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Unemployment Insurance Policy in New England: Background and Issues

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Abstract

Most states have exhausted their unemployment insurance (UI) trust fund and borrowed from the federal government at least once during the past 35 years. Under such circumstances, states are required by law to raise UI taxes to replenish their trust funds and to pay off their debts to the federal government. Since higher UI taxes increase employer costs, replenishment forces states into a trade-off between economic competitiveness and trust fund adequacy. Competitive pressures have raised questions about prevailing standards of adequacy and the speed at which they should be attained. Consequently, several states are contemplating tax reductions despite low reserves. This article provides background information and analysis intended to clarify issues underlying the UI policies of New England in general and a tax reduction under consideration in Massachusetts in particular. The main point is that alternative UI policies should not be judged solely by the yardsticks of economic competitiveness and trust fund adequacy. Allocative neutrality and economic stabilization are also relevant concerns. UI systems necessarily force some industries to subsidize others, thereby distorting the allocation of resources in favor of subsidized firms. Yet, many of the same features responsible for these allocative distortions affect economic stability. Every UI alternative entails trade-offs among these rival concerns.

UNEMPLOYMENT INSURANCE POLICY IN NEW ENGLAND: BACKGROUND AND ISSUES

Robert Tannenwald and Christopher J. O'Leary

Almost two-thirds of the states, and all the New England states except New Hampshire, have exhausted their unemployment insurance trust fund and borrowed from the federal government at least once during the past 35 years (U.S. Department of Labor 1995). Under such circumstances, states are required by law to raise unemployment insurance taxes in order to replenish their trust funds and to pay off their debts to the federal government. Since higher UI taxes increase employer costs, replenishment forces states into a trade-off between economic competitiveness and trust fund adequacy. In recent years, intensifying competitive pressures have caused many policymakers to question prevailing standards of adequacy and the speed at which they should be attained. Consequently, several states, including some still in the process of rebuilding reserves depleted by the last recession, are contemplating tax reductions.

This article provides background information and analysis intended to clarify issues underlying the unemployment insurance (UI) policies of New England in general and a tax reduction under consideration in Massachusetts in particular. The article's main point is that alternative UI policies should not be judged solely by the yardsticks of economic competitiveness and trust fund adequacy. Allocative neutrality and economic stabilization are also relevant concerns. UI systems necessarily force some industries to subsidize others, thereby distorting the allocation of resources in favor of subsidized firms. Yet, many of the same features responsible for these allocative distortions affect economic stability. Every UI alternative entails trade-offs among these rival concerns.

The article is divided into five sections. Section I explains the rationale for public provision of UI. Section II analyzes the structure of UI benefits and evaluates the relative generosity of those provided by the New England states. Section III explains how benefits are financed and compares UI tax burdens in New England with those imposed by other states. Section IV explains how certain features of unemployment insurance taxation create cross-industry subsidies that affect resource allocation. Evidence is presented concerning the extent of such subsidization in Massachusetts. Section V discusses the proposed UI tax reductions in Massachusetts and Vermont, as well as some alternative reforms.

I. Why Do Governments Provide Unemployment Insurance?

In an industrialized society, every worker, no matter how competent, faces the risk of becoming temporarily unemployed. This risk creates a demand for insurance that provides partial wage replacement between jobs. A market for such insurance will not form spontaneously because this risk is spread so unevenly. Workers in volatile industries, such as construction and the manufacture of automobiles, face a higher risk of being laid off than their counterparts in stable industries, such as public utilities and financial services. If unemployment insurance were voluntary, the latter group of workers would break away and form their own low-risk pool. As a result, workers with a severe risk of unemployment would face prohibitively high premiums. To ensure provision of UI, governments can either require high-risk employees to pay high premiums or arrange for their

premiums to be subsidized. The UI system of the United States, partially subsidizes the premiums covering high-risk workers through a payroll tax collected from employers.[1]

If governments financed unemployment compensation solely on a "pay as you go" basis, obligations for social assistance during recessions might become too heavy to bear. By compelling firms to contribute regularly to a trust fund on behalf of their workers, governments are more likely to have the fiscal capacity to provide assistance to the unemployed when needed.

Forcing employers to pay UI taxes during "good" times so that benefits can be paid to the unemployed in "bad" times ("forward funding") stabilizes the economy by smoothing consumption. As discussed in subsequent sections of this article, several features of UI are designed with stabilization in mind. Unemployment insurance is considered a social obligation and an instrument of stabilization throughout the industrialized world. Virtually every economically developed nation currently provides such insurance to its workers.

II. Unemployment Insurance Benefits

The structure of UI benefits reflects principles of both insurance and social welfare. Under insurance, eligibility is denied to those who lack the ability or make insufficient effort to avoid the insured risk. For example, a life insurer will not write a policy for someone in the terminal stages of a fatal illness; nor will a property insurer grant coverage to a landlord whose buildings are continually burning down because of faulty electrical wiring. Furthermore, the compensation offered to

[1]Private supplementary unemployment insurance is available. Workers may purchase--in a fashion similar to credit, life and disability insurance on loans--unemployment insurance which guarantees periodic consumer loan payments during unemployment up to a certain duration. This option may represent a significant supplement in a consumer society where virtually everything from homes and cars to groceries and air travel may be purchased on credit.

individuals incurring the insured risk reflects premiums paid. By contrast, eligibility and benefit levels in social welfare programs depend on recipients' presumed need.

Characteristics of UI Benefits Reflecting Insurance Principles

Consistent with the principles of insurance, UI programs limit eligibility to workers who have demonstrated some attachment to the work force. As a result, former employers would already have contributed at least a modest amount to the state's UI trust fund. Such rules are also designed to prohibit an employee from working for a few days, becoming "unemployed" through an arrangement with his employer, and then collecting benefits. In general, to become insured as of a given date, a worker must meet the following requirements, among others:

1) The worker must have earned a minimum amount and, in some states, worked a minimum number of weeks during a "base" period.[2]

2) The worker must have been working for employers who have employed at least one worker and/or met a stipulated minimum payroll for a minimum period of time.

3) The worker must have become unemployed involuntarily and through no fault of his or her own.

4) The worker must be capable of, available for, and actively seeking work and must not refuse suitable employment if offered.

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[2]The base period is usually four recent calendar quarters. (In Massachusetts, it is the four most recent quarters.) In many cases the minimum earning requirement implies a minimum work requirement as well. For example, according to one eligibility requirement in Massachusetts, an unemployed worker must have earned an amount during the base period equal to at least 30 times the weekly UI benefit amount (WBA) for which he or she would otherwise qualify. A worker's WBA generally equals one-half of his or her average weekly base period wage. Hence, the earning requirement implies a minimum work requirement of 15 weeks (30 x ½).

Limitations on the duration of benefits are also designed to deter workers and employers from creating and perpetuating unemployment. The maximum period during which an unemployed worker can receive benefits in a 52-week period is 30 weeks in Massachusetts (Table 1) and Washington State and 26 weeks in every other state.

Social Welfare Aspects of Benefits

Features of benefit structures that reflect social welfare concerns include minimum benefit levels, minimum duration periods, dependent allowances, and extended benefits. States mandate minimum benefits levels and duration periods in order to boost assistance to unemployed workers whose demonstrated attachment to the labor force barely qualifies them for benefits. Minimum "weekly benefit amounts" (WBAs) in New England range from $14 in Massachusetts to $41 in Rhode Island. In Massachusetts, no eligible worker can qualify for less than 10 weeks of benefits during a 52-week "benefit year." In Rhode Island and Maine, the minima are 15 weeks and 21 weeks, respectively. Connecticut, New Hampshire, and Vermont specify a uniform duration period of 26 weeks for all recipients.

Federal provisions require states to relax the maximum duration limitation in prolonged periods of high unemployment, when a large percentage of unemployed are likely to exhaust their benefits. The usual period of extended benefits is 13 weeks subject to a maximum of 39 weeks. The cost of most extended benefits is shared equally by federal and state governments. During unusually long and severe economic contractions, the federal government has financed supplemental UI benefits, most recently from November 1991 through February 1994. Extended and supplemental benefits are important components of federal stabilization policy.

Benefit Formulas and Maximum Benefit Limits: Mixed Rationale

According to formulas used in all states, a recipient's WBA generally depends on his or her prior earnings. Most states provide for replacement of about one-half of prior earnings, a fraction that strikes a balance between work disincentive (an insurance concern) and benefit generosity (a social welfare concern). Since UI is financed almost entirely by payroll taxes on employers (see Section III), varying benefits with income also strengthens the link between benefits earned and UI contributions made.

States set maximum WBAs in part to encourage return to work and to limit assistance to levels needed only for the purchase of necessities. However, benefit limits also enhance states' capacity to spread assistance as widely as possible. The lower the maximum, the narrower the range of incomes for which one-half replacement is achieved but, other things equal, the wider the potential coverage.

What maximum WBA limit strikes the optimal balance between these conflicting concerns? Several U.S. Presidents and UI advisory councils have advocated that states achieve one-half wage replacement for at least 80 percent of their covered workers (Becker 1980; O'Leary 1996). The Advisory Council on Unemployment Compensation (1995)--hereafter referred to as the "Advisory Council"-- recommended that states set their maximum WBAs at two-thirds of the average wage in UI-covered employment in order to meet this 80 percent standard.[3] In two New England states, Massachusetts and Rhode Island, the maximum WBA with dependent allowance exceeds two-thirds of the average wage in covered employment (U.S. Department of Labor 1996).

[3]This guideline reflects the assumption that the worker at the 20th percentile of the wage distribution earns about four-thirds of the average wage.

How Generous Are New England's UI Benefits?

