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A USEFUL QUANTITATIVE MEASURE OF STATE
UNEMPLOYMENT INSURANCE BENEFITS

Raymond Munts

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ABSTRACT

There is now no single measure of unemployment-
insurance benefits that can be used to compare state
programs or to chart the history of benefits in each
state. The purpose of this study is to develop such
a measure, called a "benefit index," which will serve
as a dependent variable in descriptive and comparative
studies, both cross-sectional and longitudinal.

The method used is, first, to establish a "benefit
ratio" that holds certain growth variables constant,
and then further refine this ratio to hold unemploy-
ment constant.

Holding unemployment constant is accomplished by
estimating certain component terms of the benefit
ratio for a specified rate of covered unemployment.
The method is a simplified actuarial procedure of
estimating benefit ratios if covered unemployment
rates in each state for each year since 1946 were 4.5%.

It is hoped that the comparative benefit index
will make possible precise legislative histories
that explore the influences that have most affected
the benefit functions of this income replacement
program.

This paper deals only with the techniques for
deriving the index, and presents the calculated index
for each state over a twenty-year period. Some words
of caution about using the results conclude the paper.

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The University of Wisconsin

Purpose

Descriptive studies of programs that deal with human resources
are frequently frustrated by the absence of useful data. In unem-
ployment insurance there is a particularly acute need for an effective
measure of program performance. Although operating statistics are
available, refinement of this information is required for both evalu-
ating past accomplishments and analyzing present policy issues. The
purpose of this study is to construct from operating statistics a use-
ful measure of annual benefit payments for each state.

Two uses for such a measure, which we will call a benefit index,
are immediately apparent. First, we should be able to compare benefit
levels of different state programs so that varying effort can be identi-
fied. This is not now possible because there are many kinds of benefit
provisions and they cannot be easily added up and compared between
states. And yet it is frequently the case that a legislative decision
in one state involves an effort to understand what is happening in other
states. Any such inter-state comparison of benefits requires a measure
that summarizes the total benefit picture and eliminates irrelevant
variables.

A benefit index can also help to describe the legislative history
of unemployment insurance. A precise history would make it possible

to isolate those influences that <u>have</u> affected the evolution of state laws, and clear out some of the mythology surrounding the subject. Both cross-section and longitudinal studies will require a dependent variable that accurately characterizes benefit output.

The problem now is that we cannot measure benefits in any comparative way, since there are many provisions affecting eligibility, weekly benefit amount, duration of benefits, disqualifications, etc., in each state law with no simple way to sum up their net effect on benefit payments. Furthermore, the range of discretion allowed in administering claims has its own effects on how much the unemployed workers in a state actually receive. A benefit index should include both the statutory and the administrative influences that are of primary importance to the beneficiaries.

A First Approximation: The Benefit Ratio

Constructing a benefit index requires us to hold some variables

constant so that the effects of others can be observed.   Among the

variables under consideration, we can distinguish three general kinds:

> 1. Benefit variables: These are statutory provisions
> and administrative procedures that affect the liberality
> of benefit payments.
>
> 2. Unemployment variables: These are the economic fac-
> tors that affect the intensity and duration of unemploy-
> ment, and therefore the volume of benefit payments.
>
> 3. Growth variables: These are economic variables
> affecting the size of the work force or number of busi-
> ness establishments in a state, as well as the chang-
> ing levels of wages and salaries. These variables,
> like those above, are reflected in the dollar amount
> of aggregate benefit payments.

Our purpose is to find a benefit index that is sensitive to the

first set of variables, but neutral with respect to the other two sets--

i.e., that holds the latter two sets constant. We shall construct,

as a first approximation, a "benefit ratio" that will hold constant the

the growth variables. In the next section we will refine this further

into our desired "benefit index" by holding constant the unemployment

variables.

