.7 | 37.6 |
| 25 or more | 28.2 | 23.5 | 36.0 |
| 26 or more | 27.7 | 23.2 | 35.1 |
| 27 or more | 26.8 | 22.2 | 34.3 |
| 28 or more | 24.6 | 19.2 | 33.5 |
| 29 or more | 24.0 | 18.4 | 33.1 |
| 30 or more | 22.6 | 16.7 | 32.2 |
| 31 or more | 20.8 | 14.6 | 31.0 |
| 32 or more | 19.7 | 13.6 | 29.8 |
| 33 or more | 19.0 | 13.1 | 28.5 |
| 34 or more | 17.7 | 12.1 | 26.9 |
| 35 or more | 16.3 | 10.6 | 25.6 |
| 40 or more | 11.9 | 6.1 | 21.5 |
| 45 or more | 7.2 | 3.3 | 13.6 |

SOURCE: New York State Department of Labor, Division of Women in Industry and Minimum Wage

While the duration of partial unemployment per person affected is greater upstate than in New York City, the rate of incidence of this hazard is smaller. However, the samples for the two subdivisions of New York State were not of a size to warrant definite conclusions. Still, it is of interest to note that the average woman worker in New York City experienced 14 short weeks while the average laundry worker upstate experienced 19 weeks of under-employment. The study does not indicate whether any of these weeks of partial unemployment might have been compensable.

Another sample, covering 117 women workers, reflected partial unemployment in hand laundries in New York City. Only 61 were found to have been affected. The average duration of under-employment per worker affected was 18 weeks but since the rate of partial unemployment was only .521, the average duration per worker exposed to this hazard was only 10 weeks.

SECTION 7. RHODE ISLAND STATE CENSUS, 1936

The following statistics are of importance, even though they do not refer to New York State, because they contain the only complete picture of the extent of part-time employment in existence.

Two years ago Rhode Island counted her part-time workers in connection with a general census of population. The returns were summarized in the Monthly Labor Review.¹ Table XLVI was prepared from the summaries, by recasting the figures so as to relate the data on part-time employment to data on total employment.

TABLE XLVI

Gainful Workers, by Industry and Employment Status, Rhode Island, January 1936

| Rank | Industry | Number of Workers | Per Cent Employed Part-Time | Per Cent Part-Time |
|---|---|-------------------|--------------------------------|-----------------------|
| MANUFACTURING AND MECHANICAL INDUSTRIES, EXCLUDING TEXTILE INDUSTRIES | | | | |
| 6 | Building construction | 6,976 | 963 | 13.8 |
| 48 | Chemical and allied products | 1,774 | 50 | 2.8 |
| 12 | Clay, glass and stone | 383 | 36 | 9.4 |
| 11 | Clothing | 707 | 74 | 10.5 |
| 43 | Electrical, machinery and supply | 815 | 28 | 3.4 |
| 13 | Furniture, woodworking, finished lumber | 777 | 69 | 8.9 |
| 38 | Independent hand trades | 930 | 45 | 4.8 |
| 24 | Iron and steel | 2,447 | 164 | 6.7 |
| 7 | Jewelry | 9,847 | 1,248 | 12.7 |
| 36 | Machines and machine tools | 7,371 | 364 | 4.9 |
| 26 | Other metal | 5,076 | 323 | 6.4 |
| 14.5 | Paper and allied products | 1,224 | 102 | 8.3 |
| 32 | Printing, publishing and engraving | 2,718 | 146 | 5.4 |
| 19 | Rubber | 3,571 | 257 | 7.2 |

¹ Employment and Unemployment in Rhode Island, 1936, *Monthly Labor Review*, Vol. 45, No. 5, pp. 1116-1120

TABLE XLVI—Continued

| Rank | Industry | Number of Workers | | Per Cent |
|---|---|-------------------|---------------|------------|
| | | Employed | Part-Time | Part-Time |
| 22 | Shoe and leather | 543 | 38 | 7.0 |
| 18 | Miscellaneous manufacturing | 3,411 | 249 | 7.3 |
| TEXTILE INDUSTRIES | | | | |
| 30 | Cotton | 12,709 | 700 | 5.5 |
| 16 | Woolen and worsted | 22,304 | 1,811 | 8.1 |
| 1 | Silk | 6,430 | 1,170 | 18.2 |
| 27 | Textile dyeing, printing, finishing, bleaching | 7,627 | 479 | 6.3 |
| 2 | Thread and braid | 4,968 | 866 | 17.4 |
| 21 | Other textile | 3,963 | 278 | 7.0 |
| TRADE | | | | |
| 37 | Wholesale and retail | 29,623 | 1,442 | 4.9 |
| 45 | Automobile agencies | 1,371 | 43 | 3.1 |
| 20 | Advertising | 453 | 32 | 7.1 |
| 55 | Banking and brokerage | 2,356 | 17 | 0.7 |
| 54 | Insurance | 2,664 | 23 | 0.9 |
| 44 | Real estate | 722 | 23 | 3.2 |
| 35 | Miscellaneous | 1,179 | 60 | 5.1 |
| TRANSPORTATION AND COMMUNICATION | | | | |
| 57 | Air transportation | 36 | | |
| 5 | Construction and maintenance of streets, roads, sewers | 804 | 115 | 14.3 |
| 23 | Express trucking, bus and cab companies | 2,721 | 186 | 6.8 |
| 40 | Garages and filling stations | 3,799 | 155 | 4.1 |
| 50 | Postal services | 909 | 22 | 2.4 |
| 29 | Steam railroads | 1,890 | 106 | 5.6 |
| 51 | Street railroads | 960 | 21 | 2.2 |
| 47 | Telephone, telegraph and radio | 1,979 | 59 | 3.0 |
| 4 | Water transportation | 1,018 | 155 | 15.2 |
| 25 | Other service | 197 | 13 | 6.6 |
| FOOD INDUSTRIES | | | | |
| 46 | Bakeries | 2,397 | 75 | 3.1 |
| 33 | Breweries, distillers and beverages | 693 | 37 | 5.3 |
| 14.5 | Slaughter and packing houses | 312 | 26 | 8.3 |
| 28 | Other food | 800 | 47 | 5.9 |
| PUBLIC SERVICE | | | | |
| 42 | City | 9,750 | 371 | 3.8 |
| 53 | State | 2,580 | 23 | 0.9 |
| 56 | Federal | 5,206 | 20 | 0.4 |
| 52 | Electric light and gas | 2,923 | 42 | 1.4 |
| DOMESTIC AND PERSONAL SERVICE | | | | |
| 39 | Hotels, restaurants, cafes, saloons, apartments | 5,789 | 240 | 4.1 |
| 31 | Laundries, cleaning, pressing | 2,415 | 132 | 5.5 |
| 17 | Other | 13,054 | | 7.3 |
| PROFESSIONAL AND SEMI-PROFESSIONAL SERVICE | | | | |
| 48 | Professional and semi-professional ser- vices | 11,566 | 311 | 2.7 |
| RECREATION AND AMUSEMENT | | | | |
| 9 | Recreation and amusement | 1,290 | 156 | 12.1 |
| GENERAL | | | | |
| 41 | Farming | 5,328 | 205 | 3.8 |
| 10 | Fishing | 826 | 95 | 11.5 |
| 34 | Forestry | 358 | 19 | 5.3 |
| 3 | Quarrying, mining, sand gravel | 302 | 46 | 15.2 |
| 8 | Other industries | 41 | 5 | 12.2 |
| ALL INDUSTRIES | | 224,882 | 14,737 | 6.5 |

SOURCE: See footnote 1, p. 110

SECTION 8. FEDERAL CENSUS OF PARTIAL EMPLOYMENT,
UNEMPLOYMENT, AND OCCUPATIONS

The census administered by John D. Biggers was meant to portray the conditions as of November 16-20, 1937. No attempt was made to count employed workers; thus the statistics of part-time employment (derived from voluntary registrations) cannot be related to employment but only to total unemployment.

TABLE XLVII

Partial Unemployment in All Industries, New York State,
November 1937

| Number of Voluntary Registrants Reporting Themselves Totally Unemployed | On Emergency Jobs | Partially Unemployed | Per Cent Partially Unemployed of All Unemployed |
|---|----------------------|-------------------------|---|
| 763,322 | 206,518 | 319,566 | 24.8 |

SOURCE: *U. S. Census of Partial Employment, Unemployment and Occupations*, Jan. 18, 1938, Preliminary Report on Total and Partial Unemployment

The test census revealed that the voluntary data on total unemployment were 72 per cent accurate, while the data on partial unemployment were 57 per cent accurate. There may have been, therefore, as many as 1,060,169 totally unemployed workers in the State of New York actively seeking work, and 560,642 partially unemployed workers seeking additional employment on the given date.

SECTION 9. NATION-WIDE STATISTICS OF PART-TIME
EMPLOYMENT

In order to round out the statistical record contained in this appendix, a brief survey was made of available data which portray in some fashion the trend of part-time employment in the United States as a whole. The limited applicability of these data to conditions in the State of New York is recognized and no specific conclusions are drawn from the examination of these sources. A brief conspectus of these materials is given below.

a. National Bureau of Economic Research

Willford I. King's pioneering study of the total volume of employment¹ in 1923 was based on replies to a questionnaire addressed to employees as well as to employers, and covered the nine calendar quarters from January 1, 1920, to March 31, 1922. King writes² that

"If the records obtained from employers are representative, the conclusion seems to be justified for all but a few industries that part-time work, while more prevalent in time of depression than when the boom is on, is, never-

¹ National Bureau of Economic Research, Inc. *Employment Hours and Earnings in Prosperity and Depression, United States 1920-1923* (1923). This study was conducted for the President's Conference on Unemployment in collaboration with the Bureau of Markets and Crop Estimates and the Bureau of the Census.

² *Op. cit.*, p. 48

theless, not commonly resorted to by most employers. The minimum per cent of full time reached by the reported totals for all industries is 95.3, a figure which indicates a surprisingly small amount of part-time work. Employers in general evidently believe it advantageous to lay off some of their employees rather than to keep everyone occupied for a smaller number of hours per week."

It should be noted that King's data represent quarterly averages and that his industrial classification is very broad. Manufacturing, for example, is divided into six groups only. In view of the method of this inquiry, it is possible that most of the under-employment existing in 1920-1922 was averaged out of sight in the process of preparing¹ and tabulating the returns. Nevertheless, the results of this investigation indicate the existence of differences in the extent of part-time employment among broad occupational groups. The quarterly data for the two complete years were averaged in order to obtain the figures set forth in Table XLVIII; no weights were used in computing these averages.

