Dismantling Policy through Fiscal Constriction: Examining the Erosion in State Unemployment Insurance Finances

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ABSTRACT A common proposition in welfare state research is that programs financed through dedicated payroll taxes tend to be more durable. This article examines American unemployment insurance (UI) as an exception to this proposition. UI is a self-financed social insurance program whose benefits have been dismantled over time because of an inability to maintain a constant revenue base. The study first examines the long-run decline in UI finances and concludes that changes in UI taxes are associated with the largest declines in state finances. It then examines why more states have not pursued reforms to strengthen UI finances and finds that opponents of more generous UI benefits have generally succeeded in preventing such measures, thus constricting UI finances and gradually retrenching benefits. These findings have implications for those seeking to improve UI solvency, as well as for the study of welfare state retrenchment more generally.

INTRODUCTION

What kinds of social policies are most resistant to retrenchment? One common conclusion in the welfare state literature is that programs financed through dedicated taxes, especially payroll taxes, are most likely to have politically sustainable and durable sources of revenue. This article examines the American unemployment insurance (UI) system as an example of a self-financed social insurance program whose benefits have eroded by an inability to maintain a constant base of revenue, despite being funded in this way. I show that this trend, which I call fiscal constriction, has been an important way that opponents of the program have retrenched UI benefits over time.

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Aside from being a theoretically interesting case, the federal-state UI system merits attention as an important part of the economic safety net for American workers. Unemployment benefits, including temporary expansions enacted by the federal government, are estimated to have kept 4.6 million Americans out of poverty in 2010 (Sherman 2011). At the same time, in mid-2011, state UI finances were at their weakest point since the passage of the Social Security Act in 1935 (Vroman 2011). Although the downturn that started in 2007 is responsible for much of the recent decline in solvency, in this article I explain how most states' UI finances were already weak going into the Great Recession as the result of deterioration over the past 40 years. Weak UI trust funds hamper the UI system's ability to provide economic security to workers and stabilization to the economy during downturns. Poor trust fund solvency also prevents legislators from enacting expansions that would otherwise be needed to keep UI benefits in line with changes in the economy and the labor force, like the growing number of low-wage and part-time workers who may have trouble accessing the program.

Using data from 1978 to 2008, this article first examines the correlates of the long-term erosion in state UI finances. Contrary to the claims of some observers of the system, I find that changes in UI taxes—rather than in economic conditions, claims, or benefit generosity—are associated with much of the variation in state UI finances over the program's history. In particular, I find that declines in the proportion of workers' wages subject to UI taxes have driven most of the erosion in solvency. In the second part of the article, I examine the political dynamics of UI, specifically the conditions under which states chose to enact reforms to improve UI solvency by indexing UI taxes to growth in workers' wages. Consistent with the theory that fiscal constriction has been an important strategy for retrenching UI benefits in the United States, I find that indexation was most likely when advocates of more generous UI benefits controlled the legislative process, when those advocates could draw on supportive policy legacies, and when indexation was less likely to be framed as a large tax increase on employers.

SOCIAL PROGRAMS AND THE POLITICS OF FISCAL CONSTRICTION

Although the politics of financing social benefits generally receive less attention in welfare state literature than the politics of providing social ben-

efits, there is consensus that programs with dedicated financing sources, especially social insurance programs with payroll contributions, are more likely to engender popular support and thus prove more difficult to retrench than programs without such dedicated sources of revenue. The political popularity of earmarked contributions is thought to be an important explanation for the durability of Social Security (and Medicare, to a lesser extent; cf. Patashnik and Zelizer 2001). As Theda Skocpol has argued, "Social Security retirement insurance always benefited—ideologically as well as fiscally—from the existence of its earmarked payroll tax and nominally separate trust fund. Social Security taxes were deliberately labeled 'contributions' and were treated as payments that built up individual 'eligibility' for 'earned benefits'" (Skocpol 2000, 42). In a similar vein, Andrea Campbell argues that citizens are more willing to finance highly visible benefits through payroll contributions. To Campbell's mind, this in part explains why Americans report that Social Security contributions are one of the most popular (or rather, least unpopular) form of taxes (Campbell 2011, 61; see also Campbell and Morgan 2005). Finally, Paul Pierson identifies the structure of Social Security and its use of self-financing earmarked contributions as an important bulwark against more drastic retrenchment under the Reagan administration (Pierson 1995, 71).

The political strength of self-financed social insurance programs, however, relies on the assumption that these programs will have access to a steady tax base. If a self-financed program, even a social insurance program, does not capture a constant share of revenue, it will become increasingly insolvent over time. A gradually diminishing tax base, which I term fiscal constriction, may in turn force legislators to make cuts to the program (see also Klitgaard and Elmelund-Præstekær [2012] on a related point).[1] Fiscal constriction may also jeopardize the program's effectiveness by preventing policy makers from making updates to the program that are necessary to ensure that the program maintains a constant level of risk protection (what Hacker [2004] terms "drift," a mismatch between a program's objectives and its effectiveness because of changing social or economic conditions).

1. Fiscal constriction could be thought of as the application of the "starve the beast" strategy for a specific social program. "Starve the beast" proponents claim that tax cuts will increase the federal deficit and thus put downward pressure on federal spending (see, e.g., Frankel 2008).

Fiscal constriction is likely pursued by proponents of retrenchment over the long run, as they take advantage of wage growth and inflation to gradually shrink a program's tax base. In this way, fiscal constriction is just as much a strategy of calculated inaction as action. This article argues that fiscal constriction through the deliberate lack of taxable wage base indexation has been a common mode of retrenchment in the American UI system.

THE STRUCTURE OF AMERICAN UNEMPLOYMENT INSURANCE

The Social Security Act of 1935 established the structure for the federal-state UI system as a way to replace a portion of past wages temporarily for workers with a recent work history who become unemployed through no fault of their own.[2] In addition to easing the financial hardship faced by unemployed individuals and their families, policy makers hoped that UI would provide a source of macroeconomic stabilization during economic downturns. Legislators also believed that by varying employer UI contributions by a firm's layoff record, UI would provide employers with an incentive to stabilize their hiring and firing practices.

The UI system provides three main types of benefits. Regular benefits are delivered and financed by individual state governments within certain broad requirements set by the federal government. The individual states must pay for regular benefits themselves, but the federal government provides funding for the administration of regular UI benefits through a federal UI tax on employers. Second, the joint federal-state extended benefits program pays additional benefits when states reach certain levels of unemployment. The federal government and individual state governments typically share the cost of financing these extended benefits. Finally, Congress may pass temporary extended benefits during recessions that are financed completely by the federal government.