The raw material for making a benefit index must be the dollar

amount of the total annual benefit payments in any state for a parti-

cular year. Officially called "benefit disbursements,"[1] this is

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[1]"Benefit disbursements" is the total of the weekly (n some cases
bi-weekly) benefit checks issued during each year adjusted for voided
checks and transfers under the inter-state combined-wage plan. Hand-
book of Unemployment Insurance Financial Data, 1946-   , BES No. U-73.
(hereafter referred to as Handbook...), p. 178.

usually regarded as a cost figure and derives its operational usefulness in bookkeeping terms. As a cost figure it is an aggregate and expresses the sum of the liabilities of the program each year. Its value for studying benefits is a relatively "clear" statistic and is available from the earliest years, and second, lies in its qualities as a net or final vector that is a function of all factors influencing benefit payments.

Unfortunately, the concept "benefit disbursements" by itself is useless for comparative purposes, because it also reflects changes in growth of programs in the several states and size differences among the states themselves. There is, for example, no sense in comparing benefit disbursements of Rhode Island and New York, nor even in the same state for two different years during which the number of business establishments has multiplied and the work force increased. For comparative purposes, it is necessary to divide the dollar benefit disbursement by some figure representing size--possibly the number of covered workers or the aggregate wages of covered workers.

Before deciding which of these figures to use as the denominator, let us look at another growth variable--the levels of wages and salaries--which vary between states and which change in every state over time. Changes in earnings levels affect benefit disbursement in that all the statutory benefit schedules vary individual weekly benefits with earnings (subject to a specified maximum amount). It follows that when individuals are earning more this year than last, their unemployment benefits will be higher (unless all are at the maximum) and benefit disbursement will rise, other cost factors remaining equal. The same benefit formula will

also result in higher total payments in a recent year than in some bygone year of lower wages. Similarly, an identical program of benefits would produce higher total dollar payments in Illinois than in Mississippi. Since our purpose is to isolate the role of the benefit variables, our index must treat wage level differences as an irrelevant factor.

For the denominator of our index then, we need a statistic that varies proportionately with the work force and with earnings. There is such a figure--total wages and salaries in covered employment,[2]--which is available as an annual series state by state.

Benefit disbursements divided by total wages and salaries in covered employment thus serves as the first approximation of our Benefit Index. It already "washes out" the growth variables, and neutralizes differences in size and earnings levels between states and over time.[3] The variations remaining in this benefit ratio are solely due to the combined effects of benefit variables, and unemployment variables. The next stop will be to refine the ratio further by holding unemployment constant.

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[2]Total wages and salaries in covered employment represents the aggregate of all wages ans salaries for all payroll periods in a year. It includes cash bonuses, the cash value of meals and lodgings supplied, and tips and other gratuities. It does not include deferred compensation (such as employment payments toward retirement benefits), nor employer-paid fringe benefits such as life insurance or hospital benefits. Handbook...., p. 179.

[3]This ratio is used for actuarial studies where it is known as a "cost rate." Because of its comparative qualities it also serves, along with a reserve ratio similarly computed, as a measure of the solvency of state funds.

*The Benefit Index: The Benefit Ratio Adjusted
for a Specified Unemployment Rate*

If the amount and duration of unemployment were the same in every

state, we could compare the benefit ratios (or cost rates) and arrive

at some measure of relative performance. Similarly, if unemployment

never varied year after year in a given state, we could quickly evaluate

whether amendments in some particular year had the net effect of liberal-

izing the program. Using benefit ratios we could prepare charts showing

the rise and fall of the benefit functions for each state.

But unemployment rates do not stand still for our convenience, and

we have to make estimates. The task of this section is, therefore, an

actuarial one--that of estimating what the benefit ratios would have been

state-by-state for every year since 1946, if unemployment had remained

steady at 4.5%. This will give us the desired "benefit index."

The procedure here is similar to that used by actuaries for esti-

mating costs, although it is simpler because the features of the law are

given, and the only problem is to estimate which components of cost

would be affected by changes in unemployment and by how much.