TABLE XLVIII

An Estimate for the Continental United States of the Per Cent of Full Time Worked by the Average Employee While on the Payroll in Enterprises of All Sizes, 1920-1921

| Rank | Industry | Per Cent of Full time Worked |
|------|---|------------------------------|
| | All Industries | 96.9 |
| 12 | Agriculture | 96.1 |
| 16 | Extraction of Minerals | 92.4 |
| 14 | Building and Construction | 94.3 |
| 9 | Other Hand Trades | 97.2 |
| 3 | Finance | 99.6 |
| 2 | Public and Professional Service | 100.3 |
| 7 | Domestic and Personal Service | 97.9 |
| | All Transportation | 101.5 |
| 1 | Steam Railways | 103.4 |
| 5 | Other Transportation | 98.6 |
| | Commerce and Trade | 98.2 |
| 4 | Wholesale | 99.3 |
| 6 | Retail | 98.0 |
| | All Factories | 94.3 |
| 10 | Food, Drink, and Tobacco | 97.0 |
| 13 | Lumber and Its Products | 94.9 |
| 17 | Metals and Metal Products ¹ | 92.2 |
| 8 | Paper and Printing | 97.6 |
| 11 | Mineral Products ² | 96.9 |
| 15 | Textile and Leather Products ³ | 94.0 |

¹ Vehicles, railroad cars, and all products not elsewhere recorded are included here.

² Includes chemical, stone, glass, and clay products.

³ Includes clothing of all kinds.

SOURCE: See footnote 1, p. 112

¹ In collecting data on employment, hours, and wages by means of a mail questionnaire, King found it necessary to provide four optional forms of reply, directing the employer to "Fill that ONE of these forms given below which can best be estimated from the memory or records of the employer — either I, II, III, or IV." *Op. cit.*, p. 14

b. National Industrial Conference Board

The National Industrial Conference Board, Inc., collects current data on actual hours of work, average hours of plant operation, and average nominal weekly hours. The Board defines these terms as follows:¹

“The average week of plant operation is the average hours of operation of all the plants covered, and the nominal or standard work week is the average number of hours the plants in the study were supposed normally to operate. In deriving each of these figures, the hours of each plant were multiplied by the total number of workers in the plant and the sum of these products divided by the total workers in all plants. In this way, properly weighted figures were obtained. But it will be noted that hours of

TABLE XLIX

Average Actual Week per Wage Earner, Average Hours of Plant Operation, and Average Nominal Week, 23 Manufacturing Industries, United States, 1914-1924

| Year | Date — Month | Actual Week Per Wage Earner | Average Hours of Plant Operation | Average Nominal Week |
|------|-----------------|-----------------------------------|---|----------------------------|
| 1914 | July | 51.5 | 53.8 | 55.0 |
| 1920 | June | 49.7 | 49.3 | 50.0 |
| | December | 46.3 | 45.9 | 50.0 |
| 1921 | January | 44.6 | 43.7 | 49.9 |
| | March | 45.0 | 45.1 | 49.8 |
| | May | 44.6 | 45.5 | 49.8 |
| | August | 45.8 | 46.0 | 49.5 |
| | October | 47.6 | 47.1 | 49.6 |
| | December | 47.8 | 47.2 | 49.7 |
| 1922 | July | 48.0 | 49.1 | 50.0 |
| | August | 48.8 | 49.5 | 50.0 |
| | September | 48.9 | 49.5 | 49.9 |
| | October | 49.5 | 49.9 | 50.0 |
| | November | 49.8 | 50.0 | 50.0 |
| | December | 50.0 | 50.0 | 50.1 |
| 1923 | January | 50.1 | 50.1 | 50.2 |
| | February | 49.8 | 50.1 | 50.1 |
| | March | 50.1 | 50.5 | 50.2 |
| | April | 50.3 | 50.4 | 50.1 |
| | May | 49.8 | 50.3 | 50.2 |
| | June | 49.5 | 50.1 | 50.2 |
| | July | 49.5 | 49.7 | 49.9 |
| | August | 48.7 | 49.7 | 49.8 |
| | September | 48.0 | 49.3 | 49.7 |
| | October | 48.3 | 49.2 | 49.7 |
| | November | 48.2 | 49.4 | 49.8 |
| | December | 48.1 | 48.8 | 49.8 |
| 1924 | January | 48.2 | 49.1 | 49.6 |

SOURCE: National Industrial Conference Board, *Wages, Hours and Employment in American Manufacturing Industries, July 1914-January 1924*, p. 21

¹ National Industrial Conference Board, *Wages, Hours, and Employment in American Manufacturing Industries, July 1914-January 1924* (1924), p. 6

plant operation and of the nominal week are weighted on the basis of representation in the study and not according to the census representation of the industry as was done in the case of earnings and the average week per wage earner."

It is unfortunate that the data of the first column of Table XLIX are not comparable with the data entered in the other two columns for the reasons quoted above.

The National Industrial Conference Board also collects information on average weekly earnings. This series (as well as the average actual hours per week per wage earner series) is an unbroken monthly series from 1923 onwards, previous years, with the exception of 1921, being incomplete. Twenty-five manufacturing industries, the production of gas and electricity, and railroads are covered for a varying number of years.² This series would have been analyzed in the course of preparing this Report, in the manner suggested in Sections 4 and 5 of this Appendix, had not other data applicable directly to New York State been available.

c. U. S. Bureau of Labor Statistics

The U. S. Bureau of Labor Statistics has been collecting information on average scheduled (full-time) hours per week or other payroll period, and on average hours actually worked per payroll period. The figures are obtained from employers' payroll records by field agents. A limited sample is used, but its geographical distribution and internal consistency is carefully controlled. The reported "actual hours worked" refer to one week only, however, and it is hard to determine whether or not the selected week is in any way representative. Some industries have been surveyed and investigated more frequently than others. Table L shows, in addition to hours, the percentage ratio of actual hours worked to average full-time scheduled hours.

² Cf. National Industrial Conference Board, *Wages, Hours and Employment in the United States 1914-1936*, (1936); *Wages, Hours, and Employment in the United States in 1936, Supplement to Service Letter* (April 29, 1937).

TABLE L

Average Hours in Industries Covered by Wage Studies in
the Bureau of Labor Statistics, 1927-1934

| Industry | Year | Average Full-time Hours Per Week | Hours Actually Worked in One Week | |
|--|------|---|--------------------------------------|-----------------------------|
| | | | Number of Hours | Per cent of Full-time |
| Airplanes | 1929 | 47.9 | 47.3 | 98.7 |
| Aircraft engines (male workers) | 1929 | 48.9 | 50.3 | 102.9 |
| Air transportation: | | | | |
| Pilots (male, per month) | 1931 | 110.0 | 80.4 | 73.1 |
| Pilots (male, per month) | 1933 | 109.0 | 85.3 | 78.3 |
| Ground personnel | 1931 | 48.5 | 49.4 | 101.9 |
| Ground personnel | 1933 | 49.7 | 49.7 | 100.0 |
| Aluminum, brass, and copper utensils and wares, manufacture of, | 1927 | 52.3 | 50.0 | 95.6 |
| Bakery: | | | | |
| Bread | 1931 | 54.9 | 53.8 | 98.0 |
| Cakes | 1931 | 51.0 | 47.3 | 92.7 |
| Batteries and small motors, manufacture of: | | | | |
| Dry cell batteries | 1927 | 49.4 | 47.3 | 95.7 |
| Storage batteries | 1927 | 48.6 | 45.1 | 92.8 |
| Fractional horsepower motors | 1927 | 48.6 | 45.0 | 92.6 |
| Boots and shoes | 1928 | 49.1 | 44.8 | 91.0 |
| Boots and shoes | 1930 | 48.9 | 42.4 | 86.7 |
| Boots and shoes | 1932 | 48.9 | 40.4 | 82.6 |
| Brass and copper sheet, rod, tube, wire, and shape mills | 1927 | 53.8 | 51.0 | 94.8 |
| Cigarettes | 1930 | 49.9 | 44.7 | 89.6 |
| Cotton gins, compresses, and oil mills: | | | | |
| Cotton gins (male workers) | 1927 | 66.2 | 64.5 | 97.4 |
| Cotton compresses (male workers) | 1927 | 56.2 | 49.6 | 88.3 |
| Cotton compresses (female workers) | 1927 | 55.9 | 48.9 | 87.5 |
| Cotton-seed oil mills (male workers) | 1927 | 70.9 | 64.6 | 91.1 |
| Cotton-seed oil mills (female workers) | 1927 | 70.0 | 61.8 | 88.3 |
| Cotton goods | 1928 | 53.4 | 41.8 | 78.3 |
| Cotton goods | 1930 | 53.4 | 42.7 | 80.0 |
| Cotton goods | 1932 | 53.4 | 44.3 | 83.0 |
| Dyeing and finishing textiles | 1930 | 50.9 | 49.3 | 96.9 |
| Dyeing and finishing textiles | 1932 | 51.3 | 49.9 | 97.3 |
| Dyeing and finishing textiles (July) | 1933 | 51.9 | 50.0 | 96.3 |
| Dyeing and finishing textiles (August) | 1933 | 40.4 | 36.0 | 89.1 |
| Dyeing and finishing textiles (August) | 1934 | 40.2 | 33.6 | 83.6 |
| Foundries and machine shops: | | | | |
| Foundries | 1929 | 51.0 | 48.7 | 95.5 |
| Foundries | 1931 | 50.3 | 33.5 | 66.6 |
| Foundries | 1933 | 49.4 | 29.6 | 59.9 |
| Machine shops | 1929 | 50.3 | 50.3 | 100.0 |
| Machine shops | 1931 | 49.8 | 38.2 | 76.7 |
| Machine shops | 1933 | 48.5 | 34.6 | 71.3 |
| Furniture | 1929 | 51.9 | 50.1 | 96.5 |
| Furniture | 1931 | 51.8 | 41.1 | 79.3 |
| Gasoline filling stations (male workers) | 1931 | 60.0 | 59.5 | 99.2 |
| Glass manufacture | 1932 | 50.2 | 37.4 | 74.5 |
| Hosiery and underwear: | | | | |
| Hosiery | 1928 | 52.1 | 47.1 | 90.4 |
| Hosiery | 1930 | 52.2 | 41.9 | 80.3 |
| Hosiery | 1932 | 51.9 | 41.3 | 79.6 |
| Underwear, knitted | 1928 | 50.0 | 43.4 | 86.8 |
| Underwear, knitted | 1930 | 50.3 | 40.6 | 80.7 |
| Underwear, knitted | 1932 | 50.7 | 38.0 | 75.0 |