This article focuses on regular UI because it is the central part of the program that is administered and financed by state governments and because workers must exhaust their regular benefits before they can become eligible for other forms of extended benefits. Regular benefit payments av-

2. Puerto Rico and the Virgin Islands operate their own UI programs as part of the federal-state system, but I do not include them in my study.

erage about $300 per week and typically replace slightly less than half of an average worker's wage.[3] Only about a third of the unemployed have actually received regular benefits in recent years.[4]

States mainly finance their regular UI programs through employer payroll contributions on behalf of covered workers. There are two primary components of state UI taxes: the tax rate and the wage base. State UI tax rates are the share of the wage base that employers must contribute to the UI system for each UI covered worker. To participate in the federal-state UI program, a state's wage base must be set at least at the level of the federal UI wage base, which is currently $7,000. This means that in a state with the minimum wage base, only the first $7,000 of workers' wages is taxed, and this value is not adjusted for changes in prices or wages each year. There is considerable variation in the structure of UI taxes, especially the level of the wage base. Wage bases in 2012 ranged from $38,800 in Hawaii to two states that had the minimum base of $7,000 (California and Arizona). The average taxable wage base in 2012 was $16,335.

Employers do not pay UI taxes at the same rate, even in the same state. The tax rate for a particular employer varies with that employer's use of the UI system, what is referred to as the experience rate. Businesses that lay off more workers who then claim UI benefits tend to pay higher tax rates relative to businesses that lay off fewer workers who claim UI benefits. Although all states experience rate their UI contributions, the schedules of tax rates (i.e., the lowest and highest rates paid by employers, as well as the degree to which the rates change with layoff records) vary greatly by state. Tax rates also vary based on the solvency of state trust funds; in many states tax rates (or the schedules of rates) will automatically rise as trust fund solvency falls. Finally, many states may levy a surcharge on employers that takes effect when a trust fund is at risk of insolvency.

3. See the national average replacement rate data from 1988 to 2010: "Replacement Rates, US Average," Department of Labor Employment and Training Administration Unemployment Insurance Chartbook: https://workforcesecurity.doleta.gov/unemploy/Chartbook/a16.asp.

4. See the share of the unemployed filing for benefits from 2000 to 2011: "Regular Program Insured Unemployment as a Percent of Total Unemployment," Department of Labor Employment and Training Administration Unemployment Insurance Chartbook: https://workforcesecurity.doleta.gov/unemploy/Chartbook/a12.asp. See also Gould-Werth and Shaefer 2012.

Although the federal government sets a minimum floor for the state wage base, it has not updated this floor since 1983. Legislation passed in 1939 set the federal UI wage base at $3,000 to match the wage base used for the Social Security program ($3,000 is equivalent to about $48,000 in 2011 dollars and represented close to 100 percent of total wages at the time; NCUC 1980, 80). Unlike the Social Security program, however, the federal UI taxable wage base has only increased three times (to $4,200 in 1972, $6,000 in 1978, and $7,000 in 1983), while the Social Security taxable wage base is indexed to a national measure of average workers' wages. This means that as wages gradually increase, so too does the amount of earnings subject to Social Security taxes. In contrast, because the federal UI taxable wage base is not indexed, the share of wages that federal and state UI taxes cover will continue to fall unless Congress takes action to deliberately increase the base. For example, in 2011, the federal taxable wage base was $7,000; this represents an inflation-adjusted decline of 85 percent between 1939 and 2011.

Figure 1 compares the inflation-adjusted values of the Social Security and federal UI taxable wage bases and shows the striking erosion of the real value of the federal UI base over time since the passage of the New Deal. Note that the three legislated updates to the federal UI base did not do much to change the downward trend over time. The figure also shows the national average wage index for comparison, which the Social Security Administration uses to track average worker wages. While the Social Security taxable wage base has steadily surpassed average wages, the federal unemployment insurance taxable wage base has fallen relative to national average wages. In light of the failure of the federal government to index the federal UI taxable wage base, about a third of states have implemented indexation of their own UI wage bases. In the following sections, I examine both the quantitative effect that trends in UI taxation, including indexation, have had on UI trust fund solvency, as well as the reasons why some states have managed to pass indexation of their taxable wage bases while most states have not.

THE EROSION IN STATE UNEMPLOYMENT INSURANCE FINANCES

The UI system's finances have been historically weak by any standard in recent years. At the end of August 2012, 19 state trust funds were insol-

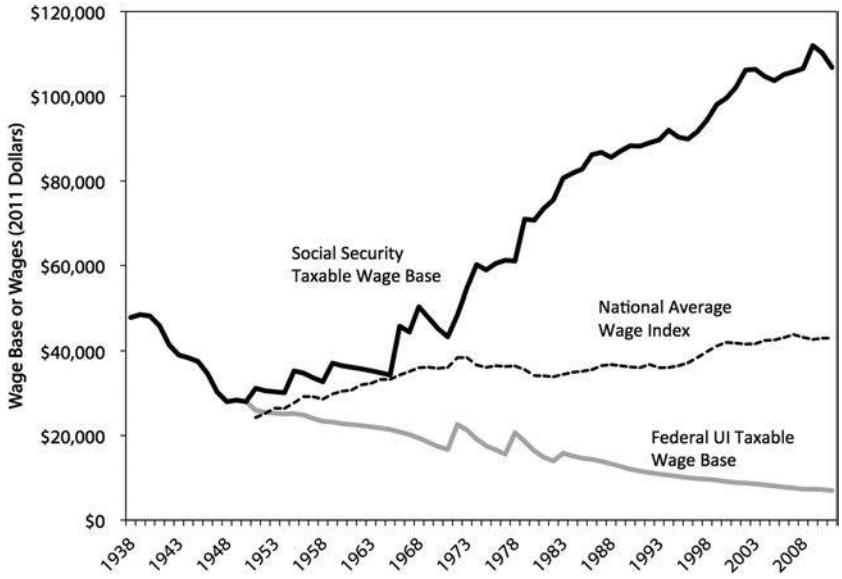

FIGURE 1. Inflation-adjusted values of the Social Security taxable wage base, federal UI taxable wage base, and national average wage index data from the Department of Labor and the Social Security Administration. This figure shows that, adjusted for inflation, the Social Security taxable wage base has grown over time while the federal unemployment insurance taxable wage base has steadily fallen, both relative to its earlier values and to average wages.

vent and thus were borrowing funds from the federal government (down from 29 states at the start of 2012, according to the Department of Labor's quarterly financial data). The recent decline in UI reserves is to be expected given the magnitude of the Great Recession. Increasing rates of unemployment in recent years has meant an increasing number of workers claiming UI benefits, a longer duration of UI benefits for those receiving them, and a decline in the number of workers from whom taxes are collected to finance UI trust funds.

