

THE EFFECT OF A SHORTENED WAITING PERIOD ON UNEMPLOYMENT BENEFIT COSTS

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The waiting period required under unemployment compensation laws serves a dual purpose. It allows time for the determination of an unemployed worker's benefit rights, and it protects the unemployment fund from heavy withdrawals for benefit payments to workers whose unemployment is of short duration. As States gain in administrative experience, the first purpose of the waiting period will decline in importance, leaving only the cost factor as of primary significance in determining whether the waiting-period requirements of State laws may be liberalized without jeopardizing the solvency of the State unemployment fund.

The Committee on Economic Security based its analysis of the cost of unemployment compensation in the United States on estimates of the average distribution of the duration of unemployment over the period 1923-33. According to these estimates, 17.1 percent of the total compensable wage loss for the period occurred among workers whose unemployment was of no more than 3 weeks' duration.¹ Since these same estimates indicated that 13.2 percent of the compensable wage loss occurred among workers unemployed 2 weeks or less, it was believed that a 3-week waiting period would conserve a significant proportion of the fund for compensating workers with longer spells of unemployment.

The Committee's estimates of the duration of unemployment, on which its cost figures were based, were derived from the few studies of the duration of unemployment then available; all these studies were limited to brief periods of time, and most of them were based on small samples. The lack of a series of comparable studies indicating the changing pattern of duration in relation to changes in business conditions made the task of

estimating an average duration distribution for the years 1923-33 extremely difficult.

Since 1935, when the Committee's estimates were made, additional and more comprehensive data have become available for computing the duration of employment and unemployment. The estimates which are here presented are based on a technique for analysis of these data to provide for a continuous time series of duration distributions.² This technique has made possible more adequate estimates of the cost of changes in waiting-period requirements for particular years and for a period of years.

The waiting-period requirements established in State unemployment compensation laws differ widely. The most frequent provision calls for a waiting period of 2 weeks within the 13 before benefits are payable. In a smaller number of States the requirement is 3 weeks in 13. In addition, most of these laws limit the maximum weeks to be served in a specified period. In most cases the maximum is 5 in 65; in the others it is 3 additional weeks in the benefit year. A few States require 2 and a few 3 weeks of waiting in the 26 weeks before benefits are paid; one State requires 2 consecutive weeks in 52, another 3 consecutive or 5 nonconsecutive weeks in 52, another 4 nonconsecutive weeks in 52. Altogether, in all but 11 jurisdictions, there is some limitation on the number of waiting-period weeks that must be served over a specified period. In most States, 2 weeks of partial unemployment count as 1 waiting-period week.

Recently, numerous proposals have been advanced for the modification of these waiting-period requirements. It is increasingly evident that a long waiting period involves considerable hardship for many claimants and may necessitate their applying for relief before unemployment benefits are payable. The proposal most widely advocated

*Bureau of Research and Statistics, Division of Unemployment Compensation Research. This article is taken from a more extensive study which includes a discussion of the techniques used in the estimates. A limited number of copies will be available for administrative use on request addressed to the Bureau of Research and Statistics, Division of Unemployment Compensation Research.

¹ *Social Security in America: The Factual Background of the Social Security Act as Summarized from Staff Reports to the Committee on Economic Security*. Washington, Social Security Board Publication No. 20, p. 87, 1937.

² The technique used in the making of these estimates has been developed by the author over the past several years. It is based essentially on the use of labor turn-over rates to measure rate of change in the volume of employment and unemployment. The mathematical theory and basic assumptions underlying the method are set forth in an article issued by the Bureau of Research and Statistics, *A Dynamic Analysis of Unemployment Statistics*.

at the present time is the requirement of a single waiting period of 2 weeks in a benefit year, with weeks of partial unemployment (as defined in the State law) counting as waiting-period weeks. These waiting-period weeks may be consecutive or nonconsecutive.