TABLE L—Continued

| Industry | Year | Average | Hours Actually | |
|---|------|--------------------------------|---|-----------------------------|
| | | Full-time Hours Per Week | Worked in One Week Number of Hours | Per Cent of Full-time |
| Iron and steel (male workers) | 1933 | 51.5 | 24.2 | 47.0 |
| Leather | 1932 | 50.4 | 42.0 | 83.3 |
| Men's clothing | 1928 | 44.0 | 40.6 | 92.0 |
| Men's clothing | 1930 | 44.3 | 37.8 | 85.3 |
| Men's clothing | 1932 | 44.4 | 37.3 | 84.0 |
| Metalliferous mining (male workers) | 1931 | 51.6 | 41.6 | 80.6 |
| Motor vehicle manufacturing | 1928 | 49.4 | 46.9 | 95.0 |
| Motor vehicle manufacturing, | 1930 | 48.8 | 34.5 | 70.7 |
| Motor vehicle manufacturing, | 1932 | 48.4 | 31.9 | 65.9 |
| Motor vehicle repair garages (male workers) | 1931 | 53.4 | 51.0 | 95.5 |
| Portland cement | 1929 | 60.8 | 56.6 | 93.1 |
| Portland cement | 1932 | 59.0 | 45.7 | 77.5 |
| Radio receiving sets, speakers, and tubes | | | | |
| Radio receiving sets | 1927 | 48.4 | 45.8 | 94.6 |
| Radio speakers | 1927 | 47.8 | 45.5 | 95.2 |
| Radio tubes | 1927 | 48.6 | 45.9 | 94.4 |
| Rayon and other synthetic yarns | 1930 | 50.2 | 41.8 | 89.2 |
| Rayon and other synthetic yarns | 1932 | 48.2 | 46.4 | 96.3 |
| Sawmills (male workers) | 1928 | 56.6 | 51.3 | 91.0 |
| Sawmills (male workers) | 1930 | 56.5 | 48.6 | 86.0 |
| Sawmills (male workers) | 1932 | 55.8 | 40.1 | 71.9 |
| Silk and rayon goods | 1931 | 50.7 | 45.5 | 89.7 |
| Silk and rayon goods (April) | 1933 | 50.9 | 44.0 | 86.4 |
| Silk and rayon goods (August) | 1933 | 39.8 | 36.2 | 91.0 |
| Silk and rayon goods (August) | 1934 | 39.7 | 33.8 | 85.1 |
| Slaughtering and meat packing | 1929 | 49.2 | 48.0 | 97.6 |
| Slaughtering and meat packing | 1931 | 49.2 | 45.4 | 92.3 |
| Sugar refining | 1930 | 58.7 | 54.2 | 92.3 |
| Woolen and worsted goods (not including any mills in Southern district) | 1928 | 49.3 | 40.4 | 81.9 |
| Woolen and worsted goods (including mills in Southern district) | 1930 | 49.6 | 40.7 | 82.1 |
| Woolen and worsted goods (including mills in Southern district) | 1932 | 50.3 | 40.9 | 81.3 |
| Woolen and worsted goods (including mills in Southern district) (August) | 1933 | 40.1 | 36.8 | 91.8 |
| Woolen and worsted goods (including mills in Southern district) (August) | 1934 | 40.1 | 30.7 | 76.6 |

SOURCE: U. S. Bureau of Labor Statistics, *Handbook of Labor Statistics*, (1929), pp. 758-759, (1931), pp. 722-723, (1936) pp. 874-878, and *Special Bulletins, Hours of Labor Series* (See pp. 147-149.)

APPENDIX B: FOREIGN AND AMERICAN EXPERIENCE

This appendix gives a brief account of the experience of Great Britain, Germany, Wisconsin, and Mississippi insofar as it bears on the problem of partial unemployment.

The British intended to compensate *part-total* unemployment, as is shown by their use of the "continuity rule," but they made no explicit provision to compensate *partial* unemployment as defined in this study. The case of Great Britain shows that industry adjusted itself to the workings of the legal mind, as evinced in the continuity rule which gave rise to what the British regard as "anomalies". The case of Germany illustrates what happens when partial unemployment insurance is handled in the most expeditious way from the point of view of the administration. The process begins by shifting some of the administrative burdens to the shoulders of the employer, and ends by denying the insured worker the right to file an independent claim. The case of Wisconsin is interesting chiefly because it shows what happens when the partial unemployment benefits are determined with reference to the individual worker's "full-time weekly wage". The case of Mississippi gives evidence of the difficulties encountered when partial unemployment insurance is put into operation.

SECTION 1. GREAT BRITAIN

The unemployment insurance scheme of Great Britain was originally designed to take care of seasonal and temporary unemployment. It was never meant to provide for partial unemployment; and, while benefits for partial unemployment have been paid, this has always been regarded as an abuse of the plan, or at best, an anomaly.

The possibility of such an abuse lies in the "continuity rule". Until recently the required waiting period was six days. The waiting period must be served each time a worker becomes unemployed. But, under the "continuity rule," any 3 days of unemployment, whether consecutive or not, within a period of 6 consecutive days shall be treated as a continuous period and any two such continuous periods separated by a period of not more than 10 weeks shall be treated as one continuous period of unemployment, and the expression "continuously unemployed" shall be construed accordingly. This ruling was meant to encourage workers receiving benefits to accept temporary jobs of short duration, in other words, to provide for part-total unemployment benefits.

Some of the abuses of the unemployment insurance plan under the "continuity rule," as they came to the attention of the Royal Commission on Unemployment Insurance appointed by Royal Warrant in December, 1930, show the lengths to which employer-employee connivance may go. Thus a firm operating regularly on a four-day week basis, with holidays on Saturday, Sunday and

Monday, changed its operating schedule and arranged for the plant to close down on Saturday, Sunday and Monday one week, and on Friday, Saturday and Sunday the next week, thus giving their workers three days of "unemployment" in six consecutive days (instead of only two as before), enabling them to qualify for benefits.

Benefits are paid to partially unemployed workers irrespective of the wages they may be earning; thus steel workers earning £6 10s. for 4 days' work receive 2 days' benefit by arrangement of the non-working days so that in each fortnight there are 3 days of unemployment in 6 consecutive days.

The question of desirability of partial as compared with total unemployment hinges on the causes of the lack of employment. If the predominant cause is the cyclical or seasonal swing, partial unemployment seems preferable to total unemployment, as it tends to maintain the morale and good workmanship of the employees, as well as the cooperative techniques of the whole labor force attached to a going concern. But when the predominant cause is of a secular character, these advantages are overshadowed by considerations of production costs, and the net effect of part-time employment is to delay the shifting of labor from one industry to another.

The Royal Commission, however, felt that there was much to be said for partial unemployment insurance in any case, pointing especially to the situation in Lancashire where short-time working combined with unemployment insurance enabled the industry to carry on in a period of unprecedented depression without real distress. It recommended, therefore, in its First Report, that benefits to partially unemployed workers should continue to be paid in the same manner as before, but that

"... The present arrangements should be modified by the introduction of the principle of an overriding limitation. We suggest that, subject as now to the waiting period, benefits should be paid in respect of any three or more days of unemployment within a period of six consecutive days, but that the *amount* of benefit to be paid should be the usual amount due, subject to the following proviso: That in respect of any period comprising both days of employment and days of unemployment, the amount of benefit payable for the days of unemployment shall be not more than the full amount of benefit which would be payable for the whole period less half the earnings received for the period."

And, mindful of the inclination of employers and employees to connive for the evasion of rules, it added:

"In ordinary circumstances a period of one week should be the basis of calculation, but in the case of a short-time worker who is employed alternate weeks, we recommend that the period to be taken for the purpose of this proviso should be a fortnight."

This decision caused the Royal Commission some qualms. It commented as follows:

"The suggestion made to the Royal Commission, that a short-time worker ought not to receive benefit if he earns in three days of the week more than the amount of a full week's unemployment benefit, would imply including a test of the worker's resources or means as one of the conditions of benefit. To apply the means test would be contrary to the principle of insurance. To insure against income falling below a certain income standard is one thing; to insure against unemployment is another."

However, the Royal Commission managed to reconcile the dilemma. It said, apropos of the recommended rule quoted above:

"We recognize that the rule introduces into the payment of insurance benefits a new consideration—the amount of earnings. In this case, we see no objection in principle to this consideration nor indeed do we think that the situation can be satisfactorily treated without it. A much more serious ground for hesitation is the administrative difficulties in giving effect to the formula, including the difficulty which the Exchanges are likely to find in ascertaining the earnings of claimants without incurring an undue delay in the payment of benefit. We believe that these difficulties are not insuperable. But even if they should compel some modification of the rule we propose, we think that it should be possible to devise a procedure by which regard would be had, in determining the amount of benefit payable for the week, to the fact that earnings have been received in respect of the period."

The First Report of the Royal Commission laid the foundation for the Unemployment Insurance Act of 1931. This Act empowered the Minister of Labour to deal with four types of "anomalies", partial unemployment being the chief one of the four. Following the report of a special advisory committee, the Unemployment Insurance (Anomalies) Regulations, 1931, were proclaimed by the Minister of Labour on October 2, 1931. These regulations stated in part:

"The amount of benefits paid to the class of persons who habitually work for less than a full week but nevertheless receive more than the normal earnings for a full week of persons following the same occupation in the same district, shall be reduced by the excess over the normal earnings of the sum of their actual earnings and the benefit, otherwise payable."

This nonsensical rule naturally had no effect, since it excluded from benefits only those workers who *habitually* earn in four days more than others of their trade can earn in six—and such workers must be very rare indeed. No cases came up under this rule before the Courts of Referees in the period from October 1931, to September 30, 1932, and no benefits were disallowed in consequence of it. Nevertheless, the Royal Commission, in its Final Report dated November 1932, said that:

“There has been only a short experience of the working of the Anomalies Regulations and it is too early to reach a definite conclusion as to their effectiveness . . . we do not propose to consider amendments to the Regulations on matters of detail.”