The decision to use a covered unemployment rate[4] of 4.5% was made

after examining all annual unemployment rates in all states between 1946

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[4]The covered unemployment rate is defined as the proportion of the
covered labor force which is unemployed on an average day of the year.
The covered labor force consists of the average number of people working
in covered employment within a state, plus the average number of covered
unemployed, which includes those receiving benefits, those in waiting
period status, those who have exhausted their benefits and are still unem-
ployed and available for work, and those who are ineligible to receive
benefits because of insufficient earnings in the base period. Unlike the
concept of "insured unemployment", covered unemployment is intended to be
relatively free of the influence of most statutory provisions regarding
eligibility, waiting period and potential duration of benefits. The covered
unemployment rates should be comparable within a state from year to year
even when different laws are in effect.

and 1966. The arithmetical mean was slightly higher (4.6%) and the rate

chosen was simply a rounding of this for convenience in reading from

graphs. Any figure could be used, though distortion in results become

amplified the further one gets from some central tendency. For purposes

of inter-state comparison in a given year, a mean figure for that year

is preferable (2.7% in 1966 for example), but for an all-state historical

study, 4.5% is the reasonable middle ground.

The tables in the appendix show, for each state in each year, what

the benefit ratios would have been if unemployment were 4.5% rather

than whatever it was. This final result is the benefit index which re-

flects the benefit variables of statutory provision and administration

only, holding constant all other variables, such as size and growth of

program, and unemployment. The steps in the computations are outlined

below.

* * *

Components of the Benefit Ratio

An analysis of the components of the benefit ratio (cost rate) will

indicate which factors have to be adjusted for differences in unemploy-

ment. We start, using our first approximation, with this formula:

$$\text{benefit ratio or cost rate} = \frac{\text{benefit disbursements}}{\text{total covered wages and salaries}}$$

We can now expand the terms. The numerator is a multiple of three fac-
tors: (1) Number of first payees, which represents the sum of first
unemployment checks issued to individual claimants during their benefit
year[5], (2) Average actual duration, which is the average length in weeks
of compensated unemployment during the year and may include more than
one spell of unemploymnnt[6]; and (3) Amount of average weekly benefit,
which is the average benefit received during the year by those fully unem-
ployed. Benefits for partial unemployment are excluded[7].

Component parts of the denominator are: (1) Average covered employ-
ment, which is a 12-month averaging of employees in covered jobs during
the year and is derived from the monthly reports submitted by employers[8];

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[5] In some states the benefit year is a 52-week period beginning with
the week of an individual's valid claim, and a claimant can receive only
one first payment during a calendar year. But in other states where the
benefit year is the same for all covered workers—for example, a one-year
period beginning April 1—it is possible for claimants to receive two
"first payments" during a calendar year. However, the amount of such
statistical duplication is relatively small. Handbook..., p. 180.

[6] Average actual duration is computed by dividing the number of weeks
compensated by the number of first payments during the year; it excludes
waiting periods, unemployment not compensated because of disqualifications,
and unemployment following exhaustion of benefits. Handbook...; p. 181.

[7] The average weekly benefit amount is computed by dividing the amount
of benefits paid for total unemployment during a given period by the cor-
responding number of weeks for which benefits were paid, that is, weeks
compensated for total unemployment. Benefits paid for partial unemployment
during a week are excluded from both the numerator and denominator.
Handbook..., p. 183.

[8] Employers report the number of individuals in covered employment
during the payroll period ending nearest the 15th day of the month. This
data does not include employment of any government units covered on a reim-
bursable basis. Handbook..., p. 179.

and (2) <u>Average weekly total wages</u>, which is a derived figure obtained by dividing total wages and salaries (note, p. 6) by 52 times the corresponding average covered employment as described above.

We can now rewrite the formula on page 7 as follows:

$$R = \frac{(F)\ (d)\ (AWB)}{52\ (E)\ (AWW)}$$

where R is the benefit ratio or cost rate,

F is the number of first payees;

d is the average actual duration of benefits in weeks,

AWB is the average weekly benefit amount;

E is average covered employment

AWW is average weekly total wages and salaries.