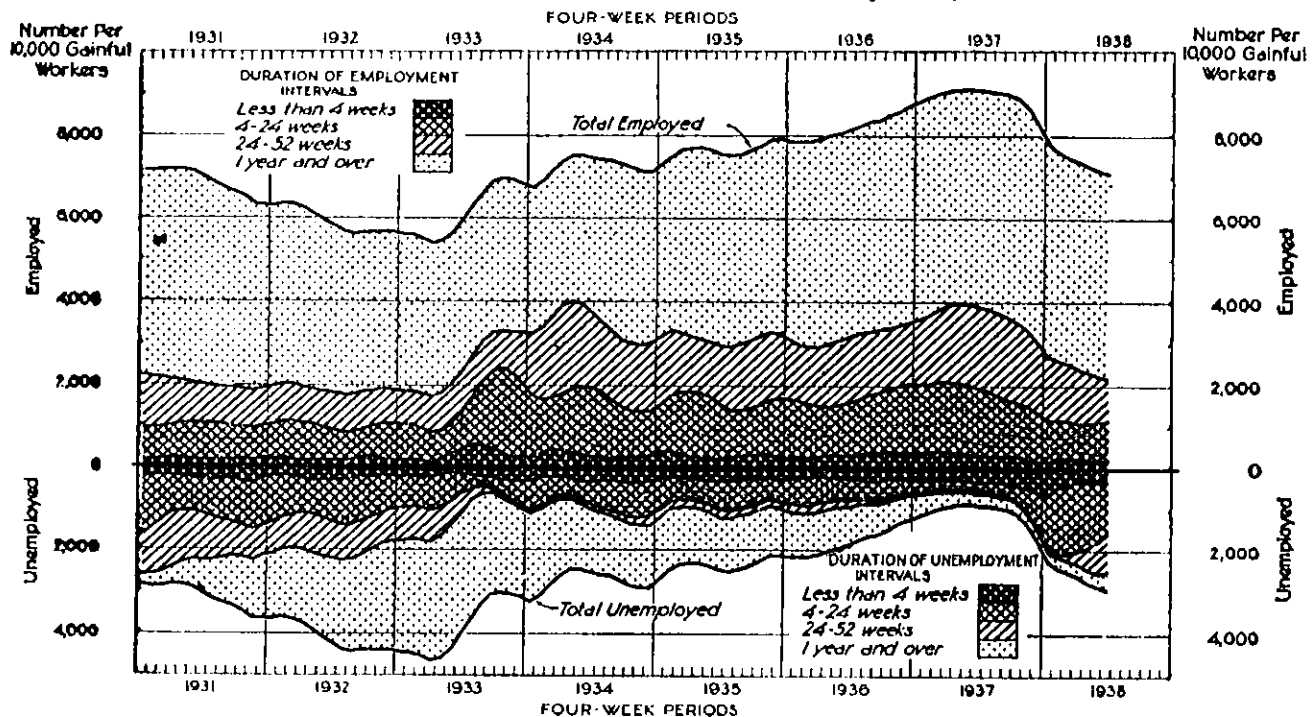
How costly would such a change be? It is obvious that the additional cost resulting from a shortening of the waiting period to 2 nonconsecutive weeks in 52 will vary from State to State, depending on the particular provisions now in effect in the State, as well as on differences in industrial structure. The data on which the cost estimates here presented are based relate to the years 1931 through 1938 and to gainful workers in the manufacturing industries only. The cost of several different changes in waiting-period requirements have been computed; the basic estimates are those for the increase in cost which would result from a reduction of the waiting period from 4 to 2, and from 3 to 2, nonconsecutive weeks in 52 before benefits are payable, assuming uniform provisions throughout the United States. The cost figures which are presented here are, therefore, not directly applicable to any one State, but they will serve as a general measure of cost differences for

the United States as a whole and should permit any State agency to figure roughly the cost differentials if the waiting-period provisions of the State laws were liberalized.

Waiting-Period Factors Affecting Costs

The two principal factors directly affecting the costs of unemployment benefits under different waiting-period requirements are the duration of unemployment and the maximum duration of benefit payments allowed workers with long spells of unemployment. High costs are not necessarily associated with the existence at any given time of large numbers of unemployed workers, for many of the workers who were last employed in covered occupations may have long since exhausted their benefit rights. The most important single influence on costs is the rate at which workers are separated from compensable employment. For example, if large numbers of workers are separated from their jobs each week during the first 2 years of a prolonged depression, large numbers of workers will receive benefits for the maximum duration allowable under the State law and will probably remain unemployed for a long time beyond the compensable period. After several years during

Chart I.—Estimated distribution of employment and unemployment per 10,000 gainful workers in manufacturing industries in the United States, by duration, January 1931–June 1938



which there has been no marked increase in employment, a large proportion of these unemployed workers will form a stagnant group, or "hard core," with no unemployment benefit rights and practically no immediate chance of returning to employment. At such a time the rate of separation from employment will have slowed down to the extent that only a small proportion of the total number unemployed will have been separated recently enough to be eligible for benefits.