The Royal Commission complained, however, that the Minister of Labour really had not been given the power to deal with this anomaly under the provisions of the Unemployment Insurance Act of 1931, the original bill having been rendered innocuous by an amendment in its passage through Parliament. It offered a new formula for achieving the desired end:

- “(1) That no account should be taken of earnings not exceeding one pound within a specified period;
- (2) Where a claimant for benefit receives earnings of more than one pound in a specified period a deduction should be made from the amount of benefit to which he would otherwise be entitled. The deduction should be a sum representing one-half the amount by which the earnings exceed 20 shillings;
- (3) The period in respect of which earnings are reckoned should be the week ending not later than the Saturday included in the particular benefit week.”

In May 1933, the Minister of Labour presented to Parliament a special Report on the Operation of the Anomalies Regulations. The Report covered the period from the inception of the Regulations to April 29, 1933. The Minister said, in respect of Regulation 1 concerning highly paid part-time workers:

“This Regulation proved ineffective, as had been anticipated, no claimants being found to fall within the class as defined in the Act.”

The Minister of Labour made no recommendation for a change of this Regulation. The Unemployment Law now in force (the Unemployment Insurance Act, 1935, 25 Geo. 5, ch. 8) repeats the provisions of the Unemployment Insurance Act of 1931 without any change whatsoever.

In 1937, the Unemployment Insurance Statutory Committee recommended a reduction in the waiting period, from six to three days, and this was accomplished by an Order made by the Min-

ister of Labour on March 10, 1937. The Order amends Section 31 of the Unemployment Insurance Act of 1935 but leaves the "continuity rule" intact.

No statistics on the extent of insurable partial unemployment in Great Britain are available. The Ministry of Labour Gazette used to publish monthly an analysis of the number of insured persons aged 16-64 on the registers of Employment Exchanges in Great Britain, by type of unemployment. The terms used were "wholly unemployed" and "temporarily stopped." The latter term comprised chiefly workers partially unemployed. Table LI shows that the proportion of partially unemployed workers claiming benefits was considerable.

TABLE LI

Analysis of Numbers of Insured Persons Aged 16-64 on the Registers of Employment Exchanges, Great Britain, 1936-1937

| Date and Description | Number | Per Cent of Total |
|----------------------|-----------|-------------------|
| January 20, 1936 | | |
| Wholly unemployed | 657,006 | 65.0 |
| Temporarily stopped | 291,259 | 28.8 |
| Casuals | 61,759 | 6.1 |
| Total | 1,010,024 | 99.9 |
| July 20, 1936 | | |
| Wholly unemployed | 400,842 | 56.9 |
| Temporarily stopped | 251,346 | 35.7 |
| Casuals | 52,582 | 7.5 |
| Total | 704,770 | 100.1 |
| January 25, 1937 | | |
| Wholly unemployed | 537,422 | 71.3 |
| Temporarily stopped | 160,988 | 21.3 |
| Casuals | 55,848 | 7.4 |
| Total | 754,258 | 100.0 |

SOURCE: Great Britain, Ministry of Labour, *Ministry of Labour Gazette*

In May 1937, the reporting was changed. The new series of "Numbers on the registers of employment exchanges" is not comparable with the old series, because no breakdown as to the insurance status of the applicants in the active file is given.

It seems that partially unemployed workers in Great Britain will continue to draw unemployment benefits irrespective of their earnings in weeks of partial unemployment, strictly in accordance with the unemployment insurance principle, as it is understood in Great Britain.¹

¹ References:

- Great Britain, Royal Commission on Unemployment Insurance, *First Report*, (1931)
- Great Britain, Royal Commission on Unemployment Insurance, *Final Report*, (1932)
- Metropolitan Life Insurance Company, *Social Insurance Series*, Monograph 10
- U. S. Department of Labor, *Unemployment Benefit Plans*, Bulletin 544 (1931) and Supplement, *Operation of Unemployment Insurance Systems in the U. S. and Foreign Countries*, R. 166 (1934)
- Ministry of Labour Gazette*, June 1933; December, 1935; February and August, 1936; February, March, and May, 1937

SECTION 2. GERMANY

Partial unemployment insurance has always been an integral part of the German unemployment insurance system, ever since its inception by the Law of 1927. However, the manner in which the partial unemployment insurance provisions of the Law are administered has undergone several modifications. Since the Law did not establish any definite procedures for partial unemployment insurance, the Federal Institution for Placement and Unemployment Insurance is free to change the rules and regulations at any time by means of a special decree.

a. Eligibility for Partial Unemployment Insurance Benefits

Partial unemployment was originally defined as the loss of at least three full working days in one calendar week, resulting in a corresponding wage reduction, or as the loss of one full week's earnings in the period of a "double week," when the operating time is so arranged that weeks of full employment alternate with weeks of total unemployment. At the beginning, all insured workers were eligible for partial unemployment insurance benefits. Under the regulations of August 27, 1931, however, such benefits were granted only to employees of industrial plants in insured industries that regularly employ at least ten employees. As the economic depression deepened, the restrictions were made more severe. Beginning with an Order dated November 30, 1934, a distinction was created as between "normal" partial unemployment benefits and "extended" partial unemployment benefits. The latter type of benefits was meant to alleviate the distress of workers in industries in which working hours were reduced on account of circumstances affecting the supply of raw materials. Under an Order dated June 7, 1935, the President of the Federal Institution for Placement and Unemployment Insurance may specify industries to which the extended partial unemployment insurance scheme may apply, regardless of the raw materials situation, the only limitation being that industries which normally operate for not more than three months in a year may not be included in the scheme.

A decree of June 30, 1937 provided that, beginning with July 12th, benefit in respect of short time would no longer be granted to workers under 30, with the exception of those having at least one relative dependent upon them. The purpose of this decree was to relieve the overcrowded branches of industry, such as textiles and boot and shoe manufacture, by the transfer of available labor to other branches. An interpretive circular explained that only those workers on short time who were really capable of being placed in other branches of industry would be called upon to leave their situations. The discharged workers would be directed in the first place towards agricultural, domestic, and hotel service, and only in second place to other occupations capable of absorbing them.

b. Normal and Extended Partial Unemployment Insurance Benefits

At present, the scheme is operated in accordance with an Order of the President of the Federal Institution for Placement and Unemployment Insurance dated September 5, 1936. The Order enunciates the policy "to maintain, when the volume of work is considerably reduced, in their employment the followers (*gefolgschaften*) of industrial concerns, and to promote the unity of such concerns."

Partial unemployment insurance covers all manual and non-manual workers who come under compulsory health and unemployment insurance. Workers are eligible for benefits if they are employed for a period of at least eight hours, or one shift, in a fortnight ("double week"), if the loss of working time is due to a shortage of work, and if, in consequence of such loss of working time, the earnings of the workers are reduced.

Normal benefits are payable only to workers in plants where at least ten manual or non-manual workers are employed, and where the loss amounts to five or more full days in two consecutive weeks. Public holidays occurring in this period may count as days lost if, in the immediately preceding fortnight, at least five working days were lost. The benefit is payable at fixed rates which vary according to the wage classes fixed for unemployment insurance, the number of dependents, and the number of full days of employment lost. The allocation of the worker to his wage class is to be effected on the basis of the earnings he would have received for employment for the full number of hours normally worked by the undertaking. If the loss of earnings is wholly or partially offset by overtime worked on days of employment, or by other arrangements, the amount of the benefit is to be correspondingly adjusted. The range of the benefit for persons without dependents in the several wage classes extends from Rm. 0.90 for the loss of five days' employment in a fortnight to Rm. 17.00 for the loss of 11 days' employment. This range is increased for persons with dependents, so that it extends, for persons with one dependent, from Rm. 1.10 to Rm. 22.00 and for persons with four or more dependents, from Rm. 1.70 to Rm. 37.00.

Only industries specified by the President of the Federal Institution for Placement and Unemployment Insurance may participate in the scheme of extended partial unemployment insurance benefits. Such benefits are paid to workers who, because of work shortage, are employed for less than eighty hours in two consecutive weeks. Working time lost on a public holiday falling in this period is deemed to be time lost on account of lack of work if the worker, during the immediately preceding fortnightly period, was employed for less than eighty hours. The benefit is payable in the proportion of 40 per cent of the difference between the actual earnings of the worker and the earnings that he would have received for eighty

hours' work if working time in the plant had not been reduced. This proportion is increased by 10 per cent of the difference for each dependent of the wage-earner, but not to more than the full amount of the earnings for eighty hours' work.

Extended benefits are paid, at present, to workers engaged in the leather manufacturing industry, in the leather glove industry, in the rubber industry, in the textile industry, in some branches of the oil industry, and in some divisions of the fur dyeing and dressing industry.

The fundamental difference between these two types of benefit lies in the unit of measurement of partial unemployment. The first type takes into account only full days lost; the second type takes into account all hours lost as compared with the eighty hour standard.

c. Waiting Period Requirements

Originally, waiting period requirements for partial unemployment insurance were identical with waiting period requirements for total unemployment insurance. The waiting period is measured in days which need not be consecutive. A new waiting period begins only after thirteen weeks of continuous full-time work. The Law of 1927 specified a seven-day waiting period. In 1929, waiting period requirements were modified so that a worker with no dependents had to wait 14 days; a worker with 1 to 3 dependents, 7 days; a worker with 4 or more dependents, 3 days. Following the recommendations of the Braun Commission, the waiting periods were increased to 21, 14, and 7 days, respectively. Later, however, the 14-7-3 plan was again put into force.

At present, there is no fixed waiting period requirement for partial unemployment benefits. The matter lies in the discretion of the local Employment Office. After the office has been notified by the employer that his force is going on short time, it determines the date on which payments will begin. If it is expected that the period of partial unemployment will last only two weeks or less, benefit payments may be refused.

There is no statutory limit for the number of weeks for which partial unemployment benefits may be paid.

d. Administration

The application for and the payment of partial unemployment benefits is handled by the employer, who is the "leader" of his "followers." The employer notifies the local placement office that a majority of his workers are going to be put on short time. Thereupon, if the placement office agrees to pay benefits, the employer calculates, at his own cost, the benefits due to each worker, once in every calendar fortnight. The schedule is presented to the local office which checks it and signifies its approval in writing. The employer then disburses the authorized partial unemployment

benefits to his workers on the next regular pay day and is subsequently reimbursed from the unemployment insurance funds.²

SECTION 3. WISCONSIN

The benefit provisions of the Wisconsin law have been in operation a little over a year and a half, viz., since July 1936. Since the law provided that no credit toward benefits should be granted for employment occurring before July 1, 1936, the initial benefit load was very small in comparison with the probable ultimate load. The Wisconsin law provides for individual employer reserve accounts and there were restrictions on the payment of benefits from accounts before the individual reserve had accumulated for a two-year period. This provision also had some effect in holding initial payments of benefits down. As a result the Wisconsin experience is of doubtful value in deciding what the effects of her law will be.