This question is difficult to address with available data because in any given year a state's benefit disbursements partially reflect its average wage level and the condition and industrial composition of its economy. Table 1 includes three indicators of generosity that, although somewhat biased by these factors, are readily available and roughly comparable across states: replacement ratio (average ratio of benefits to wages, row 10), coverage ratio (percent of workers covered by UI, row 8), and maximum duration of benefits (row 7). Relative to the nation as a whole, Massachusetts ranks high according to all three indicators. Rhode Island has the highest replacement ratio in the nation, above-average coverage, and average duration. Maine's and Vermont's coverage rates are low and their replacement ratios are average. Connecticut's coverage ratio is above average but its replacement ratio is low. New Hampshire's coverage ratio is average, and its replacement percentage is one of the lowest in the nation.

In order to control for the impact on these indicators of interstate differences in labor market conditions, some analysts have computed the benefits of hypothetical representative workers whose characteristics do not vary across states. Characteristics held constant include such determinants of UI benefits as number of dependents, previous wage level, and number of weeks worked during the state's base period. The Advisory Council used this approach to compare the UI benefits of states in 1994. The Council's computed replacement ratios for a single full-time worker earning $10 per hour are reported in Table 1, row 11. Compared to the actual average replacement ratios reported in row

10, those for this hypothetical worker are generally higher and the dispersion narrower. Connecticut's and New Hampshire's replacement ratios are much higher.[4]

III. How Unemployment Insurance is Financed

Unemployment insurance is financed almost entirely by payroll taxes levied on employers.[5] These taxes have both federal and state components. The federal component is nominally 6.2 percent of the first $7,000 of the wages of covered employees. However, the federal government grants a credit to employers against all but 0.8 percentage point of the tax, provided that they pay their state taxes in a timely manner and their state's unemployment compensation program adheres to federal guidelines. Since the programs of all states have been approved by the federal government, the federal tax is in effect 0.8 percent of the first $7,000 of wages, or $56 per covered worker.[6]

With the proceeds of this tax, the federal government pays for administration of the program (at both the federal and state levels), assumes partial responsibility for the cost of extended benefits, and maintains a federal unemployment trust fund from which a state may borrow should it exhaust its own trust fund. Revenues from state UI taxes finance the regular benefit payments, by far the

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[4]Changing the assumed characteristics of the representative worker would again change the relative replacement ratios of the New England states, further suggesting the need for caution in making interstate comparisons based on reported data.

In a forthcoming article, the authors will report on more sophisticated simulations based on current law, involving multi year analysis, and permitting interstate comparisons of tax burdens for representative employers. Also, see footnote 10.

[5]The states of Alaska, New Jersey, and Pennsylvania also collect employee contributions.

[6]The federal government imposes additional taxes on employers whose states have borrowed from the federal UI trust fund. Interest payments on federal loans cannot be paid out of trust fund balances. Federal rules require that such payments be financed by UI surtaxes or general revenues.

largest proportion of total UI costs. Since any federal loans to states must eventually be repaid with interest, each state's UI system is essentially self-financed by its employers.[7]

The characteristics of state UI taxes vary widely within broad federal parameters. The base of the state tax must be no lower than the federal base (the first $7,000 of wages paid to an employee). Many states have a higher base; in New England, bases range from $7,000 in Maine to $17,600 in Rhode Island, the third highest in the nation (Table 2).

State UI Tax Rates: The Experience Rating Principle

Every state's UI tax structure is based on the experience rating principle. This principle requires that an employer's tax rate vary positively with its propensity to lay off workers. Thus, each employer is subject to a different rate, reflecting the degree to which its former employees have drawn UI benefits.

Experience rating in effect divides the employers of the insured population into separate risk pools. Workers employed by firms in each pool face a different risk of incurring involuntary unemployment; the higher the risk, the higher the tax rate faced by the employer. Such a rate structure promotes allocative efficiency by imposing a price on each employer reflecting the social costs of the unemployment that the employer generates. Experience rating induces employers to take these costs into account in decisions concerning technology, pricing, volume, and product mix. When these costs are not fully internalized, volatile industries, that is, those with persistently high layoff rates, command an inefficiently large proportion of economic resources.

[7]Except in the three states in which an employee tax is also imposed.

Whether experience rating promotes economic stabilization is less clear. While it may discourage layoffs, it may increase the incidence of bankruptcy during recessions by requiring higher tax payments from firms when they can least afford them. As will be discussed in Section IV, a variety of modifications to a pure experience-rated system can mitigate this deleterious effect.

How the experience rating principle is implemented. While states have great latitude in designing experience rating schemes, each uses one of two approaches: "reserve ratio" or "benefit ratio." Within New England, Maine, Massachusetts, New Hampshire, and Rhode Island use the reserve ratio approach, while Connecticut and Vermont use the benefit ratio approach (Table 2).

Under the reserve ratio approach, a state government keeps track of each firm's cumulative tax payments to the state trust fund (since the firm's inception) and the cumulative benefits "charged" to the firm (paid to workers that it has laid off). As of some "computation date" the government determines the firm's "reserve"--the difference between its cumulative contributions and benefit charges. This reserve is then divided by the employer's average annual taxable or total payroll during a stipulated "computation period" to arrive at the firm's "reserve ratio."[8] The lower the firm's reserve ratio, the higher its tax rate.

Under the benefit ratio approach, an employer's account reflects only the history of its benefit charges and payroll. For a given computation period (usually three years ending shortly before the beginning of the taxable year), the government aggregates the firm's benefit charges and divides by its taxable or total payroll. The higher the resulting "benefit ratio," the higher the firm's tax rate.

The reserve ratio approach embodies the concept of "precautionary" balances. Each firm has an account that builds a surplus of contributions over benefit charges during periods of economic

[8]The computation period, which varies from state to state, is usually three years prior to the computation date.

expansion, which is then drawn down during recessions or periods of seasonal layoffs. After a surge in benefit payouts, a firm's tax liability rises gradually, but then remains at a higher level for a long period of time and falls slowly in response to improving conditions.[9] By contrast, the benefit ratio method is closer to a "pay as you go" approach in which payments for benefit charges are made with a lag. A surge in benefits is paid for relatively rapidly; then, payments fall steeply once the benefit charges have been "paid off" (Figure 1). Thus, other things equal, a UI tax system based on the reserve ratio approach is less procyclical than the benefit ratio approach.

Are New England's UI Tax Burdens Relatively High?

As in interstate comparisons of benefit levels, one should control for economic conditions in interstate comparisons of UI tax burdens. Given the experience rating principle, employers' tax burdens rise in response to an increase in unemployment rates. In a national recession, employers in states enduring an especially severe contraction usually experience a rise in their UI tax burden relative to employers in less affected states. The opposite occurs when their state enjoys unusually rapid economic growth. Therefore, it is desirable to compare states' UI tax burdens averaged over several years encompassing a variety of economic conditions.

Table 3 compares the 50 states and the District of Columbia in terms of employer tax payments ("contributions") as a percentage of the wages of covered employees averaged for 1988, 1991, and 1995. New England's economy was strong relative to the nation's in 1988, weak in 1991, and about average in 1995. For these three years, Rhode Island's average tax burden was the second

[9]Tax rates respond gradually because experience ratings are based on cumulative contributions relative to benefits. Thus, the "weight" of each firm's prior history creates an inertia in experience ratings with respect to changes in the incidence of layoffs.

highest in the nation; Maine's, Massachusetts', and Vermont's were above the national median; Connecticut's was slightly below the median, while New Hampshire's was lower than that of every other state except South Dakota.[10]

IV. Cross-Industry Subsidies and Departures from Experience Rating

No state's UI tax system adheres unswervingly to the experience-rating principle.[11] Firms generating the largest benefit outlays pay a disproportionately small share of contributions into the system. Such firms are partially subsidized by others. Firms enjoying the largest subsidies tend to face highly cyclical or seasonal demand for their products. The main features of UI financing responsible for such subsidization are maximum and minimum tax rates, time lags, exclusions, and solvency measures.

Maximum and Minimum Tax Rates

All states constrain the range of employer tax rates. At some point, a firm's tax rate stops rising no matter how much its experience rating "worsens" and stops falling no matter how much its

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[10]One should also control for industry mix in interstate comparisons of UI tax burdens, since states with inherently volatile industries have relatively high UI costs and tax burdens. Interstate comparisons of tax burdens and benefit levels that take both economic conditions and industry mix into account will be presented by the authors in a subsequent article.
(Also, see footnote 4.)

How much a state's relative UI tax burden affects its overall economic competitiveness is controversial because economists disagree on who actually bears the burden of UI taxes. According to recent studies, much of their burden is borne in the long run by workers rather than employers in the form of lower compensation. However, in the intermediate run much of the burden of these taxes probably falls on employers, thereby increasing their cost of doing business. Furthermore, because an employer's UI tax burden varies with economic conditions and is therefore difficult to predict, it is arguably an especially sensitive issue for employers considering a state as a potential location for a new facility.

[11]Indeed a perfectly experience-rated system could not function because firms with a high propensity to lay off workers would face prohibitvely high tax burdens.

experience rating "improves." For example, Massachusetts currently imposes a maximum tax rate of 8.1 percent on all firms with a reserve ratio of -14 percent of taxable payroll or less and a minimum rate of 2.2 percent on firms with a positive reserve ratio of 14.5 percent or higher (schedule D in Figure 2). A firm whose reserve ratio is -0.20 percent is subject to the same tax rate as one with a reserve ratio of -14 percent, even though the former has imposed greater net costs on its state's UI system. At the same time, a firm with a positive reserve ratio of 20 percent must pay a 2.2 percent rate of tax, the same as a firm with a ratio of only 14.5 percent.

Under the reserve ratio approach, a firm in the maximum tax bracket might ultimately become liable for all benefits paid to its laid-off workers if its employment eventually stabilizes. This would be so because the reserve ratio reflects a firm's propensity to lay off workers many years into the past.[12] Consequently, a high historical layoff rate would slow adjustment to lower tax brackets after the incidence of layoffs falls. Similarly, the high level of reserves built up by firms paying the minimum tax rate, despite few layoffs, would slow the increase in tax rates if their propensity to separate workers rose. However, Massachusetts diminishes the potential for such long-run accounting adjustments by constraining the range of possible reserve ratios to between -25 percent and 50 percent. The effect of such constraints is illustrated in the accompanying box.