The second major factor influencing costs is independent of employment conditions. It is dependent on the statutory maximum number of weeks of benefits which an individual worker may draw within his benefit year before he exhausts his benefit rights. In the following analysis a flat duration period of 16 weeks has been assumed for all workers who qualify for benefits.

Duration of unemployment may be measured in terms of a single spell of unemployment, such as the number of days or weeks between the time when a worker is separated from employment and the time when he is reemployed. Or it may be measured in terms of the aggregate number of weeks of unemployment an individual experiences over the period of a year or some other definite time interval. Still a third concept of duration of unemployment is used here; it was chosen because it is adapted to use in actuarial calculations based upon probability considerations. In measuring the duration of unemployment, the interval in weeks is counted back from a given day, such as the Saturday nearest the fifteenth of the month, to the time when the worker was separated from his last job. The particular worker's spell of unemployment does not necessarily terminate on the day from which the duration is figured but may continue for some time beyond. In computing distributions of unemployment by duration, each worker unemployed as of a given date is classified in the duration interval distinguished by the length of his unemployment from that date. A duration distribution may thus be considered as a cross section of total unemployment counted backward from a given day. The total group of the unemployed is arrayed in successive strata or levels of unemployment duration in accordance with increasing duration of unemployment. A week later a new group will be formed of those unemployed 1 week or less, and all other groups

will be moved forward into the next higher duration classification.

Dynamic Aspects of a Duration Distribution of Unemployment

Unemployment duration is a dynamic phenomenon. Extensive changes in employment and unemployment can take place within the brief space of a month so that the number of persons employed in one month may be much higher or much lower than the figure for the following month. The rapidly changing volume of employment is reflected in the proportionate distribution of the unemployed by duration of unemployment. Just as increased or decreased volumes of employment can be attributed to cyclical, seasonal, and accidental influences, so can variations in successive duration distributions of unemployment be traced to the same causes. The dynamic nature of a duration distribution of unemployment necessitates techniques of measurement different from those used for more stable characteristics of a population. Whereas shifts in the age distribution of a population take place slowly, a duration distribution of unemployment may change completely within a few months.

Chart I illustrates the dynamic nature of the duration of employment and unemployment. It shows distributions of unemployment among gainful workers in manufacturing industries for the United States by duration for each 4-week period starting with January 1931 and ending with June 1938. Thus, 13 duration distributions are shown for each year except 1938. Corresponding duration distributions of employment are also charted to illustrate the relationship between the two groups. Duration of employment is defined in the same manner as duration of unemployment, namely, the interval of each worker's employment measured from a fixed date back to his last spell of unemployment. The number of workers plotted as ordinates on the chart is expressed as the number per 10,000 gainful workers estimated for the given year.³ The number of workers in any duration interval divided by 10,000 will give the proportion of all gainful workers of the universe in that particular duration class, and if the number of gainful workers in a universe having similar

³ Estimates of the size of the gainful worker universe for each year were adjusted by allowance for changes in employment opportunities.

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unemployment characteristics is multiplied by the proportion per 10,000, the frequency or number in a given duration interval will be obtained.

The duration distributions in chart I are made up of four principal duration classes: 0-4 weeks, 4-24 weeks, 24-52 weeks, 52 weeks and over. These groups are indicated by cross-hatched areas. Each change in duration can be traced by noting the change in width of each duration belt on the chart. The 0-4 week duration belt of unemployment is the area lying directly below the horizontal axis, which is the dividing line between the employed and unemployed groups. The 4-24 week duration belt is the area directly below the 0-4 week belt, and so on. The total width of the four belts at any given point of the horizontal axis represents the total volume of unemployment per 10,000 workers at the designated period of the year.

Average Duration Distribution of Unemployment

Duration distributions are extremely sensitive to seasonal, accidental, and cyclical changes in employment. A single distribution as of a given date is rarely typical of the duration condition existing for that year. A satisfactory measure of duration for a given year is an average duration

distribution found by averaging corresponding class intervals in the 13 distributions for 1 year. This is the most useful and practical form of duration distribution for estimating costs, since it permits the calculation of the man-years of time involved in a given duration interval in a particular year.

Table 1 shows the average distribution of unemployment for gainful workers in manufacturing industries for each year over the period 1931-38 by duration. The duration distribution for 1938 is based on the first 6 months of the year and is not necessarily indicative of the average duration that will result when distributions for the remaining 6 months are included.