The UI system, however, was already weak going into the Great Recession. UI finances began eroding, for many states, in the 1970s. Figure 2 shows the aggregate UI reserve ratio for all states over the history of the program. The reserve ratio is the net reserves in a state's UI trust fund divided by the total wages in UI-covered employment in a state, and it is a common measure of UI solvency. Unemployment insurance analyst Wayne Vroman identifies four distinct periods in UI financing that correspond to the major trends in figure 2 (Vroman 1998, 14–17). During the early years

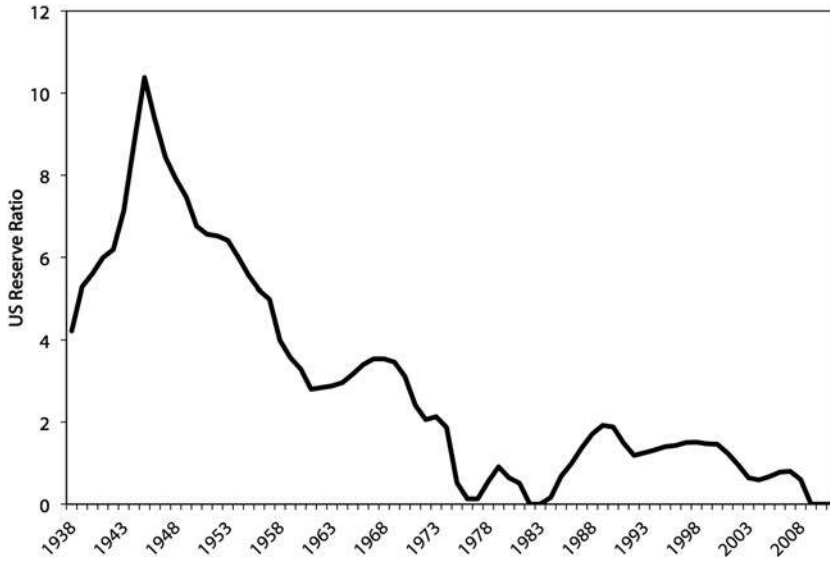

FIGURE 2. State UI reserve ratios. Data from US Department of Labor. This figure shows the aggregate reserve ratio for all state unemployment insurance systems, or the ratio of the UI trust fund to total wages in covered employment. By this measure, funding of the UI system has generally eroded over time.

of the program (from the start of UI operations to the late 1940s), states accumulated large trust fund surpluses due to lower than anticipated benefit costs, as well as the strong macroeconomic conditions and full employment associated with the war. In the second phase, from the late 1940s to the late 1970s, states experienced a steady decline in trust fund reserves, as a result of large losses during recessions and modest reserve accumulation during periods of expansion. However, because of the very large reserves that states had already accrued in the earlier years of the program, states generally did not encounter solvency problems until the mid- to late 1970s. Throughout the late 1970s and early 1980s, high unemployment and repeated recessions caused major state solvency crises. In the early 1980s, states began to build up their trust funds again, though the level and rate of accumulation were lower relative to the early years of the program. In the final period of UI financing, from the early 1990s onward, UI reserves have stagnated and eroded in many states. Despite the strong economic growth in the 1990s, most states did not accumulate much in the way of reserves. As a result, by 2007, the average state had a reserve ratio of 1.3 percent, and 25 states had reserve ratios lower than 1 percent of total wages.

The deterioration of state UI finances has important consequences for the ability of UI to provide economic security to workers and automatic economic stabilization during economic downturns. As a national Advisory Council on Unemployment Compensation warned in 1996, because UI is intended to be a self-financed program, weakened solvency will force state legislators to reduce benefits or restrict program eligibility if states do not act to raise taxes (ACUC 1996, 56). This constriction is unfolding now in the wake of the Great Recession. For example, legislators in at least six states have instituted cuts in UI benefits during 2011 as a result of diminished trust funds (McKenna and Wentworth 2011). There is also evidence that pressure from declining finances has forced states to tighten eligibility requirements for their programs over the past several decades, resulting in a decline in the share of unemployed workers claiming benefits, although many other factors, like the changing composition of the labor force and falling union density, have also affected changes in benefit receipt (ACUC 1996; Graetz and Mashaw 2000). The share of unemployed workers actually receiving UI benefits fell from a peak of about 54 percent in the 1950s to less than a third of the unemployed today, according to Department of Labor data. Consistent with this evidence, new research by Daniel Smith and Jeffrey Wenger shows that trust fund solvency and benefit generosity are positively related to one another and that there is evidence that higher solvency may lead states to increase benefits (Smith and Wenger 2013). Their findings suggest that eroding solvency could threaten the generosity of UI benefits.

It is also important to note that the failure to update UI coverage to reflect the transformation of the labor force can be considered retrenchment in its own right, as, for example, a growing part-time and low-wage workforce has difficulty accessing the UI system (see, e.g., Shaefer 2010; Enchautegui 2012). New provisions would be necessary to ensure that these populations have access to the program, and states have generally not yet implemented such changes.

Finally, deteriorating UI finances leave states unprepared for future economic downturns, exposing states to the risk of insolvency. States that are insolvent must take out loans from the federal government to finance their benefits, and these loans must be repaid with interest. Tax rates on employers then automatically increase to repay the principal on these loans, and states may also enact special taxes on employers to repay interest. These tax increases occur even when state economies remain weak. Weak-

ened UI finances thus threaten the ability of the program to provide automatic macroeconomic stabilization during recessions.

The cause of the long-term erosion in UI finances has been a source of debate in recent years. Some observers of the UI system, such as the US General Accountability Office (2010) and UI policy analyst Vroman (2011), argue that lower UI taxes are primarily responsible for declining solvency. Yet others claim that overly generous benefits are to blame. For example, in recent testimony to Congress in a hearing on UI solvency, Douglas Holmes, president of a UI consultancy, reported that "the scope of the unemployment insurance system in a number of states has been expanded and benefit payout associated with these expansions has contributed to the insolvency of the state unemployment benefit accounts" (Holmes 2010). Holmes's perspective is also shared by many groups across the states, which have pointed to high benefits or loose eligibility standards as contributing to insolvency and have thus recommended cuts in benefits and eligibility as the main mechanism for restoring balance to UI trust funds. The Pennsylvania Chamber of Business and Industry, for example, stated in 2012 that "statistics clearly show that [the UI] system suffers from a spending problem, not a revenue problem, due in part to an overly generous benefits system and broad eligibility requirements" (Pennsylvania Chamber of Business and Industry 2012). Similarly, in testimony to Michigan's legislature in 2011, the Chamber of Commerce blamed the state's insolvency, first, on the economic crisis and, second, on fraudulent claims and overpayments (Block 2011).

Understanding what factors have contributed to the erosion in UI finances is relevant to proposals for improving the program's solvency. If it is overly generous benefits that have led to the long-run erosion in solvency, it might make sense for state and federal legislators to focus on cuts to benefits and eligibility to improve the program's finances. But if those factors have contributed little to variation in the program's finances compared to other program features, such as taxes, then legislators should focus on reforming taxes rather than benefits.