States using the benefit ratio approach, such as Connecticut and Vermont, are less likely to recoup the cost of benefits charged to firms with consistently high layoff rates. Consider the situation of firms at the maximum tax rate for more than three consecutive years. Since under the benefit ratio approach an employer's experience rating generally reflects its behavior only during the three

[12]According to simulations performed by Hunt and O'Leary (1989), changes in layoff rates affect reserve percentages as many as 15 years into the future.

previous years, these firms will never become liable for some of their previous benefit charges. By similar reasoning, a firm with stable employment for more than three years does not get full credit for its "good" behavior should subsequent economic adversity propel it into a tax bracket above the minimum.

How important are firms clustered at minimum and maximum employer tax rates to the economies of the New England states? How does clustering at these extremes differ across industries? Figure 3 shows, for all Massachusetts employers and for selected industries, the percentage of total payroll accounted for by employers at the maximum and minimum tax rates in 1995. In all industries, firms accounting for about 5 percent of payroll were clustered in each extreme tax bracket. At the end of a recession, the share of all firms at the maximum rate would be higher.[13]

The impact of constraining the range of possible reserve ratios is illustrated by the following fictitious example: Up-and-Down, Inc. has been in existence for 10 years. The firm's annual taxable payroll during its "computational" period (for the purpose of calculating its reserve ratio) was $250 million. During its existence, Up-and-Down has paid $50 million in UI taxes, $150 million has been charged to its UI account. Thus, its reserve account would be $50 million - $150 million, or -$100 million. In the absence of any minimum value for reserve ratios, Up-and-Down's reserve ratio would be (-$100 million)/$250 million, or -40 percent. Under Massachusetts law, however, the Commonwealth would set the firm's reserve ratio to -25 percent, the statutory minimum, by setting its account balance equal to -$50 million. With a reserve ratio of either -40 percent or-25 percent, the firm's tax rate would be the maximum rate, which, under the current schedule ("D" in Figure 2), is 8.1 percent.

Over the next year, the firm's fortunes improve dramatically. It contributes $20 million in UI taxes and no benefits are charged to its account. Its payroll during its computation period

[13]The Advisory Council (1995, p. 81) estimated the percentage of total benefit charges that were "ineffectively charged" in 1993. It defined ineffectively charged benefits as those that neither draw on accumulated past taxes nor trigger additional current taxes because they are paid to former workers of employers who are at the maximum tax rate. The percentages for the New England states were: Connecticut, 37.3; Maine, 25.5; Massachusetts, 19.9; New Hampshire, 20.6; Rhode Island, 19.3; and Vermont, 21.5. The national median was 18.4.

remains at $250 million. If its account balance had been -$100 million, now it would be -$100 million + $20 million, or -$80 million, and its reserve ratio would be -$80 million/$250 million, or -.32. Since this is still below -.14, the firm would still be subject to the maximum tax rate of 8.1 percent. However, given that its account balance had been constrained to equal -$50 million, this balance now equals -$50 million + $30 million, or -$20 million, and its reserve ratio is -$20 million/$250 million, or -0.08. As a result, under Schedule D the firm's tax rate falls to 6.9 percent. In this manner, the Commonwealth's reserve ratio floor hinders its ability to recoup subsidies benefiting firms at the maximum tax rate. On the other hand, the floor provides an incentive for firms with a history of extensive unemployment to curtail layoffs.

Clustering patterns differed sharply across industries, however. In construction, firms at the maximum tax rate accounted for 37 percent of total payroll. A similarly skewed distribution was exhibited in agriculture and in mining. Slightly above-average clustering at the maximum was found in the manufacture of electrical machinery (SIC 36), the 2-digit manufacturing industry with the largest employment in the Commonwealth. These findings are not surprising, given the inherent volatility and seasonality of agriculture, mining, and construction, and the structural "downsizing" that the Commonwealth's manufacturers of electrical machinery have experienced over the past several years.

By contrast, almost one-quarter of the payroll in public utilities was paid out by firms at the minimum tax rate. Payroll was also concentrated heavily at the minimum in banking, insurance, eating and drinking places, and personal services.[14]

[14]In the cases of public utilities, banking, insurance, and personal services, the high concentration of payroll at the minimum is primarily a reflection of these industries' inherent stability. In the case of eating and drinking places, a seasonal industry with a relatively high turnover rate, a number of factors could be responsible. Perhaps a relatively low percentage of employees who get laid off are eligible for UI. Because the industry is labor intensive and has a high rate of labor turnover, UI is potentially high relative to total payroll for owners of eating and drinking establishments. As a result, they may manage their UI accounts very carefully. Finally, the low wages paid to workers in the industry--and, therefore, the industry's high ratio of taxable wages to total payroll--may boost taxes paid as a percentage of total wages and therefore employers' experience ratios.

Time Lags

In New England, an employer's tax rate for a given year is based on its experience rating computed between three and six months before the date the rate takes effect. Furthermore, an employer's experience rating typically reflects its actual behavior over several years preceding this computation date. In Connecticut, for example, an employer's tax rate for 1996 depends on its benefit ratio computed as of June 30, 1995. This ratio, in turn, is based on the total benefits charged to its account as a percentage of its total payroll during 1992, 1993, and 1994.

The lagged response of tax burdens to benefit payout rates in New England can be seen in Figure 4.[15] In effect, these lags represent interest-free "loans." Like maximum tax rates, they serve the useful counter cyclical function of protecting firms in all industries from a sharp increase in their UI tax liability at a time when they usually can least afford it. Nevertheless, firms in highly cyclical industries or firms that utilize seasonal workers extensively benefit disproportionately from these loans. Consequently, time lags exacerbate the allocative distortions created by the UI system.[16]

Exclusions

Certain categories of UI expenditures are not charged to particular employers. Examples include the state-financed portion of extended benefits, benefits paid to former employees of firms that have gone out of business, and benefits for dependents. These exclusions are not motivated entirely by forbearance for firms in financial distress. Thus, the costs of dependent allowances are

[15]As shown in Figure 4, the average employer tax burden in Vermont has borne little relation to benefit payout rates in recent years. The reasons for this unusual pattern are explained later in this section in the text and in the accompanying box.

[16]Lags also weaken the deterrent to laying off workers inherent in pure experience rating.

"socialized," or spread uniformly among all employers, partly on the theory that society as a whole has a moral obligation to provide for the children of laid-off workers.

Solvency Measures

Ideally, "forward funded" UI trust funds should remain solvent even during periods of severe economic contraction. UI taxes collected during periods of economic recovery and expansion should be sufficient to fund UI benefits during recessions. In fact, the trust fund of every New England state except New Hampshire has been entirely depleted at some point during the last 25 years, forcing the state to borrow from the federal government (Figure 5). Even New Hampshire has experienced years in which the balance in its trust fund has been uncomfortably low. As noted in the introduction, the need to borrow from the federal trust fund has not been limited to New England.

In order to rebuild depleted trust fund reserves quickly and to reduce the need for future borrowing, states automatically impose tax increases when their reserves fall below a certain threshold.[17] Because of the manner in which these supplementary taxes are generally structured, they indirectly affect the degree to which UI systems promote allocative efficiency. Within New England, many of these measures raise each employer's tax rate by a constant percentage-point amount.

[17]Within New England, the conditions that trigger supplementary solvency measures take a variety of forms. In New Hampshire such measures are imposed at the discretion of the commissioner of unemployment insurance whenever he or she deems the solvency of the state's trust fund to be in jeopardy. In Connecticut and Massachusetts, whether such measures are undertaken depends on the ratio of the trust fund balance to total wages of covered employees. Rhode Island's statutes stipulate the determining factor as the ratio of the trust fund balance to total taxable wages of covered employees. In Maine and Vermont, the adequacy of the trust fund balance in effect is judged by the number of months of benefits that the surplus could finance. In evaluating the number of months in reserve, Maine assumes the annual benefit payout rate (benefits as a percentage of total wages) averaged over the previous 15 years. Vermont assumes the highest annual benefit payout rate during the previous 10 years, a more stringent criterion that in recent years has created a large trust fund surplus (see the box, below).

Consequently, they violate the experience rating principle, thereby subsidizing volatile industries at the expense of stable ones.

Maine, Massachusetts, Rhode Island, and Vermont implement supplementary solvency measures by shifting among alternative unemployment tax rate schedules provided for by law.[18] For example, the laws of Massachusetts provide for eight alternative schedules (Figure 2). When the trust fund balance as a percentage of total wages paid to covered employees is 3 percent or more, schedule AA is in effect. When this percentage is below 0.8 percent, the heaviest schedule, schedule G, is imposed. As the schedule becomes heavier, the tax rate in each experience-rating bracket increases by 0.4 percentage point. Consequently, firms having laid off no workers experience the same percentage-point increase in tax rate as those firms having laid off a large fraction of their work force, a violation of the experience rating principle.[19]

In recent years, both Connecticut and New Hampshire have introduced modifications to their solvency measures that conform more closely with the experience rating principle. In the first quarter of 1996, New Hampshire, enjoying a healthy surplus in its trust fund, awarded all employers with a

[18]The laws of Connecticut and New Hampshire provide for only one rate schedule but give the state the authority to raise the tax rate in each bracket by a uniform percentage-point amount to maintain an adequate trust fund balance. Such tax increases are tantamount to parallel upward rate shifts.