For purposes of analysis, we regroup these terms as follows:

$$R = \frac{F}{52\ E}\ (d)\ \frac{AWB}{AWW}$$

We find the first two of these terms, but not the third, are closely correlated with rates of covered unemployment. Therefore, estimates will be made for these two factors assuming 4.5% rates of covered employment.

Step I: The Beneficiary Rate

The first term, $\frac{F}{52\ E}$, sometimes called the beneficiary rate, is a sensitive reflector of change in unemployment--since, with a downswing in the business cycle, F will rise rapidly and E will decline slowly. This beneficiary rate bears a good linear correlation with the rates of covered unemployment. We have calculated the regression equation for each state, and then obtained an estimate for the beneficiary rate corresponding to a covered unemployment rate of 4.5%.

Step II: Estimating Average Actual Duration

The second term, average actual duration of compensated unemployment in weeks (d), is also correlated with the rate of covered unemployment. The higher the unemployment the longer the typical worker is going to be out of a job.

To measure the severity of unemployment we again borrow an actuarial concept called, somewhat paradoxically, the "survivor rate"--which means simply the probability of an individual continuing from week to week among the unemployed. If, of any one hundred unemployed in week W, there are 95 still unemployed in week W + 1, then the survival rate is .95. A survival rate averaging out the experience for the year can be assigned to that year. Survival rates vary from state to state even where there is the same level of covered unemployment, suggesting that survival rates reflect structural economic characteristics. Our concern here is to estimate the survival rate most likely to occur in each state each year for a 4.5% level of covered unemployment.

Survival rates have been computed by unemployment insurance actuaries for all states for past years[9] and can be correlated with covered unemployment rates. The relationship is best described as a quadradic function.

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[9]This is accomplished according to the formula $r = \dfrac{C - F}{C - X}$ where r is the survival rate, C the number of weeks compensated in a year, F is the number of first payees, and X is the number of exhaustees or final payments in a year. This data is available in the Handbook.... The survival rates as computed are available from the Unemployment Insurance Service's Office of Actuarial and Financial Services.

As unemployment approaches zero, so should the survival rates; for unemployment ranging from 2 to 7% since World War II, the survival rates are in the ranges of .85 to .97 approaching unity in our deepest recessions. While the specific character of this function, particularly at the extreme, requires further study we can have confidence in estimates made for the middle ranges, including our 4.5%. The regression equations have been plotted on semi-log paper and the estimated survival rates read by inspection.[10]

With the survival rates corresponding to 4.5% unemployment, we now compute the average actual duration. A worker's total compensated weeks will depend on the severity of unemployment as it affects him, and on the number of weeks of benefits to which he is entitled by law. Average actual duration, then, is a function of both the survival rate and the average potential duration[11]. That function is indicated by the formula

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[10]The biggest open question in plotting the regressions is whether to force the intercept to zero so that the survivor rate equals zero when unemployment equals zero. The low covered unemployment rates in World War II, usually under 1% still show survival rates often above .85. But since there is little reliability, according to the Office of Actuarial and Financial Services, in the wartime data, it was thought best to simply not include the extremes in making the regressions. Charts showing these regressions are available on request to the author.

[11]The potential duration is the number of weeks of benefits for which a claimant is eligibile in his benefit year, and average potential duration of all claimants is obtained by dividing the sum of the potential duration of all claimants during the calendar year by the number of first payments. Handbook..., p. 181.

Tarrent

Limitations, Assumptions, and Qualifications

The following considerations should govern interpretation and appli-
cations of the benefit index:

1. The backdrop for silhouetting benefit performance is the level
of wages and salaries. There is here an assumption that the performance
of benefits should be in terms of earnings insurance—not welfare, sub-
sistence, poverty, or other such levels.

2. The benefit index is expressed in terms of the covered population.
This leaves out the question of the potentially coverable population, and
the index will not show changes in coverage of differences in coverage
between states. Because the index leaves out this important aspect of
benefit structure, it is not a test of benefit liberality. However, if
the benefit index is adjusted for the ratio of covered to potentially
coverable population, it can then serve as a measure of liberality.