THE DETERMINANTS OF STATE TRUST FUND SOLVENCY

In order to examine the role of various factors in contributing to trends in UI finances across the states, I conduct a time-series, cross-sectional analysis using annual data from the Department of Labor on state UI pro-

grams (specifically, data from the *Employment and Training Administration's Unemployment Insurance Financial Handbook* 394) combined with several other sources.[5]

I expect that the solvency of a state's UI trust fund will be a function of the design of that state's UI program and the economic conditions in that state. My data cover the 50 states in addition to the District of Columbia from 1978 to 2008. This time range maximizes the availability of the variables, particularly state unemployment rates and median family income. I have a balanced panel where $T = 31$, $n = 51$, and thus $N = 1{,}581$.

To measure the solvency of a state's UI trust fund, I use two variables: a state's high cost multiple and its reserve ratio. The high cost multiple is a common measure of state trust fund solvency that relates the current size of the trust fund to the period of highest UI spending since 1958. The high cost multiple is calculated by dividing a state's reserve ratio (net trust fund reserves divided by the total amount of wages of workers in UI covered employment) by the state's high cost rate (the highest amount of benefits paid out in a year since 1958 divided by the total amount of wages of workers in UI covered employment). It is an especially useful indicator because it is easy to interpret. A high cost multiple of 1.0, for example, indicates that a state would have sufficient trust fund reserves to pay out a year's worth of benefits at the state's highest cost levels; a high cost multiple of 0.5 would indicate that a state could pay out 6 months worth of benefits at those levels. Because the high cost multiple can change through either the numerator or the denominator (i.e., a change in the reserve ratio or in the period of highest expenditures), I also estimate separate models with the reserve ratio as the outcome to ensure the robustness of my results to different measures of solvency.

I use the ratio of UI taxable to total wages to measure the UI tax capacity of a state. States that have higher taxable wage bases generally have higher ratios of taxable to total wages (for 2008, e.g., the R^2 for this relationship was .87). In general, a $1,000 increase in the taxable wage base is associated with an increase in the ratio of about .02. I expect that increases

5. These other sources include the Bureau of Labor Statistics, the March Current Population Survey, and the National Bureau of Economic Research.

in the ratio of taxable to total wages will result in increases in the financial health of a state's trust fund.[6]

I include variables to measure several other salient aspects of a state's UI system. The tax rate paid by employers is captured with a variable that measures the average share of taxable wages paid by businesses. Although experience rating is undoubtedly an important feature of the American unemployment insurance system, the data to adequately measure the degree of state experience rating exist but are unavailable for a sufficient length of time to include such a variable in my analysis. Such a limitation is unfortunate because two states with the same average employer tax rate could arrive at that rate through very different tax structures.[7] I enter a variable to measure a state's replacement rate, or the average share of wages replaced by unemployment insurance benefits (calculated as the average weekly unemployment insurance benefit divided by the average weekly wage of workers in UI covered employment). I also include the average duration of unemployment insurance beneficiaries, measured in weeks. Finally, I enter the number of first payments to measure the overall number of claims in a particular state and year.[8]

6. The findings are also robust to using other measures of the UI tax capacity of a state, including the statutory taxable wage base and the taxable wage base expressed as a share of average wages.

7. It is difficult to know how the omission of measures of experience rating might bias my results since the effect of experience rating depends on the rate schedule for a particular state, as well as the distribution of employers at those various rates. For example, two states with the same schedule of tax rates could still have different levels of solvency if one state had most firms clustered at the low rates and the other state had most firms clustered at the higher rates. In general, however, given accounts of UI policy history that claim that states have used experience rating to lower overall contribution rates (especially in recent years; see, e.g., Baldwin 2001), I predict that greater experience rating would lead to lower solvency, and thus that the omission of experience rating in my analysis would understate the importance of variation in UI taxes for trust fund solvency.

8. Note that I divide this variable and the size of the UI covered workforce by one million to make the regression results more readable. I enter UI first payments as a level instead of as a share because it is unclear what an appropriate denominator for this variable might be. This is because first payments include repeated instances of the same individual claiming benefits multiple times in a year. My results are robust, however, to expressing first payments and average monthly covered employment as shares of the state labor force. Consistent with the results, the ratio of taxable to total wages is generally the most important source of variation in long-run program finances in these specifications.

To gauge the potential effect of state economic conditions on UI trust funds, I include three variables: the size of the UI covered workforce with the 12-month average of UI covered workers; median family income for a state (using microdata extracts from the Census Bureau's Current Population Survey [King and colleagues 2011] divided by ten thousand) as a measure of the overall level of state economic development; and the unemployment rate in a state (using published data from the Bureau of Labor Statistics).[9] In order to control for common shocks in each year, I enter year dummy variables.[10] I also include a dummy variable to indicate whether the National Bureau of Economic Research declared any part of a year as being in a recession. Finally, to account for potentially unmodeled state-level effects, I include state dummy variables. Table 1 reviews the descriptive statistics for the substantive variables used in the analysis.

I estimate an error correction model, an approach to time-series analysis that models variables as having an equilibrium relationship in the long run. This makes sense since states must self-finance their UI systems. The core intuition is that deviations from the relationship between variables (the errors) are eliminated over time through changes in the dependent variable (error correction). Although error correction models are often discussed in the context of co-integration (a statistical term for processes that drift randomly together), recent research has emphasized that co-integration is simply a specialized case of error correction and not a requirement for error correction models (Keele and De Boef 2004; De Boef and Keele 2008; Beck and Katz 2011).

While co-integration is one reason to use an error correction model, error correction models also permit researchers to identify the temporal dynamics associated with a particular relationship, examining not only short-run and instantaneous effects but also the long-term effects of variables.[11] Because of their flexibility, error correction models have become

9. I include the state unemployment rate to measure the effects of general labor market conditions that are not captured by the number of UI first payments, reflecting the fact that in some states the number of UI beneficiaries may be more or less correlated with overall trends in the labor market (because of variation in eligibility and take-up). Statistical tests also suggest that including this variable improves model fit.