[19]Rate schedules provided for by the laws of Maine depart further from the experience rating principle than those in Massachusetts. As the rate schedule is shifted upward, the percentage-point rate increase is significantly larger for the best-rated firms than the worst-rated firms. Under the lightest schedule, rates range from 0.5 percent to 6.4 percent; under the heaviest schedule, rates range from 2.8 percent to 7.5 percent. Thus, in moving from the lowest to the highest schedule, firms at the minimum tax rate experience a rate increase of 1.9 percentage points, while the comparable increase for firms at the maximum tax rate is only 1.1 percent. In Vermont and Rhode Island, however, each upward shift produces a percentage-point rate increase that is inversely related to the quality of the employer's experience rating.

positive reserve ratio (contributions exceeding benefit payouts) a 1-percentage-point reduction in their tax rates.[20] No such reduction was granted to firms with a negative ratio.

In 1993, Connecticut floated bonds to eliminate a persistent trust fund deficit and to repay federal loans. In order to pay off these bonds, the state levied a dedicated assessment on each employer; the assessment's value as a percentage of the employer's payroll varied directly with the firm's propensity to lay off workers. Had Connecticut not paid off its federal debt in this manner, the uniform federal unemployment tax rate imposed on the state's employers would have risen from 0.8 percent to 1.7 percent and kept increasing by 0.3 percentage point per year until the debt had been paid off. These federal tax increases would have come on top of the state's solvency assessment, currently a flat 1.5 percent of all taxable payrolls.[21]

Estimates of the Degree of Cross-Industry Subsidization, by State: The Experience Rating Index

The extent of cross-industry subsidization varies roughly with the degree of adherence to the experience rating principle. A crude indicator of the degree to which a state adheres to this principle is the "Experience Rating Index" (ERI), published annually for each state by the U.S. Department of Labor. The index equals the percentage of total unemployment benefits paid by a state that is charged to specific employers for the purpose of experience rating. The lower the index value, the greater the

[20]The New Hampshire Commissioner of Employment Security has the authority to subtract, on a quarterly basis, 0.5 percentage point from the tax rates applicable to employers with a positive reserve ratio whenever the balance in the state's unemployment trust fund equals or exceeds $200 million (currently about 14 percent of statewide covered payroll). Further successive across-the-board reductions of 0.5 percentage point are authorized when the balance equals or exceeds $225 million and $250 million. Notwithstanding these reductions, an absolute minimum tax rate of 0.01 percent is required (New Hampshire Laws, 282-A:82).

[21]Connecticut also floated bonds to pay off its federal debt immediately in order to reduce interest costs that ultimately would have had to be passed on to employers. The interest rate charged by the federal government would have exceeded 7 percent; the average interest rate on the bonds was 4.1 percent.

departure of the state from full experience rating. The ERI for each New England state from 1988 through 1995 is presented in Figure 6.

In every state except Vermont, the ERI was lower in the recession years of 1990 to 1992 than in preceding or following years, a pattern found throughout the nation. During recessions, the concentration of firms at the maximum tax rate becomes greater and the business failure rate rises.[22] States must finance the surge in benefit payouts by running down their trust fund surplus until firms' experience ratings respond, with a lag. As a result, automatic upward shifts in rate schedules and other solvency measures are more likely to be triggered.

Vermont's ERI has trended downward in recent years, even though the state's economy has recovered from the recession in the early 1990s. Two factors account for this anomaly. First, in Vermont a firm's unemployment tax rate is determined by its relative experience rating, not its

Vermont's Rules for Selecting an Unemployment Insurance Tax Rate Schedule

In Vermont, the choice of rate schedule for any year y depends on the following ratio:

$$\frac{\text{(BALANCE/TOTAL WAGES)}}{(\text{BENEFITS}_{high}/\text{TOTAL WAGES}_{high})}$$

where:

BALANCE = the trust fund balance on December 31 of y-1

TOTAL WAGES = the total wages paid to covered employees in y-1

BENEFITS_{high} = the highest amount of benefits paid out of the trust fund in any consecutive 12-month period that ended between December 31 of y-11 and December 31 of y-1

$\text{TOTAL WAGES}_{high}$ = the total wages paid to covered employees during said 12-month period.

[22]The unpaid UI tax liability of a failed employer is assumed by the state system as a whole.

This formula in effect directs Vermont to identify the 12-month interval during the previous 10 years during which its benefit payout rate was highest and to maintain reserves sufficient to finance a whole year's worth of benefits at that peak payout rate.

This formula was adopted as Vermont was recovering from the 1973-75 recession, a severe one throughout New England. In 1975, the state's ratio of benefits paid to total wages of covered employees was .0285, higher than all states except Connecticut, Massachusetts, Michigan, New Jersey, and Rhode Island. Its trust fund had incurred a deficit for two consecutive years, and it owed the federal trust fund over $28 million or about 2.8 percent of covered payroll. In 1977, when the formula was adopted, Vermont's heaviest rate schedule went into effect. The formula, the 1981-82 recession, and a policy of continued borrowing from the federal government (to take advantage of interest-free loans), kept the heaviest rate schedule continually in effect for more than a decade. The average employer tax rate actually rose after 1982 and peaked in 1985 at 4.06 percent, the highest in the region. It remained close to 4 percent until 1988, even though the 1982-87 period was one of rapid economic growth and low unemployment in Vermont.

absolute one. As its experience rating deteriorates, its tax rate, absent a schedule shift, will not rise if other employers' experience ratings deteriorate at the same rate. Its tax rate will rise only if its experience rating has deteriorated relatively rapidly.

Under such a rule, one might reasonably question Vermont's ability to maintain the solvency of its trust fund other than in years of extremely low unemployment. In fact, during the past eight years Vermont's trust fund has consistently been one of the best reserved in the country. This apparent paradox can be explained by the state's strict solvency standards, which have kept high tax rate schedules in effect for many years, even during periods of robust economic growth (see the box). As a result of these strict standards, by 1990 Vermont's trust fund balance as a percentage of wages paid to covered employees was the largest in the nation. The state financed rising benefit payout rates during the most recent recession mostly by drawing down part of this large surplus rather than by

raising tax rates. The mildness of the recession in Vermont relative to the contractions in other New England helped the state to keep UI tax rates stable.[23]

Estimates of Subsidy Rates by Industry

Data needed to estimate cross industry subsidies were available only for Massachusetts. Estimates were made for three periods: 1988 to 1992, 1993 to 1996, and 1988 to 1996. The measure used (developed by Munts and Asher 1980) was net subsidy as a fraction of wages (SUBRATE). For any given period, SUBRATE is equal to:

$$\frac{\sum \text{BENEFITS} - \sum \text{CONTRIBUTIONS}}{\sum \text{TOTAL WAGES} \times \$1{,}000}$$

where:

$\sum$BENEFITS = the total dollar amount of benefits paid to employers in industry x during the period

$\sum$CONTRIBUTIONS = the total dollar amount of contributions made by employers in industry x during the period

$\sum$TOTAL WAGES = the total dollar amount of wages paid by employers in industry x to covered employees during the period.

Results are presented in Table 4. SUBRATE was positive for Massachusetts' employers as a whole for the years 1988 to 1992, a period during which the Commonwealth had to borrow from the federal UI trust fund. With the recovery, the Commonwealth paid off its debt and began to rebuild its own trust fund. As a result, SUBRATE was negative between 1993 and 1996.

[23]Nevertheless, as the average benefit payout rate rose and tax rates did not, the state's Experience Rating Index (ERI) declined.

Given the pattern of clustering at minimum and maximum tax rates exhibited in Figure 3, it is not surprising that construction is the sector of the Massachusetts economy most heavily subsidized by the Commonwealth's UI system. For the entire 1988-96 period, construction firms drew a net subsidy of over $25 per $1,000 of payroll, while employers as a whole were making a net contribution of $1.40 per $1,000. Over the nine-year period, the construction sector received 22 percent of all UI benefits and made only 9 percent of all contributions, while accounting for 5 percent of total wages paid to covered employees.

Construction received such a disproportionately large share of UI benefits during this period not only because of its inherent cyclical sensitivity and seasonality but also because Massachusetts' real estate markets were unusually volatile. Between 1982 and 1987, the inflation-adjusted value of contracts awarded for residential construction within the Commonwealth almost quadrupled, while those for nonresidential construction expanded by 75 percent. As a result, construction employment rose by over 80 percent from 1982 to 1988. In the ensuing "bust," this sector lost all of these job gains and more (Figure 7). More than one in every six Massachusetts employees who lost their jobs during the last recession were construction workers. While it has grown steadily in recent years, construction employment is still well below its previous peak.

Manufacturing was the only other major sector to have been subsidized, although its net subsidy, 20 cents per $1,000 of payroll, was very small. The sector accounted for 28 percent of all benefits, 25 percent of contributions, and 29 percent of all payroll. Among 2-digit industries accounting for at least 2 percent of total wages paid out since 1988, the most heavily subsidized were special trade contractors, the manufacture of transportation equipment, and the manufacture of

industrial and commercial machinery and computer equipment. The largest subsidizers of other industries have been eating and drinking places, food stores, health services, and apparel trade.

V. Issues Raised by Recently Proposed Reductions in UI Tax Rates

Reductions in UI rates have recently been enacted or are currently under consideration in 14 states, including Connecticut, Massachusetts, Rhode Island, and Vermont. Vermont is considering a permanent relaxation of its solvency requirements that in the short run would reduce UI tax rates by between 0.5 and 0.2 percentage point, depending on firms' experience rating. By contrast, Massachusetts is considering a temporary measure that would cut UI tax rates by 0.4 percentage point across-the-board this year. Under current law, rates are scheduled to increase by 0.4 percentage point.[24] UI tax reductions under consideration in Connecticut and Rhode Island would apply only to new employers (National Foundation for Unemployment Compensation and Workers Compensation, 1997).