3. The third term of the benefit-ratio formula—average weekly
benefits divided by average weekly total wages and salaries—may vary
somewhat in hard-goods recessions, where the claimant group includes a
greater proportion of high-wage workers so that the average weekly bene-
fit amount is higher than would otherwise be the case. This should be
checked for such years as 1958-59 and 1960-61 in manufacturing states
before all the movement in the benefit index is attributed to benefit
variables.

4. Since in some states there is a high proportion of non-filers
and delayed filers, and since this may change with economic conditions —
probably decrease during periods of general economic distress, we have here

a variable that does affect the benefit index. We have in this paper
assumed that this is a benefit variable (rather than an unemployment
variable), and result of administration, and that good administration
will include an educational and information dimension that effectively
reaches those likely to be eligible for benefits.

APPENDIX I

Benefit Index, by States, 1946-1966

Years	Alabama	Alaska	Arizona	Arkansas
1946	.011187	.006707	.006720	.008132
1947	.008555	.007230	.006613	.008369
1948	.008390	.007417	.007293	.009096
1949	.008911	.007046	.007653	.009758
1950	.007763	.007228	.007632	.009956
1951	.007319	.005673	.006890	.009382
1952	.007935	.006863	.007237	.009029
1953	.007589	.007441	.008006	.009066
1954	.007589	.007940	.007897	.008928
1955	.006973	.008227	.008536	.008735
1956	.007532	.007303	.008680	.009229
1957	.007416	.007860	.009371	.009070
1958	.008009	.007882	.009607	.009229
1959	.007442	.007651	.010115	.009413
1960	.007540	.006962	.009728	.010504
1961	.007496	.007187	.009385	.010181
1962	.008642	.007129	.009231	.009824
1963	.008522	.007071	.009307	.009978
1964	.008078	.006556	.009604	.010587
1965	.009091	.006585	.010514	.010504
1966	.008677	.006700	.009732	.010552

Years	California	Colorado	Connecticut	Delaware
1946	.009727	.007651	.011434	.009516
1947	.008683	.007577	.009647	.007828
1948	.010419	.007742	*	.007604
1949	.010990	.008669	*	.009053
1950	.010415	.009006	.009520	.008652
1951	.009551	.008321	.008451	.007998
1952	.009310	.008378	.008654	.008023
1953	.009035	.008587	.009135	.007669
1954	.009050	.009274	.010842	.008165
1955	.009463	.008743	.010395	.007535
1956	.009646	.008429	.009991	.009333
1957	.009800	.009895	.010475	.009695
1958	.010361	.010282	.011634	.010170
1959	.009916	.011232	.010659	.009784
1960	.011491	.014009	.011155	.009799
1961	.011372	.013363	.010911	.010176
1962	.011244	.014346	.010358	.010705
1963	.010956	.013832	.010187	.010622
1964	.010806	.012357	.009949	.010395
1965	.010716	.012318	.010142	.010255
1966	.011365	.012365	.010766	.010867

Years	District of Columbia	Florida	Georgia	Hawaii
1946	.010537	*	.010046	.014314
1947	.009125	.006893	.007850	.011593
1948	.008913	.006591	.007430	.012067
1949	.008781	.006574	.007803	.012688
1950	.008506	.006166	.007161	.011475
1951	.007930	.006445	.008171	.010322
1952	.007656	.006748	.008416	.010676
1953	.007381	.006531	.008416	.010824
1954	.007188	.006483	.008840	.010854
1955	.009590	.006776	.008178	.010588
1956	.009379	.006893	.008485	.011623
1957	.009497	.007051	.009142	.011505
1958	.008921	.007323	.009382	.011263
1959	.008779	.007648	.008848	.012972
1960	.008658	.009049	.008923	.013597
1961	.008392	.009356	.009244	.014530
1962	.010552	.008731	.008677	.015396
1963	.013358	.008457	.008707	.014996
1964	.013090	.008006	.008374	.014396
1965	.013489	.007829	.008302	.014030
1966	.013467	.007636	.008484	.014630