10. The results are robust to using a year and year squared time trend as well.

11. In this study, statistical tests reveal that both of the dependent variables—the reserve ratio and the high cost multiple—as well the ratio of taxable to total wages variable have unit roots (tests were not conclusive for the other variables). Thus, the primary variable of interest

TABLE 1. Descriptive Statistics for Unemployment Insurance Trust Fund Solvency Analysis (1978–2008)

Variable	Source	Mean	SD	Min	Max
Reserve ratio	DOL	1.54	1.12	−.53	5.41
High cost multiple	DOL	.64	.46	−.19	2.38
Taxable/total wages	DOL	.42	.13	.15	.72
Taxable wage base indexation	DOL	.31	.46	0	1
Average employer tax rate	DOL	2.18	1.00	.22	7.08
Average benefit generosity	DOL	.37	.05	.19	.54
Average duration	DOL	13.98	2.56	5.40	27.10
First payments	DOL	163,186	196,648	6,752	1,491,112
Average covered employment	DOL	1,740,281	1,928,994	112,354	12,600,000
Median family income	CPS	57,093	8,702	37,632	89,998
State unemployment	BLS	5.78	1.97	2.30	17.40
NBER recession	NBER	.26	.44	0	1

Note.—Observations = 1,581. See text for definition of variables. DOL = US Department of Labor, *Financial Data Handbook* 394; CPS = Integrated Public Use Microdata Series, Current Population Survey; BLS = Bureau of Labor Statistics, Local Area Unemployment Statistics; NBER = National Bureau of Economic Research, US Business Cycle Expansions and Contractions.

increasingly common in quantitative social science work, especially in political science (see, e.g., Haber and Menaldo 2011) and sociology (see, e.g. Volscho and Kelly 2012). An error correction model strikes a good balance between relatively easy implementation and interpretation and allowing flexibility in temporal dynamics (unlike more static regressions that assume only instantaneous relationships between variables; Beck and Katz 2011).

Formally, the model is estimated as follows, where Δ is the first difference operator, t refers to a year, and s refers to a state:

$$\begin{aligned}\Delta\text{UI Trust Fund Adequacy}_{t,s} = {} & \beta_1\text{UI Trust Fund Adequacy}_{t-1,s} \\ & + \beta_2\text{Tax Variables}_{t-1,s} + \beta_3\Delta\text{Tax Variables}_{t,s} \\ & + \beta_4\text{Generosity Variables}_{t-1,s} + \beta_5\Delta\text{Generosity Variables}_{t-1,s} \\ & + \beta_6\text{State Economic Conditions}_{t-1,s} + \beta_7\Delta\text{State Economic Conditions}_{t,s} \\ & + \text{State Dummies} + \text{Year Dummies} + \varepsilon_s.\end{aligned}$$

There are three main possibilities for the temporal dynamics of an independent variable in the model. An independent variable is observed only to have transitory effects such that it changes trust fund adequacy contemporaneously but its effect does not persist over time when the lagged term is zero and the first-differenced term is nonzero. Alternatively, an

(among other variables) could have co-integrating relationships with the dependent variables, making the error correction model even more appealing.

independent variable could have both instantaneous effects and long-term equilibrium effects if both first-differenced and lagged coefficients are nonzero. Finally, a variable may only have long-run effects if the lagged term is nonzero and the first differenced term is zero.

Adding additional lags of the dependent variable (2 or 3 years) does not meaningfully change the coefficients or their substantive interpretation. I therefore proceed with one lag of the dependent variable for the rest of the analysis. Additional lags of the independent variables are generally not statistically significant at conventional levels of significance, so I do not increase the number of lags of the independent variables either.

Following the advice of Nathaniel Beck and Jonathan Katz (2011), I estimate panel-corrected standard errors. I find that these corrected standard errors are similar to those estimated with normal ordinary least squares (OLS) and thus conclude that my data do not exhibit substantial cross-sectional dependence or heteroskedasticity. I also estimate standard errors using panel bootstrapping as an additional robustness check, as recommended by Jonathan Bischof (2009). Large differences between the panel bootstrapped standard errors and the uncorrected OLS errors could indicate the presence of substantial temporal dependence. However, the two sets of standard errors are relatively similar to one another, indicating that even if there is remaining autocorrelation present in the data, it is not substantially affecting the results.[12]

Table 2 shows the main results of the solvency analysis, with both reserve ratios and high cost multiples as outcomes. For each outcome, I show the OLS coefficients, the OLS uncorrected standard errors, and the panel-bootstrapped standard errors. It is immediately apparent that changes in UI financial solvency are persistent over time. For both the reserve ratio and the high cost multiple models, the lagged dependent variable is statistically significant and relatively small. The statistical significance of this coefficient indicates that there is a stable equilibrium process between the independent and dependent variables and that an error correction model is in fact warranted. The small size of the estimates for both the reserve ratio and the high cost multiple models indicates that the changes in solvency are highly persistent over time. According to the results, about 96 percent (1.00 − .04) of a change in the reserve ratio persists from one year to the next and 94 percent (1.00 − .06) of a change in the high cost

12. I also find similar standard errors using the Newey-West estimation method (Wooldridge 2005).

TABLE 2. Error Correction Analysis of State Unemployment Insurance Trust Fund Solvency

	Outcome					
	UI High Cost Multiple			UI Reserve Ratio		
Variable	Coefficient	OLS SE	PB SE	Coefficient	OLS SE	PB SE
Lagged dependent variable	−.06	.01	.02	−.04	.01	.02
Change of taxable/total wages	.46	.10	.16	1.04	.23	.35
Level of taxable/total wages	.73	.06	.09	1.76	.14	.20
Change in employer tax rate	.08	.01	.01	.22	.02	.04
Level of employer tax rate	.12	.01	.01	.33	.01	.03
Change in benefit generosity	−.76	.17	.20	−1.38	.40	.45
Level of benefit generosity	−.99	.09	.15	−2.33	.21	.31
Change in average duration	−.02	.002	.004	−.04	.01	.01
Level of average duration	−.02	.003	.01	−.04	.01	.01
Change in first payments	−.38	.10	.19	−.86	.22	.49
Level of first payments	−.17	.08	.16	−.45	.19	.42
Change in average coverage	−.18	.06	.12	−.45	.13	.28
Level of average coverage	−.03	.01	.01	−.04	.02	.03
Change in median income	.01	.01	.01	.04	.02	.02
Level of median income	.003	.01	.01	.02	.02	.03
Change in state unemployment	−.03	.005	.01	−.09	.01	.02
Level of state unemployment	−.02	.003	.004	−.06	.01	.01
NBER recession	.04	.02	.03	.14	.05	.07

Note.—State and year dummies are included but not shown. OLS SE = uncorrected OLS standard errors; PB SE = panel bootstrapped standard errors (1,000 replications). Balanced panel: $n = 51$, $T = 31$, $N = 1{,}581$.

multiple persists from year to year. Thus, while UI benefits, taxes, and trust funds are in equilibrium, it takes a relatively long time for the trust funds to adjust to changes in benefits or taxes to reach a new equilibrium.