The figures in table 1 are presented in the form of a cumulative distribution, since this is the most useful form for cost estimates. In this form each successive duration level includes all the frequencies of shorter duration, so that successive classes read less than 1 week, less than 2 weeks, less than 3 weeks, and so on. The class intervals in the table progress by 1-week increments from 0 to 4 weeks, by two 4-week increments from 4 to 12 weeks, by 1-week increments from 12 to 20 weeks, and by 4-week increments from 20 to 52 weeks. A single detached increment is given for the group unemployed 52 weeks and over.

Table 1.—Estimated cumulative man-years of time lost by unemployed workers in manufacturing industries in the United States, 1931-38, by duration of unemployment ¹

[Per 10,000 gainful workers]

Duration	1931	1932	1933	1934	1935	1936	1937	1938 ²
Total.....	3, 125	4, 070	3, 859	2, 748	2, 370	1, 900	1, 056	2, 620
Less than 1 week.....	66	61	68	77	68	72	103	94
Less than 2 weeks.....	131	121	112	140	132	135	192	188
Less than 3 weeks.....	195	179	163	217	191	199	268	282
Less than 4 weeks.....	258	236	210	280	247	264	338	375
Less than 8 weeks.....	490	455	370	400	436	433	514	746
Less than 12 weeks.....	717	636	496	659	582	561	609	1, 096
Less than 13 weeks.....	708	698	524	603	613	587	625	1, 179
Less than 14 weeks.....	819	757	550	725	643	611	638	1, 259
Less than 15 weeks.....	809	813	575	754	671	633	649	1, 336
Less than 16 weeks.....	919	850	590	781	697	654	658	1, 410
Less than 17 weeks.....	968	914	622	806	721	673	665	1, 483
Less than 18 weeks.....	1, 016	961	644	829	744	691	672	1, 552
Less than 19 weeks.....	1, 064	1, 007	666	850	766	707	678	1, 618
Less than 20 weeks.....	1, 112	1, 052	686	870	786	722	683	1, 661
Less than 24 weeks.....	1, 298	1, 223	764	934	855	772	696	1, 903
Less than 28 weeks.....	1, 474	1, 380	837	979	908	811	705	2, 076
Less than 32 weeks.....	1, 630	1, 524	908	1, 008	950	841	709	2, 190
Less than 36 weeks.....	1, 795	1, 654	976	1, 028	983	865	712	2, 259
Less than 40 weeks.....	1, 942	1, 769	1, 043	1, 041	1, 007	883	713	2, 298
Less than 44 weeks.....	2, 079	1, 873	1, 105	1, 051	1, 026	897	714	2, 317
Less than 48 weeks.....	2, 204	1, 968	1, 162	1, 059	1, 040	907	715	2, 326
Less than 52 weeks.....	2, 317	2, 054	1, 212	1, 065	1, 051	916	710	2, 331
52 weeks and over.....	808	2, 022	2, 647	1, 681	1, 319	891	340	289

¹ Calculated from labor turn-over rates published by the U. S. Department of Labor, Bureau of Labor Statistics. Formulas and technique for calculation developed by the author of this article.

² 1938 average based on data for first half of year.

The total of 3,125 workers unemployed per 10,000 in 1931, as shown in table 1, represents the aggregate of man-years of unemployment per 10,000 gainful workers in the manufacturing industries in that year. This aggregate is made up of unemployment experienced by many more than 3,125 individual workers per 10,000, since the same individuals may not be unemployed throughout the entire year. If a census of the unemployed were taken on each working day of the year and the numbers counted on each of the days were added, the total would represent the number of man-days of unemployment during the year. Dividing this total by the number of working days in the year would give (a) the average number of persons unemployed in the year and (b) the number of *man-years* of unemployment in that year. If the average number of persons unemployed in a year is derived by taking less frequent measures of unemployment (a daily census is obviously impossible), this average also represents the total man-years lost through unemployment in the year. This total, when distributed by duration intervals, represents both the average number unemployed for the number of weeks of the interval and the man-years of unemployment which occurred in unemployment of the specified duration.