The law originally provided that partial benefit payments should be sufficient to make the employee's total earnings plus his partial benefits at least equal to his benefit rate as long as he continued working for the same employer. In July 1937 an amendment was added, extending the supplementary payment so that if the employee were completely laid off but obtained employment elsewhere at less than his benefit rate, he would receive a supplementary payment to bring his weekly income up to his benefit rate. This type of benefit is known in Wisconsin as part-total benefit.

Partial unemployment benefits (as distinguished from part-total benefits) are conditioned upon a three-week waiting period, which is separate from the waiting period for total unemployment benefits. A worker whose total unemployment benefit rate falls short of \$5.00 is not eligible for partial unemployment benefits. The total unemployment benefit rate is determined with reference to an average wage earned in one year in all weeks of employment, both full and partial.

The report³ on the administration of the Wisconsin law by Walter Matscheck and R. C. Atkinson contains general conclusions related to the partial unemployment problem. The report first points out that partial unemployment compensation gives rise to a general problem of administrative complexity.

The report also reveals that partial benefits have been a large proportion of the total, both in number of claims and amount paid. It states:

"In Wisconsin in the first six months of 1937, 49% of the checks issued and 30% of the amount of benefits paid were for partial unemployment."

² References:

- Weigert, Oscar, *Administration of Placement and Unemployment Insurance in Germany*. New York, (1934)
- Armstrong, Barbara N., *Insuring the Essentials*, New York, (1932)
- U. S. Department of Labor, *Unemployment Benefit Plans* (1931) and *Operation of Unemployment Insurance Systems*, (1934) Bulletins No. 544 and No. R 166
- Metropolitan Life Insurance Company, *Social Insurance Legislation*, Monograph Four in a Series on Social Insurance, (1932)
- Ministry of Labour Gazette*, January, February, June, and November, 1935; May and October, 1936
- ³ Matscheck, Walter, and Atkinson, R. C. *The Administration of Unemployment Compensation Benefits in Wisconsin, July 1, 1936 to June 30, 1937*, (1937)

The problem of determining in individual cases when an employee is entitled to partial benefits has been a difficult one. Employees cannot be expected to understand a complicated benefit provision and determine for themselves when they are entitled to benefits. The report draws the following conclusion from the Wisconsin experience:

"Predetermination of benefit rates is essential to the payment of benefits for partial employment.

"If benefits for partial unemployment are to be based on the relation between a worker's earnings and his benefit rate, it is necessary that this rate be known. The employee cannot be expected to calculate his own rate, since he usually will have insufficient knowledge both of his earnings and of the process of determination. Nor can he be expected to report at the employment office every time his earnings drop off on the chance that he may be entitled to partial benefits. Also, if, as in Wisconsin, reporting is not required for partial benefits, the employee should be notified of his benefit rate in advance so that he may object if he gets no benefits. Even where benefit rates are determined in advance and the employee notified, many employees will not get partial benefits until the department discovers that they are due.

"Predetermination of benefit rates, if made by the employer, requires procedures and reports that will insure the work's actually being done and each employee's being notified. Field auditors should spot check benefit determinations to assure accurate calculation.

"In Wisconsin, employers are required to certify that employees have been notified of their benefit rates, but analyses by the Statistical Department indicate that a considerable number of employers did not so report and that many employees state that they were not notified of their rates. It is important that the employee know his benefit rate so he may check it and so that he may be sure that he gets partial benefits when he is entitled to them.

"If benefit rates are to be predetermined by the employer, the basis of determination must be sufficiently simple so that they may easily be computed by him, readily checked by the employee, and quickly audited by the department.

"The full-time weekly hour basis used in Wisconsin in 1936-1937 met none of these requirements. The employer had difficulty in determining benefit rates; the employee could not understand how his rate was calculated and know whether it was correct; and the Department could not check any individual rate without an audit of the employer's whole procedure in determining rates for all of his employees. As a result of one year's experience, the basis was changed to the average weekly wage base."

Although the Wisconsin experience is very brief and covers a period of improving employment conditions, with low insurance costs, it should be of value in discovering the kinds of business most subject to partial unemployment during good times. Table LII gives the data available at present. The first column gives the cumulative contributions to the reserve accounts. Since a two-year accumulation was made before paying benefits, this represents more than a two-year accumulation at the time the data were collected. How much more than a two-year accumulation cannot be accurately stated because the different concerns started their accumulations at different times. Thus the accumulation figures can only be used as a rough indication of the relative size of the industry. The second column gives the total unemployment benefits paid and the third the partial. The last two columns give the ratio of total and partial benefits to total contributions.

The first outstanding fact shown by the table is that partial benefits were over one-third as large in volume as total benefits, and that in some industries, particularly in the field of trade, they were greater than total benefits. It is also striking that the cost of partial is high relative to contributions in the "Stone, Clay and Glass Products," the "Textiles and their Products," in certain parts of "Retail Trade," and in the "Construction Industries."

The high ratio of partial unemployment benefits to total benefits paid in Wisconsin is due, among other factors, to the legal provision which limited the accumulation of benefit rights to the period after July 1, 1936. A worker who became totally unemployed in January 1937, could draw only a limited number of benefit checks. A partially unemployed worker, on the other hand, continued benefit credits while being partially unemployed, and hence did not tend to exhaust his benefits as rapidly as the totally unemployed worker. As the "base year" of the Wisconsin unemployment compensation beneficiaries lengthened with the passage of time, the relative proportion of partial unemployment benefits to the total number of benefits paid became gradually less. Statistics covering the operations in Wisconsin for 1938 will probably differ significantly, in respect to partial unemployment benefits, from those covering operations in 1937.

TABLE LII

TOTAL CONTRIBUTIONS RECEIVED AND TOTAL BENEFITS PAID, WISCONSIN UNEMPLOYMENT COMPENSATION FUNDS,
JULY 1, 1934—SEPTEMBER 30, 1937

| Industry | Total Contributions to September 30, 1937 | Benefits Paid to September 30, 1937 | | Per Cent Benefits to Contributions | |
|---|---|--|--------------|---------------------------------------|---------|
| | | Total | Partial | Total | Partial |
| All industries | \$23,814,579.67 | \$972,872.39 | \$337,067.12 | 4.09 | .42 |
| Manufacturing industries | 16,154,911.14 | 640,357.85 | 122,616.86 | 3.96 | .76 |
| Iron and steel and their products, except machinery | 1,634,297.83 | 71,629.55 | 11,416.50 | 4.38 | .70 |
| Machinery, except transportation equipment | 4,566,325.64 | 80,381.15 | 6,437.05 | 1.76 | .14 |
| Transportation equipment | 1,386,021.23 | 176,765.05 | 8,109.80 | 12.75 | .59 |
| Non-ferrous metals and their products | 841,052.58 | 19,628.80 | 1,564.90 | 2.33 | .19 |
| Lumber and allied products | 861,361.11 | 39,236.75 | 8,408.77 | 4.56 | .98 |
| Stone, clay and glass products | 34,766.39 | 1,970.25 | 854.30 | 5.67 | 2.46 |
| Textiles and their products | 1,101,197.64 | 74,399.40 | 24,774.15 | 6.76 | 2.25 |
| Leather and its manufactures | 1,056,876.55 | 50,915.55 | 16,931.63 | 4.82 | 1.60 |
| Food and kindred products | 2,112,405.87 | 72,732.40 | 33,473.62 | 3.44 | 1.58 |
| Tobacco manufactures | 5,902.57 | 129.75 | 35.55 | 2.20 | .60 |
| Paper and paper products | 1,314,663.42 | 13,229.75 | 2,140.80 | 1.01 | .16 |
| Printing and publishing | 678,896.24 | 17,956.50 | 4,456.99 | 2.64 | .66 |
| Chemical products | 291,755.93 | 3,062.25 | 495.65 | 1.05 | .17 |
| Rubber products | 227,394.10 | 14,373.50 | 3,123.90 | 6.32 | 1.37 |
| Miscellaneous manufacturing, n. e. c. | 41,904.04 | 3,947.20 | 393.25 | 9.42 | .94 |
| Non-manufacturing industries | 2,079,131.58 | 42,606.41 | 13,584.84 | 2.05 | .65 |
| Retail trade | 2,247,281.59 | 62,852.34 | 102,180.04 | 2.80 | 4.55 |
| Food | 343,102.91 | 5,337.55 | 6,712.33 | 1.56 | 1.96 |
| Automotive | 349,010.77 | 5,267.00 | 1,961.95 | 1.51 | .56 |
| General merchandise | 896,393.94 | 33,436.04 | 76,467.05 | 3.73 | 8.53 |
| Apparel | 164,243.15 | 3,943.30 | 7,898.99 | 2.40 | 4.81 |
| Furniture and household | 50,999.98 | 1,045.05 | 345.90 | 2.05 | .68 |
| Restaurant | 44,328.94 | 1,051.65 | 451.60 | 2.37 | 1.02 |
| Lumber and building | 93,526.40 | 3,125.50 | 2,006.25 | 3.34 | 2.15 |
| General stores | 9,134.04 | 94.10 | 584.50 | 1.03 | 6.40 |
| Other retail | 296,541.46 | 9,552.15 | 5,751.47 | 3.22 | 1.94 |
| Wholesale trade | 1,048,590.53 | 28,773.34 | 10,482.77 | 2.74 | 1.00 |
| Service industries | 1,165,867.69 | 22,578.85 | 8,753.85 | 1.94 | .75 |
| Construction industries | 347,354.51 | 60,692.20 | 23,113.70 | 17.47 | 6.65 |
| Government | 758,237.63 | 114,548.30 | 56,197.26 | 15.11 | 7.41 |
| Miscellaneous | 2,928.84 | 221.40 | 10.85 | 7.56 | .37 |
| Industry not given | 10,276.16 | 241.70 | 126.95 | 2.35 | 1.24 |

SOURCE: Wisconsin Industrial Commission, Unemployment Compensation Department, *Statistical releases*, 1937

SECTION 4. MISSISSIPPI

Mississippi adopted a partial unemployment benefit plan modelled upon the Draft Bills prepared by the Social Security Board. On February 1, 1938, the Mississippi Unemployment Compensation Commission reported to the Legislature as follows:¹

“Elimination of provision for payment of benefits for partial unemployment. It is felt that further study should be given to the problems connected with this matter, in the light of actual benefit payment experience. There is no way in which the Commission can be assured of the solvency of the fund, and the payment of benefits for partial unemployment at this time might well prove the deciding factor between a solvent and an insolvent fund. If such should prove to be the case, it is strongly felt that workers who are totally unemployed should receive every preference, insofar as it is possible for the Commission to give preference, to the end that they may receive the benefits to which they are entitled. If two years experience proves that the payment of benefits for partial unemployment is feasible, then the Commission will recommend a plan to the 1940 session of the Legislature.