The signs on the coefficients generally follow my expectation that increases in the UI tax variables or decreases in the generosity or demand variables generally improve UI solvency. In addition, both the high cost multiple and the reserve ratio models are highly consistent with one another. In order to interpret the substantive effects of the results, I conduct a series of simulations using data from the UI program's overall history to show the effect of a one standard deviation change in various explanatory variables on the total change in either the reserve ratio or the high cost multiple. The results of these simulations appear in figure 3.

This study observes that increases in the ratio of taxable wages to total wages and increases in the tax rate paid by employers cause large and persistent increases in UI solvency over time. Figure 3 shows that a one standard deviation increase in the ratio of taxable to total wages is expected to cause an 8.7 percentage point increase in a state's reserve ratio and a 2.6 increase in a state's high cost multiple (both largely through long-term effects). This represents an increase in a state's ability to pay benefits at

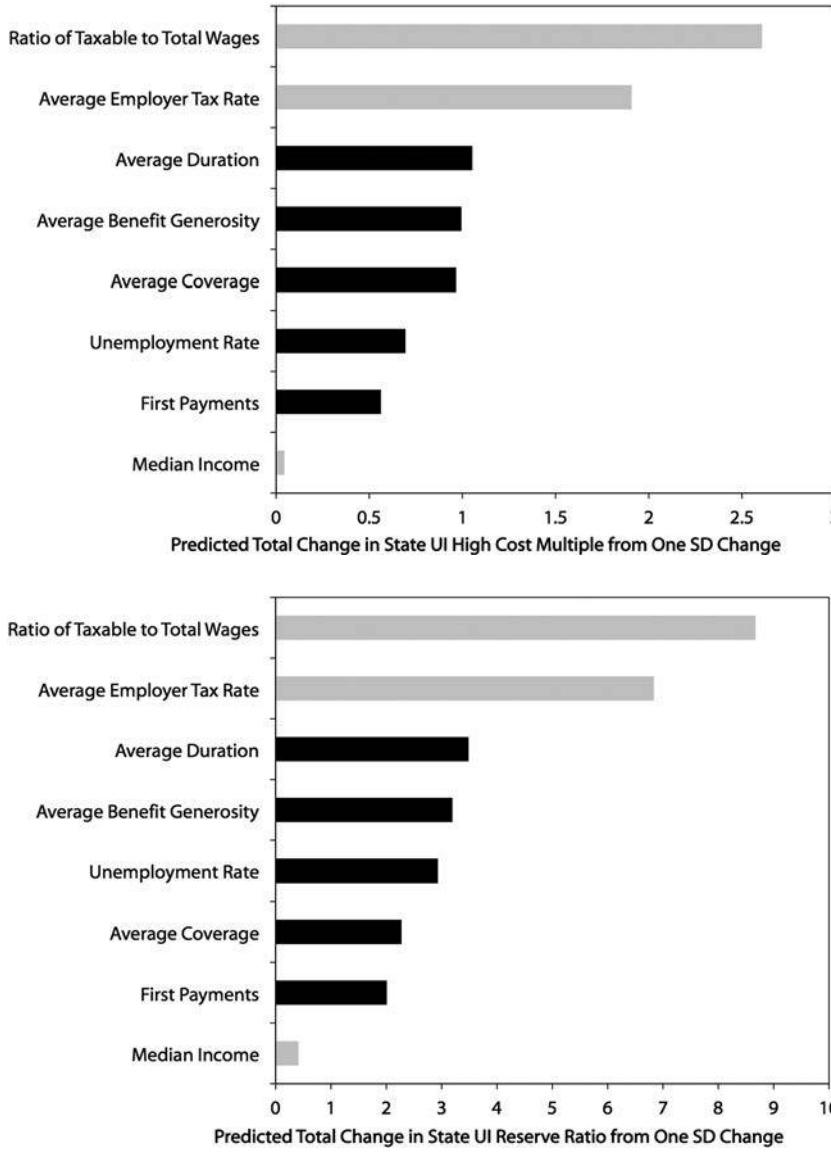

FIGURE 3. Total estimated effects of a one standard deviation change in various variables on UI solvency. Data from error correction model regression results in table 2. This figure shows the total predicted change in either a state's high cost multiple (top) or reserve ratio (bottom) from a one standard deviation change in various independent variables across the program's history, holding all other variables constant. Gray bars indicate a one standard deviation increase while black bars indicate a one standard deviation decrease. This figure shows that changes in UI tax policy over the course of the program's history—especially the ratio of taxable to total wages—have the greatest total effect on UI solvency, while changes in generosity, demand, or economic conditions have weaker effects.

the state's highest rate of over 2.5 years. A one standard deviation increase in average employer tax rates causes an increase in solvency as well, though the total effect is slightly less than that of the ratio of taxable to total wages for both the high cost multiple and reserve ratio models.

In contrast, increases in UI generosity, in UI duration, and in the state unemployment rate all cause enduring but smaller decreases in UI solvency. A one standard deviation increase in the average generosity of benefits produces a total decline in a state's high cost multiple of about 1.0, or about a year of solvency at the state's highest cost rate. From the figure we can see that the model predicts that changes to a state's tax structure (and especially the tax base) produced the largest total changes in UI solvency relative to changes in generosity or other economic conditions.

To further illustrate the estimated effect of changes in taxes, we can ask what would have happened if Indiana, which had one of the lowest levels of solvency in 2008, increased its ratio of taxable to total wages to the national average in 2008. This would mean that Indiana moved from subjecting 22 percent of total wages to taxes to subjecting 34 percent of total wages to taxes. Such a move would have caused an immediate increase in Indiana's high cost multiple of .06 and then an increase of 1.4 in the long run. This corresponds to Indiana being able to pay out an additional year and a half's worth of benefits at its highest cost levels.

Another way of considering the temporal dynamics of changes in solvency can be found in figure 4, which uses data from table 2 to predict the effect of a one standard deviation increase in the ratio of taxable to total wages on a state's high cost multiple (gray bars), and the cumulative effect for all the periods so far (black line). So, for example, an increase in the ratio of taxable to total wages by one standard deviation produces a .11 increase in the high cost multiple in the fifth year after the shock, for a cumulative .73 increase in that year. With each passing year the effect of the shock in the tax base diminishes, so the rate of change in the cumulative effect slows as well. What is striking about this plot, however, is that it shows just how slowly UI trust funds return to equilibrium. Changes in the various policy characteristics of state UI programs can produce very long-term effects on state solvency, lasting more than 20 years in the case of the ratio of taxable to total wages.