Proponents of permanent rate reductions argue that they would enhance their state's economic competitiveness. Competitiveness is less of a consideration in temporary rate cuts since rates usually return to their previous level after the cuts expire, precluding long-terms reductions in employer costs. Advocates of temporary cuts generally argue either that the level of their state's trust fund is adequate (even if relatively low) or that reserves will become adequate within a few years. Since the economic outlook is so sanguine, both in New England and rest of the nation, they see an

[24]Specifically, after three years of a temporary freeze on UI rates at schedule D, rates are scheduled to rise to schedule E. The proposal would lower rates to schedule C (see Figure 2). Rates were also temporarily reduced in 1992.

acceptable risk in slowing the rate of reserve accumulation and value in allowing employers to keep some dollars otherwise earmarked for UI contributions. Moreover, they reason that, should current economic forecasts prove too optimistic and trust fund reserves are exhausted during the next recession, states will still have the option of borrowing from the federal government to benefit pay benefit obligations.

A central issue in the debate over both temporary and permanent rate cuts, therefore, is what constitutes an adequate level of reserves. The most frequently used standard is the high cost multiple (HCM), which the U.S. Department of Labor defines as:

$$HCM = TF/HCR$$

where:

TF = trust fund balance as a percentage of wages in covered employment

HCR = high cost rate, or the highest ratio of benefits to wages in covered employment for any 12- month period in the state's history.

In the past, the U.S. Labor Department has endorsed an HCM of 1.5 as a solvency guideline (Advisory Council, 1995). In effect the standard requires trust fund reserves sufficient to finance 18 months of benefits paid out at the highest cost rate that the state has ever experienced. In 1996Q4, only Mississippi, New Mexico, Oklahoma, and Utah exceeded this extremely conservative standard, although Vermont came close at 1.43. The five other New England states fell far short (Table 5, column 1).

As the Advisory Council discussed in its report to the President and Congress (1995), the 1.5 HCM may be too strict. The most serious recession in a state's history since the inception of UI may

have been produced by a unique confluence of factors that is highly unlikely to be repeated. Consequently, the Council recommended an alternative, less stringent standard that takes into account UI experience over a shorter historical period. Specifically, each state should accumulate reserves sufficient to provide at least one year of benefits paid out at the average of the three highest cost rates recorded during the past 20 years. The Advisory Council also offered a variety of alternative standards.

The degree to which each New England state had achieved these various standards as of 1996Q4 is summarized in Table 5, columns 2 through 7. Among all the state, more than one-half had met at least one these standards, and almost two-thirds had met the standard recommended by the Advisory Council (column 4). Within New England, New Hampshire and Vermont both substantially exceeded all six standards. By contrast, the reserves of the other four New England states were well below every guideline.

Nevertheless, with the economy performing so well, some of these four states have a reasonable chance of achieving at least one of these standards within a few years. Official 1997 projections of the Massachusetts Department of Employment and Training provide evidence that the Commonwealth may be one of these states, even with a rate cut. According to these projections, the Commonwealth's UI tax rate jumps by 0.8 percentage point across-the-board in 1998 (from schedule C to schedule E in Figure 2), after the proposed temporary rate cut expires. By the end of 1998 trust fund balances exceed the adequacy standards presented in columns 6 and 7 of Table 5. By the end of 1999, reserves also exceed the standard presented in column 3 and the standard preferred by Advisory Council (column 4). In addition, reserves come within 1 percent of attaining the standards

presented in columns 2 and 5. These projections assume that through the end of 1999 the state's annual unemployment rate averages about 4.0 percent.

Two important issues that should be considered in evaluating a one-year rate cut for 1997 are the probability that its expiration date will be extended and that a recession will begin before trust funds accumulate adequate reserves. Opponents of temporary tax cuts note that the lifetimes of such cuts are often extended. For example, Massachusetts has extended freezes on its UI rate schedule (at schedule D) every year since 1993. Furthermore, noting that the current recovery has been long-lived by postwar standards, opponents believe that the risk of a recession sometime within three years is substantial. They therefore fear that states implementing rate reductions run an unacceptable risk of exhausting their trust fund reserves during the next recession, incurring costly federal debt, and possibly confronting the need to curtail benefits. They also caution that, if the availability of federal loans induces many states to relax efforts to accumulate reserves, the federal government might make credit more expensive or reduce the interest payments that it pays to states on their reserves if their trust fund balance is small. Finally, they argue that if states forego rate cuts now and current optimistic economic forecasts prove accurate, growth in reserves will permit rates to drop later. As a result, within a few years, rates are likely to be the same with or without short-term UI tax relief. The projections of the Massachusetts Department of Employment and Training support this argument.

Largely absent from the debate over proposed rate cuts in both Massachusetts and Vermont has been any discussion of the impact of shifts in rate schedules on allocative efficiency. As explained in Section IV, uniform upward shifts in statutory rates violate the experience rating principle and therefore accentuate allocative distortions. Uniform downward shifts have the opposite effect.

However, if slowing reserve accumulation ultimately sacrificed adequacy, it might necessitate future uniform upward shifts in rates to restore solvency. In this manner, UI cuts implemented today could indirectly aggravate allocative distortions over the long run.

Whatever reserve level or tax schedule Massachusetts and other states deem optimal for now, they might wish to consider more permanent reforms of their UI tax structure that would enhance allocative efficiency by reducing cross-industry subsidization. Examples of such measures include the following:

- Reducing minimum tax rates and raising maximum tax rates. Rhode Island, which is currently considering this option, has 9 different UI tax rate schedules. Each schedule has 20 different rates that differ by 0.1 percentage point. As in other states, which schedule is effective in any given year depends on the level of reserves in the state's UI trust fund. In each schedule, the minimum rate is applicable to employers with a reserve ratio equal to or greater than 15.5 percent, while the maximum rate applies to those with a ratio equal to or less than -16 percent. A bill currently before the state's legislature would add a bracket to the bottom and four brackets to the top of each rate schedule. As a result, the minimum tax rate in each schedule would fall by between 0.2 and 0.4 percentage point and would apply to employers with a reserve ratio equal to or greater than 17 percent. The maximum rate in each schedule would rise by 1.6 percentage point and would apply to employers with a reserve ratio equal to or less than -24 percent.

- Reducing time lags in the determination of an employer's tax rate for a given year. As noted in section IV, an employer's tax rate for a given year is usually determined on the basis of its experience rating calculated three to six months before the year begins. Given modern computation technology, a lag of less than six months is achievable.

- Making solvency measures conform more closely to the experience rating principle. For example, upward shifts in rate schedules could raise tax rates for employers with poor experience ratings by more percentage points than the rates for those with good ratings, instead of raising tax rates by a uniform percentage-point amount (such as shown in Figure 2).[25]

In addition to promoting allocative neutrality, these reforms would permit UI tax reductions for many relatively stable industries, and give firms in more volatile industries a stronger incentive to reduce labor turnover. On the negative side, these measures would impose additional fiscal stress on employers with shrinking payrolls and little cash flow. During a recession, when layoffs and cash flow problems are widespread, the subsidies built into the UI system provide a cushion to severely stressed firms across all industries, thereby diminishing the incidence of bankruptcy. Reducing these subsidies would weaken this stabilizing influence.

[25]These suggestions, among others, have been made by Brechling and Laurence (1995).

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Table 1
Selected Unemployment Insurance Benefit Characteristics for the New England States and U.S. Average
(as of January 1997 unless otherwise noted)

		Connecticut	Maine	Massachusetts	New Hampshire	Rhode Island	Vermont	United States Average
(1)	Weekly Benefit Amount (WBA) Formula	1/26 of average of two highest quarter earnings (HQE)	1/22 of HQE	1/21 to 1/26 of HQE	.8% to 1.1% of annual earnings	4.62% of HQE	Sum of two HQE divided by 45	n.c.
(2)	Minimum WBA	$15	$36	$14	$32	$41	$31	$35
(3)	Maximum WBA	$353	$250	$362	$228	$336	$217	$248
(4)	Dependent Allowance	$10 each up to lower of $50 or ½ WBA	$10 each up to ½ WBA	$25 each up to ½ WBA	None	Greater of $10 or 5% of WBA each	None	n.c.
(5)	Maximum WBA with Dependent Allowance	$403	$315	$543	$228	$420	$217	$231
(6)	Minimum Duration (Weeks)	26	21	10	26	15	26	15
(7)	Maximum Duration (Weeks)	26	26	30	26	26	26	26
(8)	Percent of Workers Covered	88.4%	77.7%	90.9%	83.8%	85.1%	80.2%	83.1%[a]
(9)	Average Weekly Benefit Amount (AWBA)	$228	$174	$261	$161	$235	$167	$178
(10)	AWBA as a Percentage of State Average Weekly Wage	34.6%	42.0%	43.0%	32.0%	49.0%	40.1%	40.1%
(11)	Weekly Benefits as a Percentage of Weekly Wage, Hypothetical Single Individual Working Full-Time, Full-Year, and Earning $10 per hour, 1994	50%	48%	50%	45%	60%	52%	50%[b]

[a] Excluding the District of Columbia. [b] Data for Michigan are not available.
n.c.: Not comparable.
Source: Author's calculations; U.S. Department of Labor, Unemployment Insurance Service, Division of Actuarial Services, UI Data Summary, various issues; and Significant Provisions of State Unemployment Insurance Laws, January 5, 1997; and Advisory Council on Unemployment Compensation (1995), Table 10-2, pp. 148-49.

Table 2
Selected Unemployment Insurance Tax Provisions in the New England States, 1996

	Connecticut	Maine	Massachusetts	New Hampshire	Rhode Island	Vermont
Method of Experience Rating	Benefit Ratio (1)	Reserve Ratio (2)	Reserve Ratio (3)	Reserve Ratio (4)	Reserve Ratio (5)	Benefit Ratio (6)
Lag between Computation and Effective Dates	6 months	5 months	3 months	5 months	6 months	6 months
Number of Tax Brackets	50	31	45	48	20	21
Taxable Wage Base	$12,000	$7,000	$10,800	$8,000	$17,600	$8,000

(1) Benefits charged in the 3 preceding years divided by taxable payrolls totaled over the 3 preceding years. Computed as of June 30; effective January 1.