Another factor involved in the payment of partial benefits at the present time is the great amount of administrative difficulty involved. It is felt that the only way in which the worker may know when he is entitled to a benefit amount for partial unemployment is to know what his benefit amount for total unemployment is. This would require the Commission, at least once each year, to predetermine the weekly benefit amount of every worker on whom it had a record—requiring the calculation of from 150,000 to 175,000 separate benefit amounts. In recommending the elimination, for the time being, of benefits for partial unemployment, the Mississippi Commission is joining seven other states, including the State of New York, which have already taken this step. In order to partially offset this recommendation, it is suggested that amounts of \$2 or less per week, received by the worker for odd jobs or subsidiary work, be not counted as remuneration.”

¹ State of Mississippi, Unemployment Compensation Commission, *Second Annual Report* (1938)

APPENDIX C: PARTIAL UNEMPLOYMENT PROVISIONS OF FIFTY-

As of

| STATE | Definition of partial unemployment in terms of wage deficiency | DEFINITION OF FULL-TIME WEEKLY WAGE | | ELIGIBILITY REQUIREMENTS | |
|----------------------|--|--|---|--|--|
| | | First option | Second option | Previous earnings or weeks of employment | Minimum benefit |
| Alabama | Wages less than total weekly benefit plus \$1 | Recent wage rate for full week | 1/13 of highest quarterly earnings in base period | Unemployed person is eligible if: "He has within the first three out of the last four completed calendar quarters immediately preceding the first day of his benefit year earned wages for employment by employers equal to not less than 16 times his weekly benefit amount." | No provision |
| Alaska | Wages less than 120% of weekly total unemployment benefit | Same as for Alabama | Same as for Alabama | Same as for Alabama | Benefit not payable unless and until a total of \$2 has been accumulated in preceding 13 consecutive weeks |
| Arizona | Wages less than total weekly benefit plus \$2 | Same as for Alabama | Same as for Alabama | Same as for Alabama — except that earnings must be 14 times weekly benefit amount instead of 16 times | Same as for Alaska |
| Arkansas | Same as for Alaska | Same as for Alabama | Same as for Alabama | Same as for Alabama | Same as for Alaska |
| California | Wages less than weekly benefit rate for total unemployment | Average weekly wages based on certain quarters in base period | No provision | Employee must have earned wages in two, three, or four calendar quarters of his base period, totaling at least \$156; or if wages were earned in five or more calendar quarters, quarterly wage must average at least \$39 | Partial benefit not payable unless or until \$1 has been accumulated within the 13 preceding weeks |
| Colorado | Same as for Alaska | Most recent hourly wage, rate times usual full time weekly hours | Same as for Alabama | Same as for Alabama | Same as for Alaska |
| Connecticut | Same as for California | Not given; see total unemployment benefits | No provision | 24 times weekly benefit rate, earned in the first four of the five most recently completed calendar quarters | No provision |
| Delaware | Same as for Alaska | Same as for Alabama | 1/13 of 1/8 of total earnings in base period | Same as for Alabama — except that earnings must be 13 times weekly benefit amount instead of 16 times | Same as for Alaska |
| District of Columbia | Same as for Arizona | Average weekly wage in weeks of full employment with modifications | No provision | Length of employment: 13 weeks within the 52 weeks ending with the week in which worker was last engaged in employment | No provision |

ONE UNEMPLOYMENT COMPENSATION LAWS IN THE U. S.

January 15, 1938

| IN TERMS OF | BENEFIT RATE | | Waiting period for total unemployment unless otherwise specified | DURATION OF TOTAL UNEMPLOYMENT BENEFIT PAYMENTS DETERMINING DURATION OF PARTIAL | |
|--|---|--|---|---|---|
| | For total unemployment | For partial unemployment | | Maximum in terms of total weekly benefit | Maximum as related to earnings in base period |
| Income from personal services including net income from self employment considered part of weekly wage under partial employment | 50% of wages; maximum \$15, no minimum | Wages plus partial benefit to equal \$2 more than weekly total benefit | Three weeks within 52 weeks preceding week of unemployment with the addition that two weeks of partial are equivalent to one week of total unemployment | 20 times weekly benefit amount | Benefits may not exceed 1/6 of wages earned in base year period, such wages not to exceed \$390 per quarter |
| Earnings from odd jobs and/or subsidiary work not considered wages in determination of total and partial unemployment if such wages amount to \$3, or less, per week | 50% of wages; maximum \$15, minimum \$5 or 3/4 of wages, whichever is less | Amount equal to difference between weekly benefit for total unemployment and 5/8 of wages per week | Two weeks with stipulation that two weeks of partial unemployment equivalent to one of total. Weeks need not be consecutive | 16 times weekly benefit amount | Same as for Alabama |
| Same as for Alaska | Same as for Alaska | Same as for Alabama | Same as for Alaska | 14 times weekly benefit amount | Same as for Alabama |
| Same as for Alaska | Same as for Alaska | Same as for Alaska | Same as for Alaska | 16 times weekly benefit amount | Same as for Alabama |
| No provision | 50% of average weekly wage; maximum \$15, minimum \$7 | Wages plus partial benefit to equal weekly benefit for total unemployment | No waiting period required for partial unemployment | Estimated to be 20 times weekly benefit amount (based on schedules detailed in law) | Maximum benefits for partial or total unemployment set forth in schedule and vary with earning; may not exceed \$300 per benefit year |
| Same as for Alaska | Same as for Alaska | Same as for Alaska | Same as for Alaska | 16 times weekly benefit amount | Same as for Alabama |
| No provision | 4% of total wages during quarter of highest earnings; maximum \$15, minimum \$7.50; must not exceed 6% of earnings in quarter on which benefit is based | Same as for Alabama | Same as for Alaska | For either partial or total unemployment, benefit must not exceed 13 times weekly benefit rate for total unemployment | Benefits for partial or total unemployment may not exceed 1/8 of wages earned in first eight of last nine calendar quarters |
| Same as for Alaska — except that wage limit is \$2, or less, per week | 50% of wages; maximum \$15, minimum \$5 | Same as for Alaska | Same as for Alaska, but such weeks must be consecutive | 13 times weekly benefit amount | Same as for Alabama |
| No provision | 40% of wages plus 10% for dependent spouse plus 5% for each dependent relative; maximum \$15 or 65% of weekly wage, whichever is less; no minimum | Same as for Alabama | Same as for Alabama; weeks need not be consecutive | 16 times weekly benefit amount | Benefits in ratio of 1/3 of a week of benefit for each week of earnings within 104 weeks |

PARTIAL UNEMPLOYMENT PROVISIONS OF

| STATE | Definition of partial unemployment in terms of wage deficiency | DEFINITION OF FULL-TIME WEEKLY WAGE | | ELIGIBILITY REQUIREMENTS | |
|---------------|--|--|--------------------------------|---|--------------------|
| | | First option | Second option | Previous earnings or weeks of employment | Minimum benefit |
| Florida | Same as for Alaska | Same as for Alabama | Same as for Alabama | Same as for Alabama | Same as for Alaska |
| Georgia | Same as for Alaska | Same as for Alabama | Same as for Alabama | Same as for Alabama | Same as for Alaska |
| Hawaii | Same as for Alaska | Wage to correspond to modal working hours | No provision | Employment requirement: 13 weeks of employment in the 12 months immediately preceding application for benefits | No provision |
| Idaho | Same as for Alaska | Same as for Alabama | Same as for Alabama | Same as for Alabama | Same as for Alaska |
| Illinois | Same as for Alaska | 1/13 of highest quarterly earnings | No provision | Same as for Alabama | Same as for Alaska |
| Indiana | Wages less than weekly benefit for total unemployment | No provision; see benefit rate | No provision | Wages of \$10 or more subsequent to March 31, 1938, and wages of \$50 or more (subsequent to first day of last benefit period) in each of three of the first four calendar quarters of the base period or an aggregate of \$250 in the first four calendar quarters of the base period | No provision |
| Iowa | Same as for Arizona | Same as for Alabama | Same as for Alabama | Earnings equal to 15 times weekly benefit rate for total unemployment, earned in first four of five most recently completed calendar quarters; or eligibility may be provided by a commission finding, with necessary earnings computed from last four quarters including incompleting current calendar quarter | No provision |
| Kansas | Same as for Alaska | No provision; see benefit rate | No provision | Same as for Alabama | Same as for Alaska |
| Kentucky | NO PARTIAL BENEFITS PROVIDED. | | | | |
| Louisiana | Same as for Alaska | Average hourly rate of earnings times full time weekly hours | To be prescribed by Commission | At least 13 weeks of employment within the 52 consecutive weeks preceding the close of the most recent week of employment | No provision |
| Maine | Same as for Alaska | Same as for Alabama | Same as for Alabama | Same as for Alabama | Same as for Alaska |
| Maryland | Same as for Alaska | Same as for Alabama | Same as for Alabama | Same as for Alabama | Same as for Alaska |
| Massachusetts | NO PARTIAL | | | | |