An average duration distribution of unemployment for a given year is thus a measure of the amount of time lost in man-years within a series of duration belts. For example, time lost by workers unemployed between 4 and 24 weeks in 1931 is proportional to the difference between the figure for the two cumulative duration levels, 258 and 1,298. The result, 1,040, represents the number of man-years lost by workers unemployed between 4 and 24 weeks throughout the entire year per 10,000 gainful workers in that year. These man-year units can be readily converted to man-weeks by multiplying by 52. Following through similar calculations for the successive years, it is found that workers in manufacturing industries who were unemployed between 4 and 24 weeks lost the following man-years of work per 10,000 gainful workers: 987 in 1932; 554 in 1933; 654 in 1934; 608 in 1935; 518 in 1936; 365 in 1937; and 764 (1,528÷2) in the first 6 months of 1938. The wide differences in these figures indicate the effect of unemployment variations from year to year. It is evident that the costs of

benefit payments will vary proportionately from year to year.

Calculation of Changes in Benefit Costs Resulting From Shortened Waiting Periods

The duration distributions shown in table 1 apply only to workers in the manufacturing industries; the lack of data on labor turn-over in the nonmanufacturing industries makes impossible the computation of similar distributions for those industries. Since, however, in most States the majority of covered workers and hence of eligible claimants will come from the manufacturing industries, it is unlikely that the duration experience of the whole group will be radically different from that shown in the table.

The duration distributions in the table relate to single uncompleted spells of unemployment and not to the unemployment of an individual worker aggregated over the period of a year. Thus the 93 man-years of unemployment in the 3 but less than 4 weeks' duration intervals for 1938 represent the amount of unemployment occurring in spells of at least that length; but any individual worker who experienced a spell of unemployment of 3 weeks but less than 4 might within the course of a year have several other spells of unemployment of different durations. In estimating the cost of different waiting-period requirements, account must be taken of the fact that those requirements apply not to each spell of unemployment but to a defined period of time, usually a year.

Assuming a waiting-period requirement of 2 nonconsecutive weeks in 52, for each individual spell of unemployment, eligible claimants will enter their first week of compensable unemployment in one of three ways—by serving (a) 2 consecutive waiting-period weeks, (b) 1 waiting-period week, or (c) no waiting-period weeks—depending on the number of waiting-period weeks previously served in the past 52 weeks. Similarly, with a requirement of 3 nonconsecutive waiting-period weeks, an individual spell of unemployment might lead to a compensable week only after the lapse of 3, 2, 1, or no waiting-period weeks.

In estimating the cost of benefit payments under any given waiting-period requirements, one must adopt some assumption in regard to the proportion of claimants who will enter each spell of unemployment occurring throughout the year with the necessity of waiting 3, 2, 1, or no weeks before bene-

fits are payable. All workers who have been employed for 52 weeks or more prior to a spell of unemployment will necessarily serve the maximum number of waiting-period weeks before they can receive benefits for the current spell.

For those spells of unemployment which follow spells of employment of less than a year's duration, the basis for estimating the number of weeks of waiting period to be served is less definite. In the calculations which follow, it has been assumed that, for such spells, an average of 1 week of waiting would be necessary when the requirement is 3 weeks of waiting in 52, an average of 2 weeks when the requirement is 4 weeks in 52, and an average of $\frac{1}{2}$ week of waiting when the requirement is 2 weeks in 52.

Table 2.—With 16-week flat benefit duration, estimated percentage increase in benefit costs with waiting period reduced from 3 and 4 weeks to 2 weeks, 1931-38

Year	Percentage increase in costs over waiting period of—	
	3 weeks	4 weeks
1931-38	4.0	8.0
1931	1.5	3.1
1932	1.2	2.4
1933	4.9	9.3
1934	5.4	11.0
1935	5.1	10.4
1936	7.0	14.1
1937	12.9	26.9
1938 (6 months)	1.6	3.4

Table 2 shows the estimated percentage increase in benefit costs for a flat duration period of 16 weeks when the waiting period is reduced from 4 to 2 and from 3 to 2 weeks, calculated for each year from 1931 through June 1938 by the above process. Two sets of percentages are set forth in this table: (1) for a reduction of waiting period from 3 weeks to 2 weeks, and (2) for a reduction of waiting period from 4 weeks to 2 weeks. Under the first condition, the percentage increase in benefit costs varies over a range of 1.2 percent in 1932 to 12.9 percent in 1937. For the second condition the range is from 2.4 percent in 1932 to 26.9 percent in 1937. The total increase in benefit costs over the whole period is 4 percent for the first, and 8 percent for the second condition, respectively.

In general, the percentage increase in costs which results from reducing the waiting period is greatest in years when total benefit payments are lowest

and the least in years when total benefit payments are highest. The reason for this inverse relation can be attributed to cyclical changes in labor turn-over. When the accession rate for labor turn-over is high, a greater proportion of the unemployed workers concentrate in the short duration classes than when the accession rate is low; consequently, with longer waiting periods a greater proportion of the unemployed workers will be rehired without receiving benefits when employment opportunities are good than when they are bad.