(2) Net contributions as of the prior July 31 divided by average annual payroll in the 3 preceding years. Calculated as of June 30. Effective January 1.

(3) Net reserves as of September 30 in the preceding year divided by taxable payroll for the preceding year. Effective January 1.

(4) Net reserve balance as of January 31 divided by average annual taxable payrolls over the prior 3 years. Effective July 1.

(5) Net reserves as of June 30 divided by average annual taxable payroll over the prior 3 years. Effective January 1.

(6) Ratio of total benefits charged to total payrolls over the 3 preceding years, as of the preceding December 31. Effective July 1.

Source: Commerce Clearing House, Unemployment Insurance Reports

Table 3
UI Taxes as a Percent of Total Wages, by State, Average of 1988, 1991, and 1995 [a]

State	Average	Rank
United States	.86	
Alaska	2.13	1
Rhode Island	1.71	2
Washington	1.60	3
Pennsylvania	1.42	4
Oregon	1.41	5
Michigan	1.41	5
West Virginia	1.32	7
Idaho	1.26	8
Wisconsin	1.15	9
Wyoming	1.11	10
Vermont	1.09	11
Massachusetts	1.09	11
Maine	1.01	13
Illinois	1.00	14
Arkansas	.98	15
Louisiana	.97	16
Ohio	.97	16
Montana	.95	18
Iowa	.92	19
North Dakota	.92	19
New Jersey	.90	21
Minnesota	.88	22
Kentucky	.87	23
New Mexico	.87	23
Delaware	.84	25
Texas	.81	26
New York	.80	27
Nevada	.79	28
Hawaii	.78	29
Connecticut	.76	30
California	.75	31
South Carolina	.69	32
Utah	.69	32
Kansas	.68	34
Oklahoma	.67	35
Colorado	.65	36
Maryland	.64	37
District of Columbia	.63	38
Tennessee	.61	39
Mississippi	.60	40
Missouri	.53	41
Georgia	.51	42
Alabama	.51	42
Arizona	.46	44
Indiana	.44	45
Florida	.43	46
North Carolina	.40	47
Nebraska	.40	47
Virginia	.36	49
New Hampshire	.35	50
South Dakota	.30	51

[a] Does not include special assessments levied on employers to repay Federal UI debt, such as that introduced in Connecticut in 1993 (see text).
Source: U.S. Department of Labor, Employment and Training Administration Unemployment Insurance Financial Data, ET Handbook No. 394, Section I, pp. 241 and 259; and U.S. Department of Labor, Unemployment Insurance Service, Division of Actuarial Services, UI Data Summary, various issues.

Table 4
Net UI Subsidy Per $1000 of Total Wages, 1988 to 1996, Massachusetts, by Industry (SUBRATE [a])

INDUSTRY			1988-92	1993-96	1988-96
CONSTRUCTION					
Building construction	SIC	15	27.90	14.14	23.26
Other heavy construction	SIC	16	46.86	33.87	40.62
Special trades	SIC	17	28.80	14.39	23.07
Total			30.37	17.18	25.21
MANUFACTURING					
Food	SIC	20	2.12	-5.75	-1.57
Tobacco	SIC	21	-8.04	-19.47	-10.01
Textiles	SIC	22	2.04	-7.67	-2.93
Apparel	SIC	23	11.16	-1.04	6.04
Lumber	SIC	24	11.70	-3.26	5.72
Furniture	SIC	25	10.56	-5.65	3.94
Paper	SIC	26	1.58	-5.17	-1.54
Printing	SIC	27	.02	-6.12	-2.88
Chemicals	SIC	28	-0.88	-4.59	-2.71
Petroleum	SIC	29	26.33	12.93	19.59
Rubber	SIC	30	1.35	-7.22	-2.86
Leather	SIC	31	9.06	-4.19	3.86
Stone, clay, and glass	SIC	32	5.78	-2.17	2.42
Primary metals	SIC	33	3.62	-5.37	-0.32
Fabricated metals	SIC	34	3.18	-5.33	-0.89
Nonelectrical machinery	SIC	35	3.06	-2.65	0.70
Electrical machinery	SIC	36	0.31	-1.29	-0.38
Transportation equipment	SIC	37	6.11	1.59	4.36
Instruments	SIC	38	0.96	-4.56	-1.68
Miscellaneous	SIC	39	1.26	-7.58	-2.98
Total			2.50	-3.55	-0.20
TRANSPORTATION, COMMUNICATIONS, AND PUBLIC UTILITIES					
Transit	SIC	41	7.85	-4.79	1.60
Trucking	SIC	42	3.56	-6.27	-1.03
Water transport	SIC	44	9.14	7.99	8.61
Air transport	SIC	45	-1.06	-7.42	-4.25
Pipelines, except gas	SIC	46	-0.67	-8.46	-2.30
Transport services	SIC	47	0.32	-8.21	-3.90
Communications	SIC	48	-0.34	-7.38	-3.85
Public utilities	SIC	49	-1.71	-2.79	-2.24
Total			0.72	-5.70	-2.43

Table 4
(continued)

INDUSTRY			1988-92	1993-96	1988-96
Net UI Subsidy Per $1000 of Payroll, 1988 to 1996, Massachusetts, by Industry (SUBRATE)					
			1988-92	1993-96	1988-96
TRADE					
Wholesale, durable	SIC	50	1.51	-5.03	-1.54
Wholesale, nondurable	SIC	51	-0.07	-5.44	-2.71
Building and hardware	SIC	52	2.74	-6.21	-0.87
General merchandise	SIC	53	-1.38	-10.79	-6.21
Food	SIC	54	-5.62	-11.04	-8.11
Auto and service stations	SIC	55	2.28	-9.30	-2.65
Apparel	SIC	56	-2.80	-10.14	-6.10
Furniture	SIC	57	-0.23	-8.57	-4.00
Eating and drinking	SIC	58	-4.95	-13.47	-9.01
Miscellaneous	SIC	59	-2.48	-10.24	-6.16
Total			-1.05	-8.39	-4.49
FINANCE, INSURANCE, AND REAL ESTATE					
Depositories	SIC	60	-2.02	-6.03	-3.90
Nondepository Credit	SIC	61	-1.51	-4.14	-2.92
Brokers and dealers	SIC	62	-1.82	-4.85	-3.58
Insurance carriers	SIC	63	-1.87	-4.98	-3.41
Insurance agents	SIC	64	-2.48	-6.31	-4.32
Real estate	SIC	65	1.74	-6.62	-1.94
Investment companies	SIC	67	-1.41	-3.13	-2.17
Total			-1.49	-5.41	-3.45
SERVICES					
Lodging	SIC	70	-0.67	-9.19	-4.63
Personal	SIC	72	-3.37	-12.00	-7.45
Business	SIC	73	-0.20	-7.11	-3.71
Auto repair	SIC	75	2.29	-9.06	-2.95
Miscellaneous repair	SIC	76	3.32	-4.72	-0.28
Motion picture	SIC	78	-1.66	-7.46	-4.32
Amusement	SIC	79	2.69	-4.59	-1.23
Health	SIC	80	-4.76	-9.31	-7.18
Legal	SIC	81	-2.39	-5.38	-3.88
Education	SIC	82	-2.42	-11.48	-7.05
Social	SIC	83	-3.57	-12.58	-8.07
Museum and zoos	SIC	84	-2.03	-9.42	-5.54

Table 4
(continued)

INDUSTRY			1988-92	1993-96	1988-96
(Services continued)					
Membership organizations	SIC	86	-2.78	-8.83	-5.69
Engineering and accounting[b]	SIC	87	0.91	-4.88	-2.34
Private households	SIC	88	-9.32	-16.07	-13.05
Miscellaneous	SIC	89	-1.42	-6.01	-1.85
Total			-1.27	-7.42	-4.44

Net UI Subsidy Per $1000 of Payroll, 1988 to 1996, Massachusetts, by Industry (SUBRATE)

	1988-92	1993-96	1988-96
ALL INDUSTRIES	1.90	-5.02	-1.40
AGRICULTURE[c]	n.a.	22.92	n.a.
MINING[c]	n.a.	-1.19	n.a.
CONSTRUCTION	30.37	17.18	25.21
MANUFACTURING	2.50	-3.55	-0.20
TCPU	0.72	-5.70	-2.43
TRADE	-1.05	-8.39	-4.49
FIRE	-1.49	-5.41	-3.45
SERVICES	-1.27	-7.42	-4.44

n.a.: Not available.

[a] See text definitions of SUBRATE.
[b] Date for 1989-96 only.
[c] Date for 1993-96 only.

Source: Author's calculations; Massachusetts Department of Employment and Training.

Table 5
The Adequacy of New England's UI Trust Fund Reserves
According to Alternative Standards
(Percentage of Standard Attained as of 1996:Q4)

Sufficient Reserves to Finance:							
	18 Months of Benefits/ Highest Cost Rate Ever	12 Months of Benefits/ Highest Cost Rate in 20 Years	12 Months of Benefits/2nd Highest Cost Rate in 20 Years	12 Months of Benefits/ Average of 3 Highest Cost Rates in 20 Years	12 Months of Benefits/ Highest Cost Rate in 10 Years	12 Months of Benefits/2nd Highest Cost Rate in Last 10 Years	12 Months of Benefits at Average of 3 Highest Cost Rates in 10 Years
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Connecticut	13	28	39	35	40	44	44
Maine	29	55	61	61	55	71	69
Massachusetts	25	59	64	63	59	68	68
New Hampshire	61	230	234	233	234	327	295
Rhode Island	21	44	52	50	44	52	53
Vermont	97	227	237	239	256	301	300

Note: In presenting these alternative standards, the Advisory Council on Unemployment Compensation defined "cost rate" as the ratio of benefits paid out to the total wages of employees with UI coverage in any 12-month period. In general, cost rates are readily available only by calendar year. Thus, calendar year measures are used for the computations reported in Column 2 through 7. Since the U.S. Department of Labor reports state-by-state figures for Column 1 on a quarterly basis, the numbers in that column are based on the highest cost rate in any 12-month period. Limiting cost rates to those observed for calendar years overestimates the degree to which a state has attained a given standard.