Years	Idaho	Illinois	Indiana	Iowa
1946	.010002	.011493	.010743	.009979
1947	.009020	.009832	.008381	.007880
1948	.009728	.009223	.007991	.008173
1949	.009664	.009389	.008273	.008762
1950	.009382	.009696	.007574	.008695
1951	.009458	.009721	.007941	.007773
1952	.010717	.009965	.008647	.008844
1953	.010813	.009843	.007941	.008225
1954	.010635	.009768	.008414	.008182
1955	.010399	.009144	.007479	.007653
1956	.010781	.009452	.008009	.009091
1957	.011133	.009732	.007890	.009150
1958	.012941	.010114	.008541	.008970
1959	.012670	.009441	.007910	.008597
1960	.012634	.010282	.008717	.010381
1961	.011861	.010295	.008744	.010406
1962	.011756	.010674	.008307	.010202
1963	.011840	.010625	.007918	.009576
1964	.011698	.010237	.007817	.009345
1965	.011222	.010319	.007459	.009525
1966	.011759	.010878	.008014	.011424

Years	Kansas	Kentucky	Louisiana	Maine
1946	.009125	.009025	.008008	.012196
1947	.007824	.007280	.006329	.009462
1948	.007520	.008097	.006661	.009587
1949	.008406	.010015	.009139	.010373
1950	.009028	.009289	.008769	.009241
1951	.008478	.009468	.008141	.008676
1952	.008533	.010442	.007754	.008833
1953	.008479	.011079	.007511	.008959
1954	.008328	.011482	.007548	.009776
1955	.008174	.010539	.007286	.009670
1956	.008971	.010203	.006595	.009484
1957	.008923	.010876	.006364	.010258
1958	.009262	.011130	.007639	.010844
1959	.010235	.011012	.009537	.009952
1960	.011491	.011325	.009408	.009746
1961	.011184	.011225	.009097	.009746
1962	.010983	.010978	.008644	.009815
1963	.011232	.011396	.008457	.009883
1964	.011192	.011289	.008165	.009574
1965	.011345	.010924	.008346	.009437
1966	.010950	.010749	.008187	.010621

Years	Maryland	Massachusetts	Michigan	Minnesota
1946	.013395	.013250	.010447	.010584
1947	.011702	.012308	.009246	.008330
1948	.011571	.011805	*	.007800
1949	.012873	.012317	.009624	.008586
1950	.011295	.011240	.009412	.008976
1951	.010123	.010829	.009324	.008050
1952	.010505	.011338	.009368	.008063
1953	.010607	.010386	.008655	.007771
1954	.011949	.011081	.009791	.009457
1955	.010597	.010614	.010069	.008936
1956	.009851	.010390	.010677	.008912
1957	.012363	.012036	.010617	.009346
1958	.012974	.012139	.010838	.010330
1959	.012100	.011380	.010231	.009647
1960	.012066	.013401	.010009	.009547
1961	.011730	.013229	.010160	.009517
1962	.011461	.012821	.009363	.008826
1963	.011159	.012699	.008913	.008913
1964	.011327	.012715	.008882	.008803
1965	.011797	.012628	.008891	.008549
1966	.011999	.012658	.010578	.008409

Years	Mississippi	Missouri	Montana	Nebraska
1946	.009427	.010818	.008383	.009295
1947	.008137	.009874	.007980	.007574
1948	.010008	.008993	.008131	.007101
1949	.009658	.009237	.008646	.007506
1950	.008594	.008540	.008691	.008055
1951	.008492	.008459	.007886	.007630
1952	.008898	.009284	.007672	.008463
1953	.009785	.009020	.008192	.008342
1954	.009430	.009160	.008559	.008913
1955	.009050	.008572	.008701	.008632
1956	.009505	.008448	.008785	.008736
1957	.010100	.008860	.009976	.008856
1958	.010083	.010686	.010375	.009155
1959	.010917	.009992	.009962	.009055
1960	.011056	.010264	.009697	.009855
1961	.010560	.010133	.009684	.009688
1962	.010063	.010647	.009979	.009544
1963	.009988	.010553	.009962	.009560
1964	.009853	.010213	.009962	.009806
1965	.009249	.010052	.009463	.009937
1966	.009090	.010636	.009245	.009752