Effect of Reducing Waiting-Period Requirements Under Existing Unemployment Compensation Laws

As was pointed out earlier, many of the existing State unemployment compensation laws provide for a waiting period of 2 or 3 weeks in the 13 weeks immediately preceding the payment of benefits, with a maximum of 5 weeks in the 65 preceding benefit payment or of 3 additional weeks in the benefit year. There are no data on which to base estimates of the proportion of claimants who will actually serve 2, 3, 4, or 5 waiting-period weeks in a year under such provisions. It is evident that the increase in cost involved in a change from this type of provision to a requirement of 2 nonconsecutive weeks in 52 will vary somewhat from the increases shown in table 2. The effect of provisions calling for additional waiting periods in the course of a 65-week period, as compared with a requirement of 2 or 3 weeks in 52, is first to decrease the number of workers who will enter the current spell of unemployment with no waiting-period weeks to their credit, since the actual period during which waiting-period weeks can be accumulated is 65 rather than 52. In the second place, such provisions, as well as the provision for 3 additional weeks in the benefit year, will increase the average duration of the waiting period to be served in the current spell of unemployment by workers entering the benefit period with a partial waiting period served in a prior spell of unemployment.

A computation of the change in costs which would arise if the provision of 2 weeks of waiting in 13 and 5 in 65 were changed to 2 weeks in 52 gave an increase of 2.4 percent in costs for the period 1931-38. With a change from a requirement of 3 weeks in 13 and 5 in 65 to that of 2 weeks in 52, the increased cost for the same period was found to be 7.6 percent. These computations

were made on the basis of the very conservative assumptions that the average duration of the waiting period for spells of unemployment following a period of employment of less than 65 weeks would be $1\frac{1}{2}$ weeks if the requirement were 2 in 13 and 5 in 65, and $2\frac{1}{2}$ if it were 3 in 13 and 5 in 65. In general, the cost of change from a requirement of 2 weeks in 13 but not more than 3 additional weeks in the benefit year will approximate that of a change from 2 weeks in 13 but not more than 5 in 65.

One other factor which is not taken into account in the calculation in table 2 is the effect of the proposal to count weeks of partial unemployment as waiting-period weeks. Such a provision would mean that more workers would enter their first compensable week with no waiting period to be served. Existing data give no indication of the extent of the change which would be involved; it might be expected to vary greatly as between different industries.

Conclusion

Decreasing the waiting period for a given flat duration of benefits will increase benefit costs. It is estimated that with a duration of 16 weeks the increase in costs over the period 1931-38 would amount to 4 percent if the waiting-period requirement were changed from 3 weeks in 52 to 2 weeks in 52, and to 8 percent if the requirement were changed from 4 weeks in 52 to 2 weeks in 52. If the provision most commonly embodied in existing State laws, that of 2 weeks of waiting in 13 and a maximum of 5 in 65 or of 3 additional weeks in the benefit year, were changed to a requirement of 2 weeks in 52, it is estimated that the increase in cost would be 2.4 percent. The increase would be 7.6 percent were the change from

a requirement of 3 weeks in 13 and 5 in 65, to a requirement of 2 weeks in 52.

The greatest percentage increases in costs resulting from a decrease in the waiting period will occur in years in which total benefit payments are small. There has been a tendency in the past to overemphasize the savings in benefit costs resulting from a long waiting period. This was the result of observations made of data on duration of unemployment collected in periods of high labor turn-over accession rates or in the first few weeks in which large lay-offs occurred.

The data on which the estimates in this study are based are slightly biased in the other direction. The period for which the data are available, 1931 through 1938, includes few years of increasing employment opportunities. If many years of continuous prosperity had been included in the period studied, increased benefit costs for individual years resulting from a shorter waiting period would have been relatively much higher. Benefit payments, however, are so low in years of high employment in comparison with years of rapidly declining employment that a high percentage increase in the total outlay caused by a shortened waiting period should not result in a serious depletion of the reserve fund. A memorandum on the method of computing the duration distributions of unemployment in the covered labor force is now in preparation. This analysis when completed will make possible the application of this method to individual States and to longer periods of time. In the meantime, this discussion of the effect of the waiting period on benefit costs should permit weighing the proportionately small increase in benefit costs resulting from a shortened waiting period against the desirability of more liberal provisions for workers.