Source: Author's calculations; U.S. Department of Labor, Unemployment Insurance Financial Data, ET Handbook 394, 1995; and U.S. Department of Labor, UI Data Summary, several issues.

Figure 1
Difference between Responses of Average Employer Tax Rate to Onset of a Recession under Reserve Ratio Method and under Benefit Ratio Method

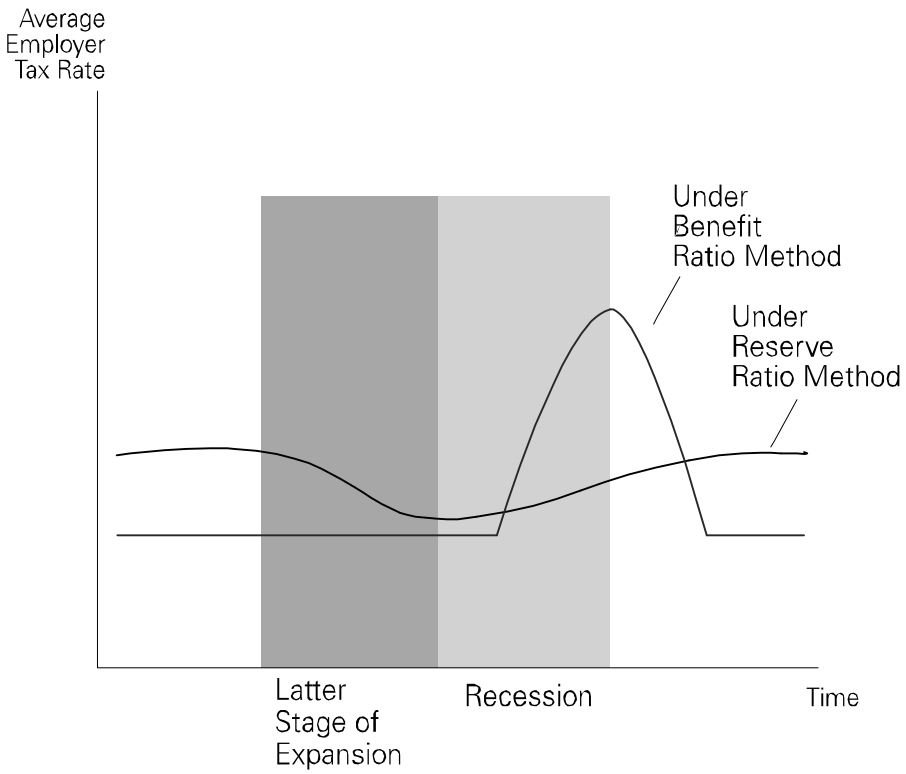
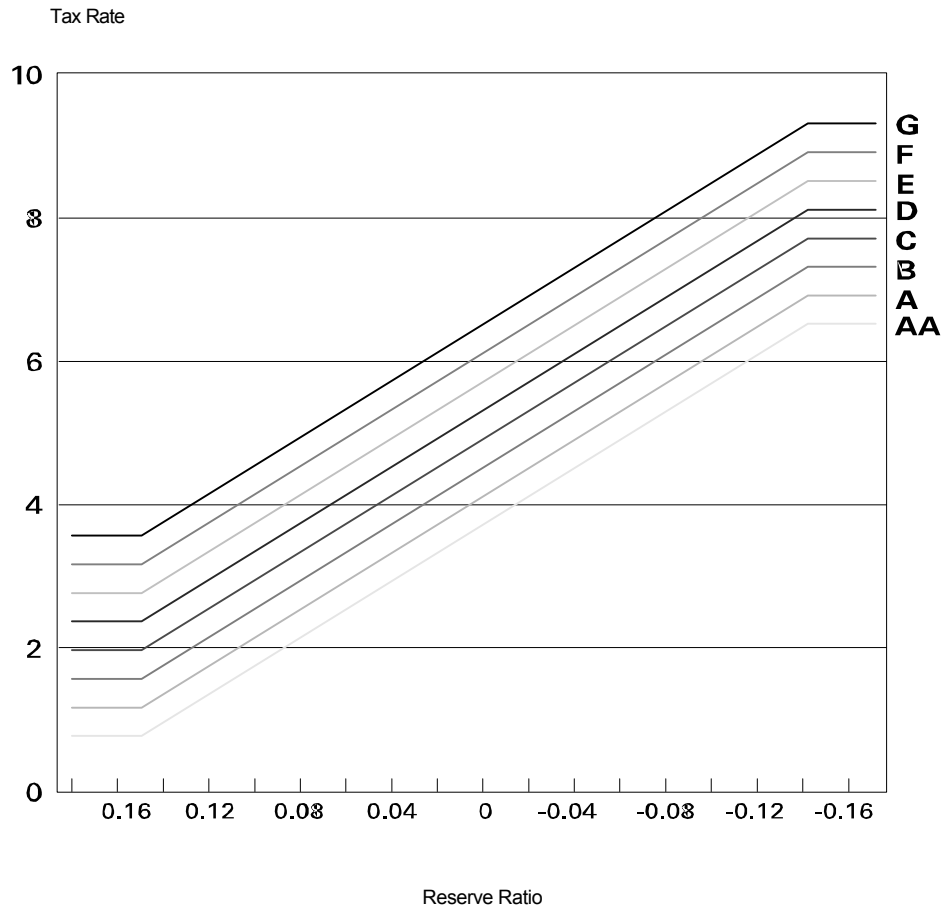
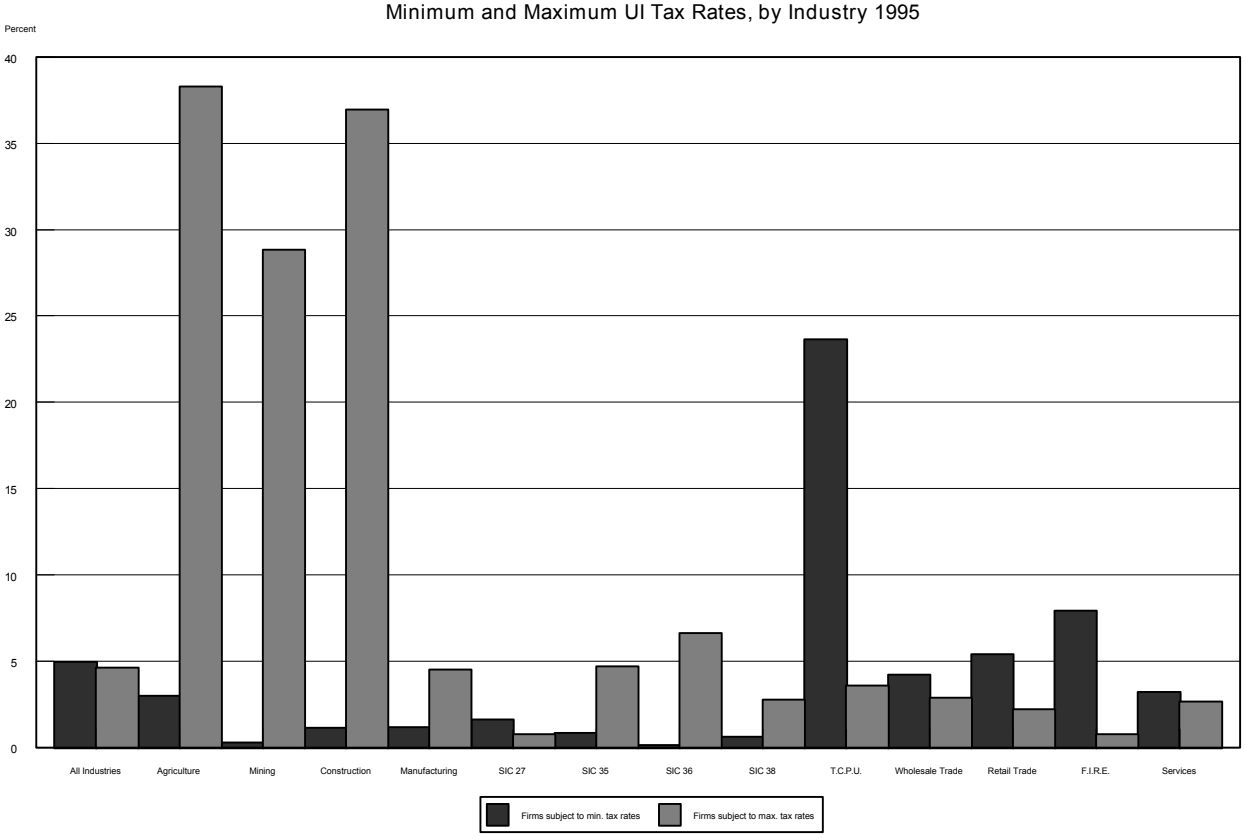


Figure 2
UI Tax Schedules
Massachusetts



Source: Massachusetts Department of Employment and Training.