Years	Nevada	New Hampshire	New Jersey	New Mexico
1946	.010311	.010399	.011968	.008052
1947	.009748	.011236	.010330	.007794
1948	.009748	.010364	.010019	.009200
1949	.010795	.012112	.010434	.009303
1950	.011508	.010520	.009676	.008550
1951	.010807	.011026	.009761	.008247
1952	.010243	.011639	.009488	.009453
1953	.010706	.011672	*	.009580
1954	.011686	.011348	.011113	.010135
1955	.011405	.010734	.010646	.009569
1956	.011593	.010831	.011084	.009012
1957	.012030	.010605	.011001	.008867
1958	.012612	.010831	.010895	.008814
1959	.012064	.010766	.010210	.009027
1960	.011768	.011154	.009998	.010347
1961	.011200	.011090	.010006	.010132
1962	.010247	.011478	.010953	.009777
1963	.010418	.011704	.010991	.010147
1964	.010398	.011445	.010650	.009623
1965	.010719	.011769	.010410	.009452
1966	.010949	.011995	.010166	.009651

Years	New York	North Carolina	North Dakota	Ohio
1946	.011713	.010153	.012050	.010524
1947	.010448	.008593	.011016	.008749
1948	.010772	.007916	.009925	.008259
1949	.011583	.010281	.010037	.009709
1950	.010999	.010469	.010568	.010547
1951	.010318	.011834	.010093	.009068
1952	.010837	.011598	.011072	.009648
1953	.011064	.011053	.010820	.009707
1954	.010740	.011417	.010680	.010725
1955	.010480	.010798	.010792	.009707
1956	.010935	.010580	.011044	.010120
1957	.010902	.010835	.010680	.010193
1958	.011454	.011817	.010457	.010400
1959	.011389	.010871	.010553	.009780
1960	.011194	.010871	.011159	.012115
1961	.011421	.011017	.011007	.011962
1962	.011194	.011089	.010946	.011343
1963	.011097	.010944	.011384	.010852
1964	.010772	.010471	.012880	.009923
1965	.010740	.010217	.012590	.009572
1966	.010837	.010835	.012259	.009279

Years	Oklahoma	Oregon	Pennsylvania	Rhode Island
1946	.009001	.010349	.011179	.010420
1947	.007575	.008407	.009423	.010280
1948	.007123	.008334	.009271	.011426
1949	.007223	.009565	.010482	.012321
1950	.007406	.010310	.010339	.010572
1951	.006778	.009777	.009570	.010585
1952	.006687	.009905	.010994	.010271
1953	.006850	.009761	.010670	.010683
1954	.007978	.009484	.011190	.010869
1955	.007813	.009049	.011264	.010156
1956	.007668	.011326	.011487	.011064
1957	.008013	.012194	.011356	.011340
1958	.008214	.012795	.011748	.011176
1959	.008439	.012045	.010832	.011884
1960	.009275	.012506	.011290	.011770
1961	.009124	.012253	.011617	.011643
1962	.008783	.011782	.011061	.011327
1963	.008605	.011304	.010767	.012034
1964	.008230	.011232	.009937	.010820
1965	.008140	.010862	.010086	.010989
1966	.007963	.010838	.010078	.012468

Years	South Carolina	South Dakota	Tennessee	Texas
1946	.016462	.008641	.008895	.007832
1947	.009146	.007024	.008469	.005866
1948	.009455	.007310	.008460	.005418
1949	.010965	.007644	.009028	.006150
1950	.009937	.007347	.008290	.006886
1951	.009542	.007115	.008265	.006067
1952	.008777	.008187	.008772	.006266
1953	.008619	.007996	.008385	.006373
1954	.008856	.008270	.009069	.006249
1955	.008957	.008039	.008801	.006121
1956	.009981	.008023	.008546	.007244
1957	.010087	.007996	.009218	.007667
1958	.010055	.008364	.009485	.008253
1959	.009495	.008391	.008682	.007717
1960	.009326	.009546	.009069	.007692
1961	.009269	.008936	.009129	.007342
1962	.009744	.008856	.008717	.008333
1963	.010116	.009291	.008723	.008709
1964	.009804	.009447	.009479	.008412
1965	.009828	.009401	.009555	.008323
1966	.009857	.009713	.009547	.008151