UNEMPLOYMENT COMPENSATION LAWS (continued)

| IN TERMS OF | BENEFIT RATE | | Waiting period for total unemployment unless otherwise specified | DURATION OF TOTAL UNEMPLOYMENT BENEFIT PAYMENTS DETERMINING DURATION OF PARTIAL | |
|---|---|---|---|---|--|
| | For total unemployment | For partial unemployment | | Maximum in terms of total weekly benefit | Maximum as related to earnings in base period |
| Same as for Alaska | Same as for Alaska | Same as for Alaska | Same as for Alabama; weeks need not be consecutive | 16 times weekly benefit amount | Same as for Alabama |
| Same as for Alaska | Same as for Alaska | Same as for Alaska | Same as for Alaska | 16 times weekly benefit amount | Same as for Alabama |
| Income from jobs not covered by act included in partial wage base | 50% of wages; maximum \$15, minimum \$5 | Wages plus partial benefits to equal equal 120% of weekly total benefit | Three weeks; reduced to one week for subsequent unemployment in any 12 successive calendar months | 15 times weekly benefit amount; applies specifically to partial unemployment | Benefits in ratio to earnings; one to four within 104 weeks plus one to 20 within 260 weeks |
| No provision | Same as for Alaska | Same as for Alabama | Same as for Alabama; weeks need not be consecutive | 20 times weekly benefit amount | Same as for Alabama |
| Same as for Alaska | Same as for Alaska | Same as for Alaska | Same as for Alabama; weeks need not be consecutive | 16 times weekly benefit amount | Same as for Alabama |
| No provision | 4% of total wages during quarter of highest earnings; maximum \$15, minimum \$5 | Same as for California | Same as for Alaska | 15 times weekly benefit amount | Benefits may not exceed 16% of wages earned in base period, such wages not to exceed \$375 per quarter |
| Same as for Alaska | 50% of wages; maximum \$15, minimum \$5 or full-time weekly wages, whichever is less | Same as for Alabama | Same as for Alaska | 15 times weekly benefit amount | Same as for Alabama |
| Same as for Alaska | 4% of total wages during quarter of highest earnings; maximum \$15, minimum \$5 or 6% of total wages in quarter on which benefit is based | Same as for Alaska | Same as for Alaska | 16 weeks | 8% of wages (not exceeding \$375 per quarter earned in first eight of last nine calendar quarters) |
| COMMISSION TO REPORT RECOMMENDATIONS DECEMBER 1, 1937 | | | | | |
| No provision | Same as for Alaska | Same as for Alaska | Four weeks, not necessarily consecutive | 15 times weekly benefit amount | 1/4 week benefit to each week of employment within 104 weeks |
| Same as for Alaska | Same as for Alaska | Same as for Alaska | Same as for Alaska | 16 times weekly benefit amount | Same as for Alabama |
| Same as for Alaska | Same as for Alaska | Same as for Alaska | Same as for Alaska | 16 times weekly benefit amount | Same as for Alabama |
| BENEFITS PROVIDED | | | | | |

PARTIAL UNEMPLOYMENT PROVISIONS OF

| STATE | Definition of partial unemployment in terms of wage deficiency | DEFINITION OF FULL-TIME WEEKLY WAGE | | ELIGIBILITY REQUIREMENTS | |
|----------------|---|--|--------------------------------|--|-------------------------------|
| | | First option | Second option | Previous earnings or weeks of employment | Minimum benefit |
| Michigan | Earnings in four weeks or one month, less than five times total unemployment weekly benefit | No provision; see benefit rate | No provision | Wages of \$50 in each of any three quarters out of the five completed calendar quarters immediately preceding the first day of the benefit year, or an aggregate of at least \$250 in any three of such five calendar quarters | No provision |
| Minnesota | Same as for Alaska | Same as for Alabama | Same as for Alabama | Wages equal to 16 times benefit amount in first four of the last five completed calendar quarters preceding the first day of the benefit year | Same as for Alaska |
| Mississippi | Same as for Alaska | Average hourly rate times full time weekly hours | To be prescribed by Commission | Employment requirement: at least 13 weeks of employment within the 52 consecutive weeks preceding the close of most recent week of employment | No provision |
| Missouri | Same as for Alaska | No provision; see benefit rate | No provision | Wages equal to 16 times weekly benefit amount in the first four of the last five completed calendar quarters preceding first day of benefit year. Qualifications requiring employment during probationary period | Same as for Alaska |
| Montana | | | | | NO PARTIAL |
| Nebraska | | | | | NO PARTIAL |
| Nevada | Same as for Arizona | Same as for Alabama | Same as for Alabama | Same as for Alabama | Same as for Alaska |
| New Hampshire | Same as for Arizona | No provision; see benefit rate | No provision | Same as for Alabama; except for requirement of \$175 earnings instead of wages equal to not less than 16 times weekly benefit amount | No provision |
| New Jersey | | | | | NO PARTIAL |
| New Mexico | Same as for Alaska | Same as for Alabama | Same as for Alabama | Same as for Alabama | Same as for Alaska |
| New York | | | | | NO PARTIAL BENEFITS PROVIDED: |
| North Carolina | Same as for Alaska | Same as for Alabama | Same as for Alabama | 16 times weekly benefit amount in the first four of the last five completed calendar quarters preceding first day of benefit year | No provision |
| North Dakota | Same as for Alaska | Same as for Alabama | Same as for Alabama | Same as for Alabama | Same as for Alaska |
| Ohio | Wages less than 60% of average weekly wage | Commission to decide on average weekly wage | No provision | Employed in at least 20 calendar weeks within 1 year immediately preceding the date of application for benefits | No provision |

UNEMPLOYMENT COMPENSATION LAWS (continued)

| IN TERMS OF | BENEFIT RATE | | Waiting period for total unemployment unless otherwise specified | DURATION OF TOTAL UNEMPLOYMENT BENEFIT PAYMENTS DETERMINING DURATION OF PARTIAL | |
|---|--|---|--|--|---|
| | For total unemployment | For partial unemployment | | Maximum in terms of total weekly benefit | Maximum as related to earnings in base period |
| No provision | 4% of total wages during quarter of highest earnings; maximum \$18, minimum \$7 or 6% of earnings in quarter on which benefit is based | Monthly remuneration plus partial benefit to equal five times weekly benefit for total unemployment | Three consecutive weeks for total unemployment | Same as for Connecticut except that benefit must not exceed 16 times rate for total unemployment | Benefits not to exceed 12.5% of wages earned in base period |
| No provision | 50% of wages; maximum \$15, minimum \$6 or 3/4 of wages, whichever is less | Same as for Alaska | Two weeks with the addition that three weeks of partial are equivalent to one week of total unemployment | 16 times weekly benefit amount | Same as for Alabama |
| No provision | Same as for Alabama | Same as for Alaska | Two weeks for total unemployment; weeks need not be consecutive | 12 times weekly benefit amount | Same as for Louisiana |
| Same as for Alaska | 4% of total wages during quarter of highest earnings; maximum \$15, minimum \$5 or 6% of total wages in quarter on which benefit is based, whichever is less | Same as for Alaska | Same as for Alabama; weeks need not be consecutive | 12 times weekly benefit amount | Benefits not to exceed 16% of wages earned in base period, such wages not to exceed \$390 per quarter |
| BENEFITS PROVIDED | | | | | |
| BENEFITS PROVIDED | | | | | |
| Same as for Alaska | 50% of wages; maximum \$15, minimum \$7 or 3/4 of wages, whichever is less | Same as for Alabama | Same as for Alaska | 18 times weekly benefit amount | Same as for Alabama |
| Same as for Alaska | 1/26 of highest quarterly wage; maximum \$15, minimum \$5 or 3/4 of 1-13 of wages in quarter on which benefit is based, whichever is less | Same as for Alabama | Same as for Alabama; weeks need not be consecutive | 16 times weekly benefit amount | Same as for Alabama |
| BENEFITS PROVIDED | | | | | |
| Same as for Alaska | Same as for Alaska | Same as for Alabama | Same as for Alaska | 16 times weekly benefit amount | Same as for Alabama |
| STUDY TO BE READY FEBRUARY 1, 1938 | | | | | |
| Same as for Alaska | Same as for Alaska | Same as for Alaska | Same as for Alaska | 16 times weekly benefit amount | Same as for Alabama |
| Same as for Alaska | Same as for Alaska | Same as for Alaska | Same as for Alaska | 16 times weekly benefit amount | Same as for Alabama |
| No provision | Same as for Alabama | Benefits to vary with weekly earnings on basis of a schedule | For partial unemployment loss of wages must be equal to three weeks of total unemployment | 16 times weekly benefit amount within 12 months whether for partial or total unemployment, or both | No provision |

PARTIAL UNEMPLOYMENT PROVISIONS OF

| STATE | Definition of partial unemployment in terms of wage deficiency | DEFINITION OF FULL-TIME WEEKLY WAGE | | ELIGIBILITY REQUIREMENTS | |
|----------------|--|--|--------------------------------|--|--------------------|
| | | First option | Second option | Previous earnings or weeks of employment | Minimum benefit |
| Oklahoma | Same as for Alaska | Same as for Alabama | Same as for Alabama | Must have earned 16 times weekly benefit rate in base year | No provision |
| Oregon | Same as for Alaska | Same as for Alabama | Same as for Alabama | Same as for Oklahoma with qualification for period of ineligibility | No provision |
| Pennsylvania | NO PARTIAL BENEFITS PROVIDED | | | | |
| Rhode Island | Same as for Arizona | 1/13 of highest quarterly earnings | Recent wage rate for full week | Earnings of not less than 16 times the weekly benefit amount earned within the four completed calendar quarters and the expired portion of the incomplete calendar quarter immediately preceding the first day of the benefit year | Same as for Alaska |
| South Carolina | Same as for Arizona | Average hourly rate times average full time weekly hours | Commission to provide | At least 13 weeks of employment within the 52 consecutive weeks preceding the close of most recent week of employment | No provision |
| South Dakota | Same as for Arizona | Same as for Alabama | Same as for Alabama | Same as for Alabama except that earnings must be 20 times weekly benefit amount instead of 16 | No provision |
| Tennessee | Same as for Alaska | Same as for Alabama | Same as for Alabama | Same as for Alabama | Same as for Alaska |
| Texas | Same as for Arizona | Same as for Alabama | Same as for Alabama | Same as for Alabama | Same as for Alaska |
| Utah | Same as for Alaska | Same as for Alabama | Same as for Alabama | Same as for Missouri with qualification that not less than eight times weekly benefit amount shall have been earned within the last two of the first four completed calendar quarters | No provision |
| Vermont | Same as for Alaska | Same as for Alabama | Same as for Alabama | Same as for Alabama | Same as for Alaska |
| Virginia | Same as for Alaska | Same as for Alabama | Same as for Alabama | Same as for Alabama | No provision |
| Washington | Same as for Alaska | Same as for Alabama | Same as for Alabama | 16 times weekly benefit amount within base year with extension of base year in cases of incapacity for work during base year | No provision |
| West Virginia | Same as for Alaska | Same as for Alabama | Same as for Alabama | Same as for Alabama except that earnings must be 12 times weekly benefit amount; exception for qualifying period in case of ineligibility due to sickness, self employment, etc. | Same as for Alaska |