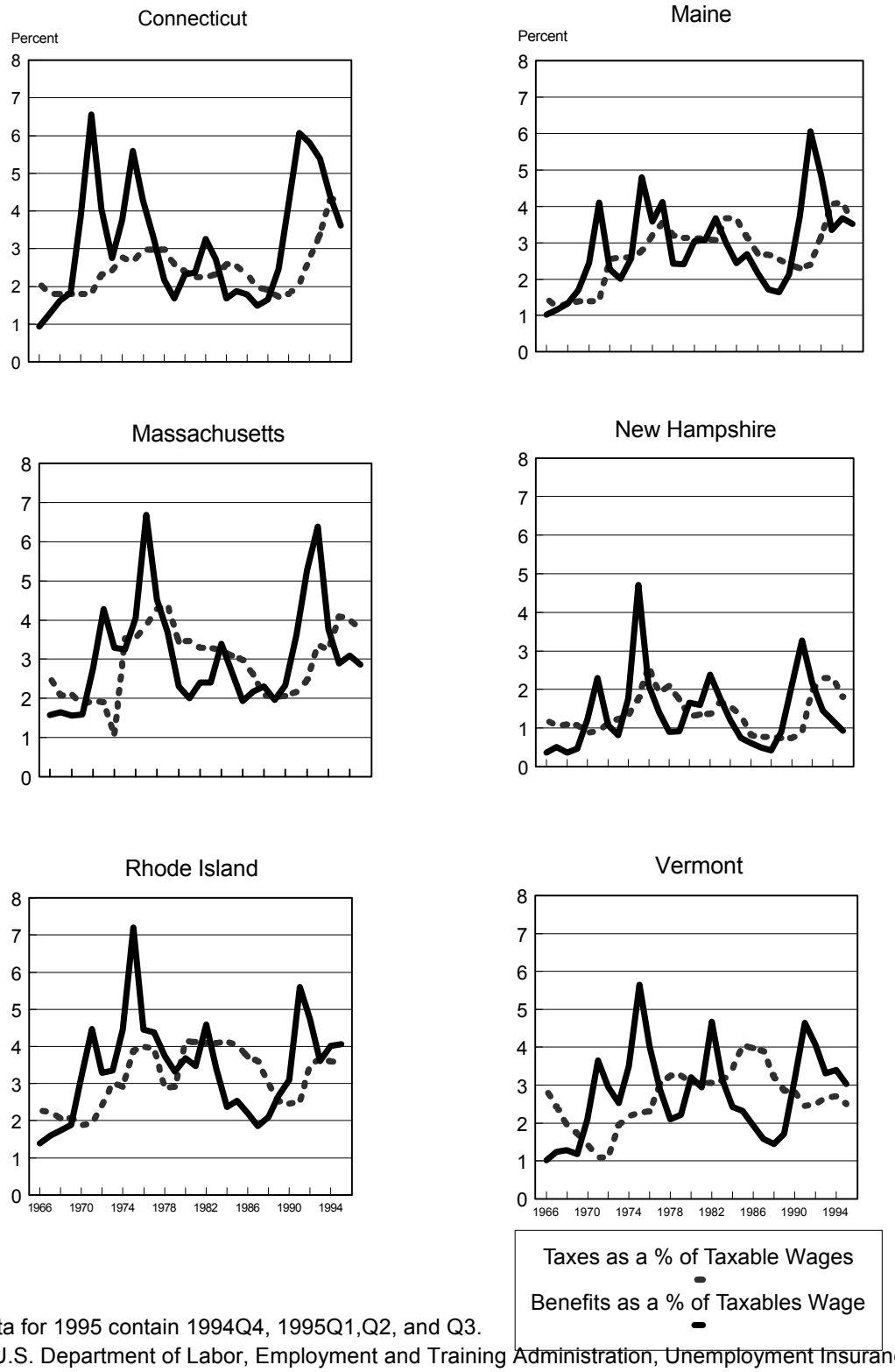
Figure 3
Percent of Wages Paid by Massachusetts Employers Subject to
Minimum and Maximum UI Tax Rates, by Industry 1995



Source: Massachusetts Department of Employment and Training

Note: SIC 27 is printing and publishing. SIC 35 is non-electrical machinery, SIC 36 is electrical machinery. SIC 38 is instruments. T.C.P.U. stands for transportation, communications, and public utilities. F.I.R.E. stands for finance, insurance, and real estate.

Figure 4
UI Taxes and Benefits as a Percent of Taxable Wages,
New England States, 1966 to 1995



Note: Data for 1995 contain 1994Q4, 1995Q1,Q2, and Q3.

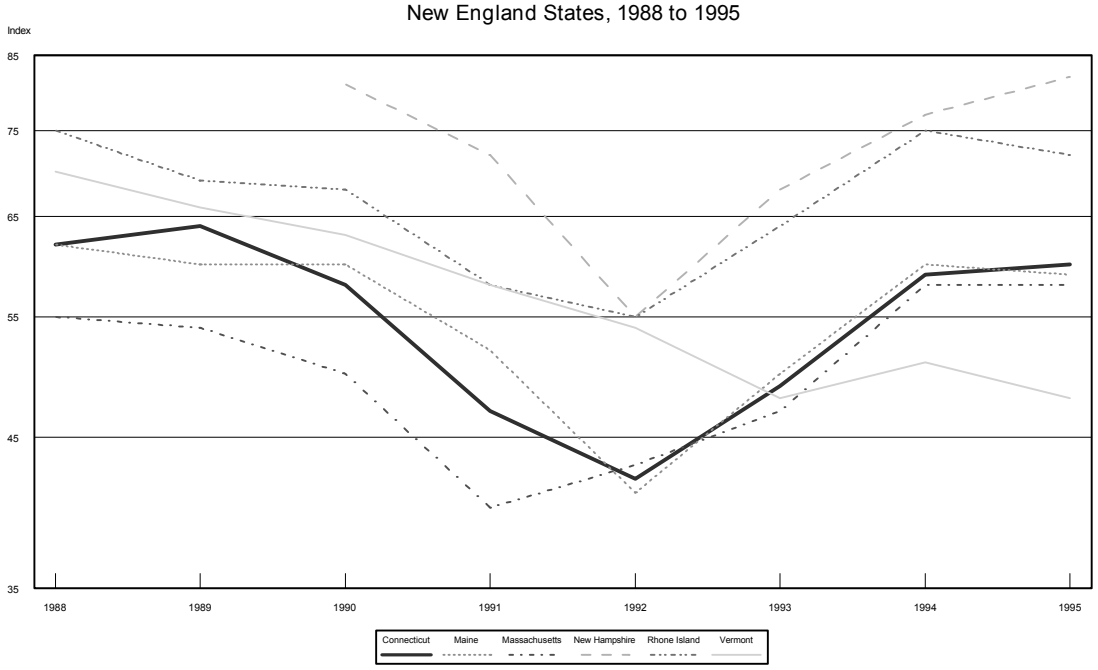
Source: U.S. Department of Labor, Employment and Training Administration, Unemployment Insurance Financial Data, ET Handbook No. 394, Section II; and U.S. Department of Labor, Unemployment Insurance Service, Division of Actuarial Services, UI Data Summary, various issues.

Figure 5
Trust Fund Balance as a % of Total Wages Paid to UI Covered Employment, New England States, 1966 to 1995

Note: Data for 1996 contain the first quarter only.

Source: U.S. Department of Labor, Employment and Training Administration, Unemployment Insurance Financial Data , ET Handbook No. 394, Section II: and U.S. Department of Labor, Employment Insurance Service, Division of Actuarial Services, UI Data Summary, various issues.

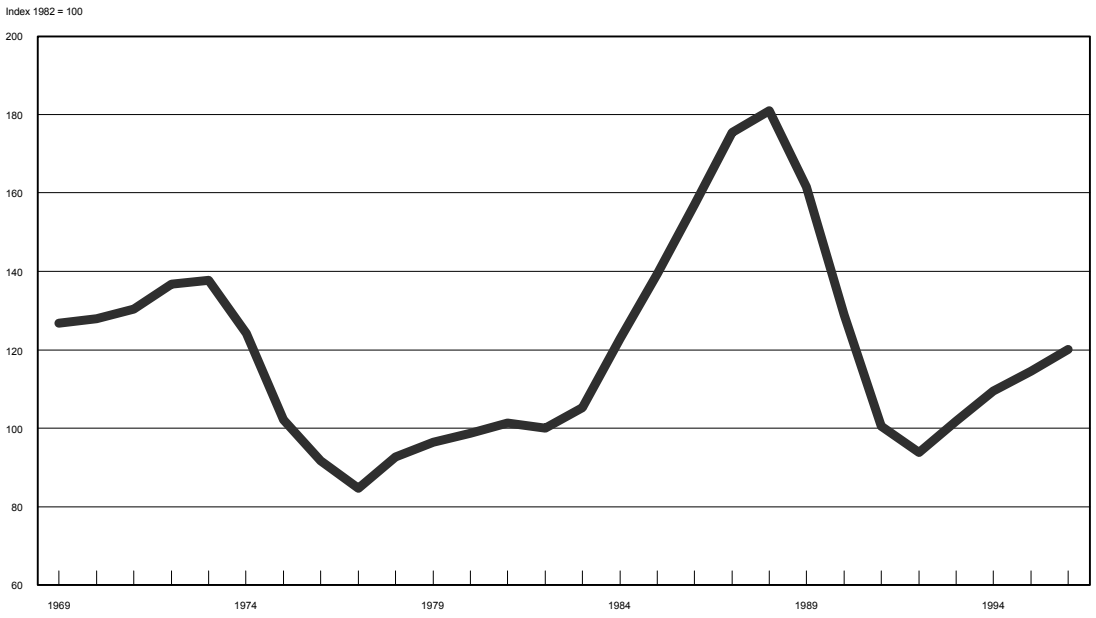
Figure 6
Experience Rating Index
New England States, 1988 to 1995



Note: The experience rating index is calculated by first computing "effective benefit charges" by taking the total benefits paid during the reporting period and subtracting from them the ineffective charges, inactive charges, and noncharges. The remainder is then divided by the total benefits. Data unavailable for New Hampshire for 1988 and 1989.

Source: U.S. Department of Labor.

Figure 7
Employment in Construction in Massachusetts



Source: Federal Reserve Bank of Boston, New England Economic Indicators .