Years	Utah	Vermont	Virginia	Washington
1946	.015764	.012437	.007518	.013838
1947	.013699	.011371	.006285	.011105
1948	.012441	.010542	.006710	.009753
1949	.012571	.011845	.007502	.010712
1950	.011785	.011075	.006886	.010745
1951	.011446	.010246	.006527	.010008
1952	.012431	.010572	.006816	.010598
1953	.011931	.009950	.006763	.010463
1954	.012060	.010513	.007017	.010204
1955	.011227	.011782	.006534	.010556
1956	.011074	.010922	.006538	.011221
1957	.011368	.011286	.007458	.011002
1958	.012001	.011253	.007845	.010579
1959	.012065	.010591	.007246	.010587
1960	.012416	.011485	.007369	.010965
1961	.012197	.011882	.007680	.010606
1962	.012000	.011584	.007532	.010248
1963	.012065	.012014	.008141	.009953
1964	.012566	.012577	.008117	.009861
1965	.012457	.012279	.008496	.009325
1966	.012246	.011981	.008568	.008926

Years	West Virginia	Wyoming
1946	.010395	.011161
1947	.008477	.009254
1948	.008058	.008195
1949	.009594	.009163
1950	.009336	.010395
1951	.008377	.009627
1952	.009088	.009505
1953	.008814	.010137
1954	.009937	.012207
1955	.008464	.011340
1956	.007962	.010698
1957	.008276	.010916
1958	.008934	.013379
1959	.007962	.013080
1960	.007837	.013393
1961	.007617	.013843
1962	.007415	.014559
1963	.007447	.014443
1964	.007544	.013076
1965	.007512	.013023
1966	.007255	.013025

*The absence of data on the average potential duration of benefits makes it impossible at this time to estimate the benefit index.

APPENDIX II

Estimated Beneficiary Rates and Survival Rates by
States for Covered Unemployment Rates of 4.5%, from
Correlation Analysis 1946-1966 Data.

States	Beneficiary Rates	Survival Rates
Alabama	.0020	.949
Alaska	.0028	.913
Arizona	.0025	.934
Arkansas	.0026	.931
California	.0025	.933
Colorado	.0022	.949
Connecticut	.0025	.936
Delaware	.0025	.940
District of Columbia	.0020	.962
Florida	.0023	.942
Georgia	.0022	.942
Hawaii	.0025	.940
Idaho	.0026	.933
Illinois	.0027	.932
Indiana	.0025	.935
Iowa	.0024	.945
Kansas	.0024	.935
Kentucky	.0024	.945
Louisiana	.0017	.959
Maine	.0031	.920
Maryland	.0029	.925
Massachusetts	.0026	.934
Michigan	.0030	.914
Minnesota	.0022	.947
Mississippi	.0025	.935

APPENDIX II

(continued)

States	Beneficiary Rates	Survival Rates
Missouri	.0027	.934
Montana	.0025	.934
Nebraska	.0021	.947
Nevada	.0028	.927
New Hampshire	.0031	.913
New Jersey	.0027	.928
New Mexico	.0023	.937
New York	.0026	.933
North Carolina	.0030	.930
North Dakota	.0024	.938
Ohio	.0021	.946
Oklahoma	.0020	.950
Oregon	.0030	.922
Pennsylvania	.0025	.933
Rhode Island	.0029	.923
South Carolina	.0023	.943
South Dakota	.0022	.942
Tennessee	.0024	.940
Texas	.0020	.957
Utah	.0025	.938
Vermont	.0026	.935
Virginia	.0025	.926
Washington	.0028	.927
West Virginia	.0029	.920
Wyoming	.0026	.933