UNEMPLOYMENT COMPENSATION LAWS (continued)

| IN TERMS OF | BENEFIT RATE | | Waiting period for total unemployment unless otherwise specified | DURATION OF TOTAL UNEMPLOYMENT BENEFIT PAYMENTS DETERMINING DURATION OF PARTIAL | |
|-------------------------|---|--|--|---|---|
| | For total unemployment | For partial unemployment | | Maximum in terms of total weekly benefit | Maximum as related to earnings in base period |
| Same as for Alaska | 50% of wages; maximum \$15, minimum \$4 or 3/4 of wages, whichever is less | Same as for Alaska | Two weeks with stipulation that two weeks of partial shall equal one of total unemployment | 16 times weekly benefit amount | Benefits not to exceed 1/6 of wages earned in base year |
| No provision | 50% of wages; maximum \$15, minimum \$7 or 3/4 of wages, whichever is less | Same as for Alaska | Same as for Oklahoma | 16 times weekly benefit amount | Benefits not to exceed 1/6 of wages earned in base year |
| STUDY TO BE MADE | | | | | |
| Same as for Alaska | 50% of wages; maximum \$15, minimum \$7.50 or 3/4 of wages, whichever is less | Same as for Alabama | Same as for Alaska | 20 times weekly benefit amount | Same as for Alabama |
| No provision | Same as for Alaska | Same as for Alabama | Two weeks for total unemployment not necessarily consecutive | 12 times weekly benefit amount | Same as for Louisiana |
| Same as for Alaska | Same as for Alaska | Same as for Alabama | Same as for Alabama; weeks need not be consecutive | 14 times weekly benefit amount | Same as for Alabama |
| Same as for Alaska | Same as for Alaska | Same as for Alaska | Same as for Alabama; weeks need not be consecutive | 16 times weekly benefit amount | Same as for Alabama |
| Same as for Alaska | Same as for Alaska | Same as for Alabama | Same as for Alaska | 15 times weekly benefit amount | Same as for Alabama |
| Same as for Alaska | Same as for Nevada | Wages plus partial benefit to equal weekly total benefit plus 1/6 of wages | Same as for Alaska | 16 times weekly benefit amount | Same as for Alabama |
| Same as for Alaska | Same as for Alaska | Same as for Alaska | Same as for Alabama; weeks need not be consecutive | 16 times weekly benefit amount | Same as for Alabama |
| No provision | Same as for Alaska | Same as for Alaska | Same as for Alaska | 16 times weekly benefit amount | Same as for Alabama |
| Same as for Alaska | Same as for Nevada | Same as for Alaska | Same as for Alaska | 16 times weekly benefit amount | Same as for Alabama |
| Same as for Alaska | Same as for Alaska | Same as for Alaska | Same as for Alaska | 12 times weekly benefit amount | Same as for Alabama |

PARTIAL UNEMPLOYMENT PROVISIONS OF

| STATE | Definition of partial unemployment in terms of wage deficiency | DEFINITION OF FULL-TIME WEEKLY WAGE | | ELIGIBILITY REQUIREMENTS | |
|-----------|---|--|-------------------------------------|--|--|
| | | First option | Second option | Previous earnings or weeks of employment | Minimum benefit |
| Wisconsin | Deemed partially unemployed if total wages in any week from all employers are less than weekly benefit rate from the given employer | Annual wages divided by number of weeks employed | Commission to prescribe alternative | Probationary employment requirement of more than four weeks or for at least 12 days, or on a monthly salary basis for more than one month. Only workers whose weekly wage is \$10 or more are eligible for partial unemployment benefits | Partial benefits payable when sum equals or exceeds weekly benefit rate, unless commission decides upon a shorter period |
| Wyoming | Same as for Alaska | Same as for Alabama | Same as for Alabama | Same as for Alabama except that earnings must be 14 times weekly benefit amount | Same as for Alaska |

UNEMPLOYMENT COMPENSATION LAWS (continued)

| IN TERMS OF | BENEFIT RATE | | Waiting period for total unemployment unless otherwise specified | DURATION OF TOTAL UNEMPLOYMENT BENEFIT PAYMENTS DETERMINING DURATION OF PARTIAL | |
|--------------------|---|--|---|---|---|
| | For total unemployment | For partial unemployment | | Maximum in terms of total weekly benefit | Maximum as related to earnings in base period |
| No provision | 50% of wages; maximum \$10 if wages less than \$25; \$12.50 if \$25-\$30; \$15 if \$30 and over; rates effective temporarily; after February 27, 1938 - maximum of \$15, minimum of \$1 | Wages plus partial benefit to equal weekly total benefit | Three weeks of total unemployment for total benefits; three weeks of partial unemployment for partial benefits within a calendar year | 20 times weekly benefit amount | Until February 28, 1938, ratio of one week of benefits to five or six weeks of earnings; after that date ratio is one to four |
| Same as for Alaska | 60% of wages; maximum \$18, minimum \$7 or 3/4 of wages, whichever is less | Same as for Alaska | Same as for Alaska | 14 times weekly benefit amount | Same as for Alabama except that maximum wages credited per quarter is \$468 |

PROPOSED PARTIAL

| AGENCY | Definition of partial unemployment in terms of wage deficiency | DEFINITION OF FULL-TIME WEEKLY WAGE | | ELIGIBILITY REQUIREMENTS | |
|--------|--|-------------------------------------|---------------|--|-----------------|
| | | First option | Second option | Previous earnings or weeks of employment | Minimum benefit |

I. FIRST PROPOSED

| | | | | | |
|--------------------------------|---|---------------|---------------|--|--------------|
| Committee on Economic Security | Wages less than total weekly benefit plus \$1 | Not specified | Not specified | 40 weeks of insured employment and contribution in the preceding two years | No provision |
|--------------------------------|---|---------------|---------------|--|--------------|

II. DRAFT BILL FOR EITHER COMPLETELY POOLED FUND WITH MERIT

| | | | | | |
|-----------------------|---|--------------------------------|------------------------------------|---|--|
| Social Security Board | An individual shall be deemed "partial unemployed" in any week of less than full-time work if the wages payable to him for such week are less than six-fifths of the weekly benefit amount he would be entitled to receive if totally unemployed and eligible, or an individual shall be deemed "partially unemployed" in any week of less than full-time work if his wages payable for such week fail to equal \$2 more than the weekly benefit amount he would be entitled to receive if totally unemployed and eligible. | Recent wage rate for full week | 1/13 of highest quarterly earnings | Earnings within the first four out of the last five completed calendar quarters immediately preceding the first day of the benefit year equal to not less than 16 times his weekly benefit amount | If such partial benefit for any week equals less than \$2, it shall not be payable unless and until the accumulated total of such partial benefits with respect to weeks occurring within the 13 preceding weeks equals \$2 or more. |
|-----------------------|---|--------------------------------|------------------------------------|---|--|

III. DRAFT FOR TRANS

| | | | | |
|---------------------------------------|---|--|---|---|
| Federal Coordinator of Transportation | There is no special definition because compensation is paid whenever an employee's loss of earnings in a half month (the time unit used throughout) exceeds 10% of his monthly earnings in the 12 months prior to a given benefit year. However, loss of earnings due to changes in rates of pay, sickness, voluntary leaves, etc., is not to be compensated. | The full-time weekly wage is not employed at all. In its stead is the concept of average monthly earnings, defined as the average of the highest earnings in one month out of each period of three consecutive months in the 12 months preceding unemployment or 80% of average earnings in the previous year, whichever is greater. | Must be equal to at least four times average monthly earnings, during period of 24 consecutive half-months immediately preceding beginning of benefit year. | Amount of benefit payable to an individual for any half-month plus his earnings in the period shall not be less than \$12.50 or 3/8 of average monthly earnings, whichever is less. Also there must be an accumulated total of benefits equal to at least \$2 |
|---------------------------------------|---|--|---|---|

UNEMPLOYMENT PROVISIONS

| IN TERMS OF | BENEFIT RATE | | Waiting period for total unemployment unless otherwise specified | DURATION OF TOTAL UNEMPLOYMENT BENEFIT PAYMENTS DETERMINING DURATION OF PARTIAL | |
|-------------------------------|----------------------------|--|--|---|---|
| | For total unemployment | For partial unemployment | | Maximum in terms of total weekly benefit | Maximum as related to earnings in base period |
| Acceptance of incidental work | | | | | |
| PROVISIONS | | | | | |
| No provision | 50% of wages; maximum \$15 | Difference between total weekly benefit plus \$1 and actual earnings | Four weeks suggested for total and partial | 12 weeks suggested | Four to one ratio of weeks of employment to weeks of benefits |

RATING FOR EMPLOYERS OR SEPARATE EMPLOYER RESERVE ACCOUNTS

| | | | | |
|--|---|---|---|--|
| Odd jobs and/or subsidiary work paying \$3 or less do not exclude workers from partial (or total benefits) | —% of full-time weekly wages but not more than \$. . per week nor less than either \$. or 3/4 of full-time weekly wage, whichever is less | Partial benefit shall be an amount equal to the difference between his weekly benefit amount and 5/6 of his wages for such week. (Alternative provision: an amount which if added to wages would exceed weekly benefit amount by \$2) | Two weeks for total unemployment; two weeks of partial unemployment deemed equivalent to one week of total unemployment | The lesser of . times his weekly benefit amount and 1/6 of uncharged wage credits with respect to base period and wage credits not to exceed \$390 per quarter |
|--|---|---|---|--|

PORTATION EMPLOYEES

| | | | |
|---|---|---|--|
| The benefit is 5/8 of the amount by which loss of earnings in a half-month exceeds 10% of average monthly earnings for the 12 consecutive months preceding the benefit year. The amount is such that a totally unemployed worker may receive 50% of his monthly earnings. | Benefits are payable only after individual has had a loss of earnings equal to 1/2 of his average monthly earnings for the 12 months period preceding his benefit year. For partial unemployment, then, the waiting period is longer than for total unemployment. | There are no more than 12 half-monthly payments for partial unemployment (six months). For total unemployment, the maximum in terms of time is four months. | As a maximum, a worker may get no more than 1/12 of his earnings in the previous two years. No earnings in excess of \$150 per month counted |
|---|---|---|--|

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