Collectively, these results suggest that the deterioration of UI finances is not simply a result of economic downturns, an increased demand for benefits, or overly generous benefits, but rather a form of fiscal constric-

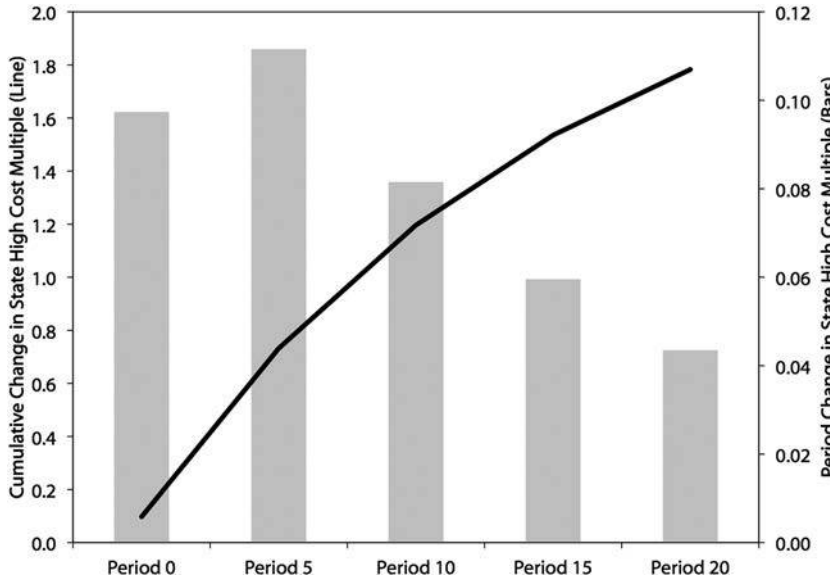

FIGURE 4. Dynamic estimated effects of a one standard deviation increase in the ratio of taxable to total wages on UI solvency. Data from error correction model regression results in table 2. This figure shows the period (gray bars, right axis) and cumulative (black line, left axis) effect from a one standard deviation increase in the ratio of taxable to total wages on a state's high cost multiple, holding all other variables constant. This figure shows that changes in UI solvency are highly persistent over time; shocks in variables—like the tax base—continue to affect solvency for many years.

tion. This study shows that changes in UI financing, especially the erosion of the tax base, have driven a substantial portion of the deterioration in UI solvency.

In many cases, it is a combination of both passive and active decisions by policy makers that has caused the erosion in UI taxes. Only a handful of states have taken the step of indexing their bases so that the bases rise automatically with average wages. Therefore, unless legislators take action each year to update their state's wage bases (or other actions to raise tax rates or reduce benefit generosity), their UI trust funds will generally collect declining revenue and their solvency will diminish over time.

Figure 5 shows the importance of indexation of a state's tax base to maintain a constant ratio of taxable to total wages. The top line shows the ratio of taxable to total wages for states with an indexed wage base. These states have covered a relatively constant share of wages. Between 1979

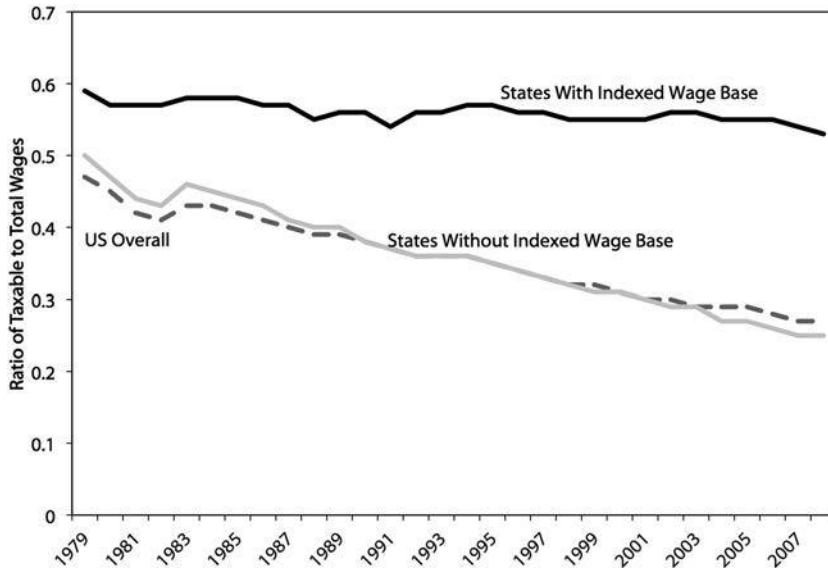

FIGURE 5. Ratio of taxable to total wages in indexing and nonindexing states. Data from the Department of Labor; chart replicated from US Government Accountability Office (2010). This figure shows that states with indexed taxable wage bases have maintained stronger and relatively more consistent ratios of taxable to total wages compared to states without indexed wage bases. Given that states with indexed wage bases only represent a small share of all states, the overall trend for the United States is downward over time.

and 2008, the ratio of taxable to total wages in these states only declined by 6 percentage points. In contrast, states without indexation had steadily declining shares of taxable to total wages. From 1979 to 2008, the ratio of taxable to total wages fell by 25 percentage points for nonindexing states. Although nonindexing states have the option of periodically raising their tax bases, these states are evidently not doing so frequently enough to maintain a constant ratio of taxable to total wages: the average nonindexing state only increased its taxable wage base four times. As a result, nonindexing states apply their UI taxes to a declining share of wages, generating less revenue for their UI systems, and as this article shows, resulting in lower levels of UI solvency.

What difference does it make for a state to index their taxable wage base? To answer this question, I repeat the regression models estimated above, but replace the variable measuring the ratio of a state's taxable to total wages with a dummy variable that indicates whether a state has indexed its taxable wage base. Table 3 reports the full results. In the model, indexing

TABLE 3. Error Correction Analysis of State Unemployment Insurance Trust Fund Solvency with Indexation of Taxable Wage Base

	State UI High Cost Multiple			State UI Reserve Ratio		
Variable	Coefficient	OLS SE	PB SE	Coefficient	OLS SE	PB SE
Lagged dependent variable	−.06	.01	.02	−.04	.01	.02
Change in indexation	.04	.03	.04	.13	.08	.10
Indexation	.10	.02	.03	.25	.04	.09
Change in employer tax rate	.07	.01	.01	.20	.02	.03
Level of employer tax rate	.11	.01	.01	.29	.01	.03
Change in benefit generosity	−.84	.18	.21	−1.57	.41	.46
Level of benefit generosity	−.83	.10	.14	−1.95	.22	.30
Change in average duration	−.02	.003	.004	−.05	.01	.01
Level of average duration	−.02	.003	.01	−.05	.01	.02
Change in first payments	−.34	.10	.18	−.77	.23	.45
Level of first payments	−.16	.09	.15	−.44	.20	.38
Change in average coverage	−.17	.06	.11	−.43	.13	.26
Level of average coverage	−.04	.01	.01	−.08	.02	.03
Change in median income	−.002	.01	.01	.01	.02	.02
Level of median income	−.02	.01	.01	−.03	.02	.03
Change in state unemployment	−.03	.005	.01	−.09	.01	.02
Level of state unemployment	−.02	.003	.005	−.05	.01	.01
NBER recession	−.08	.02	.03	−.15	.05	.07

Note.—State and year dummies included but not shown. OLS SE: uncorrected OLS standard errors; PB SE: panel bootstrapped standard errors (1,000 replications). Balanced panel: $n = 51$, $T = 31$, $N = 1{,}581$.

a state's taxable wage base results in a persistent increase in that state's high cost multiple of about 1.7 (or a 6.3 percentage point increase in a state's reserve ratio).[13] Indexation of a state's taxable wage base thus could have resulted in stronger state UI solvency over the program's history. These findings are consistent with previous work that proposes the lack of indexation in most states as a major factor in the deterioration of UI finances (see, e.g., Vroman 1998, 50–53; US Government Accountability Office 2010).

THE POLITICS OF STATE UI FINANCES

In light of the finding that a state's decision to index its taxable wage base has large and persistent effects on that state's UI solvency, why are more states not pursuing this option? As of 2012, only 17 states had indexation in effect. I conduct an event history analysis to determine the correlates of a state's decision to implement indexation of its UI taxable wage base

13. As with the earlier model, I find that the uncorrected OLS standard errors, the panel-corrected standard errors, the panel-bootstrapped standard errors, and Newey-West standard errors all produce similar substantive results, indicating that my results are relatively robust.

TABLE 4. States Indexing Taxable Wage Bases in 2012

State	Year First Indexed	Computation Method (2012)
Alaska	1981	75% of state average annual wage rounded to nearest $100
Hawaii	1972	100% of state average annual wage rounded to nearest $100
Idaho	1976	100% of state average annual wage rounded to nearest $100
Iowa	1978	66 2/3% of state average weekly wage multiplied by 52, or the federal taxable wage base; rounded to higher $100
Minnesota	1983	60% of state average annual wage rounded to nearest $1,000
Montana	1979	80% of state average annual wage rounded to nearest $100
Nevada	1975	66 2/3% of state average annual wage rounded to nearest $100
New Jersey	1975	28 times state average weekly wage rounded to higher $100
New Mexico	1977	60% of state average annual wage rounded to higher $100
North Carolina	1984	50% of state average annual wage rounded to nearest $100
North Dakota	1978	70% of state average annual wage rounded to nearest $100
Oklahoma	1986	50% of state average annual wage rounded to nearest $100
Oregon	1976	80% of state average annual wage rounded to nearest $100
Rhode Island	1980	46 1/2% rounded upward to the next higher even multiple of $200
Utah	1977	75% of prior average fiscal year wage rounded to the higher $100
Washington	1974	115% of previous year's taxable wage base rounded to the lower $100, but not to exceed 80% of average annual wage for second preceding calendar year rounded to lower $100
Wyoming	1984	55% of state average annual wage rounded to lower $100

Source.—US Department of Labor State Unemployment Insurance Law Information, "2012 State Unemployment Insurance Law Information, Comparison of State UI Laws," chap. 2, table 2-2, Computation of Flexible Taxable Wage Bases.

and to better understand the political logic underpinning the erosion of UI financing. Table 4 summarizes my outcome of interest; it shows a list of states that are indexing their wage bases as of 2012 and the methodology currently employed for indexation.[14]

Viewing state inaction over indexation as a form of gradual retrenchment of UI through fiscal constriction, I draw on prior research and political theory to develop and estimate a model of the conditions under which states either index or fail to index their UI taxable wage bases. I expect that indexation is most likely when advocates of more generous UI benefits are politically strong (or, conversely, when proponents of fiscal constriction of UI are politically weak), when advocates of more generous UI benefits could draw on supportive preexisting policy legacies, and when those advocates' proposals are less likely to be framed as imposing high costs on society, especially on employers.

Drawing on historical accounts of the politics of American UI, I expect that Democrats and labor unions will be the strongest advocates of

14. Wayne Vroman generously provided these indexation dates.

UI tax base indexation as the primary proponents of more generous UI benefits (Haber and Murray 1966; Lieberman 2001; see also power resource theory generally and as applied to the American states [Korpi 1983; Kelly and Witko 2012]). Similarly, I expect that those seeking to retrench UI benefits—perhaps mostly notably conservative business associations like the Chamber of Commerce or the National Association of Manufacturers (NAM) and Republicans—will typically be opposed to indexation. I hypothesize that these associations' opposition to indexation stems not only from the immediate tax increase implied by indexation but also from their historical preference for minimizing spending on UI benefits to reduce labor costs. Both in public statements and testimony, as well as private memos, the Chamber and NAM strongly opposed efforts to increase benefit generosity (their vociferous opposition to federal minimum standards during the Kennedy and Johnson administrations is a particularly vivid example; see, e.g., Congressional Quarterly 1965, 1969). Restricting updates to the taxable base would be one way for these actors to restrain the growth of the UI system through fiscal constriction.

Given that business groups like the Chamber of Commerce and NAM are most closely aligned with the Republican Party, especially at the state level (see, e.g., Chen 2007), I will operationalize the balance of power between advocates and opponents of more generous UI benefits mainly along partisan lines. Specifically, I construct this variable by examining the party that controls each chamber in the legislature and the governorship in each state. This variable ranges from zero (Republicans control both chambers and the governorship) to three (Democrats control majorities in both chambers and the governorship). Each of these three levels could be considered a veto point, or a point in the legislative process at which political actors could stymie the progress of policy making (Tsebelis 1995).

Conceptualizing control of the policy-making process in terms of veto points makes sense for the analysis, since it considers the degree to which opponents of more generous UI benefits (i.e., state Republicans and business associations) can leverage legislative inaction to induce fiscal constriction, and thus retrenchment, and control of veto points affords precisely such an opportunity for inaction. When the opponents of more generous UI spending controlled more veto points, we thus ought to observe a much lower probability of indexation. An emphasis on veto points is also consistent with the literature on welfare state retrenchment, which finds that control of veto points is crucial to explaining variation in welfare

state outcomes (see, e.g., Immergut 1990; Bonoli 2001).[15] The data used in this study on partisan control of government come from the updated historical series constructed by Carl Klarner (2013).

In order to measure labor union strength—the other primary advocate of more generous UI benefits—I use a historical series of the percent of employed workers who are union members constructed by Barry Hirsch, David Macpherson, and Wayne Vroman (2001). I expect that states with stronger labor unions will be more likely to pass taxable wage base indexation than those with weaker unions.

In addition to the strength of the relevant political actors, I draw on recent research that examines the ways that policy entrepreneurs frame and strategically craft their proposals to appeal to other legislators, interest groups, and the general public (see especially Martin 2010). This research suggests that actors will be much more successful when they can design and frame proposals in ways that maximize their appeal and minimize political opposition. I expect this to matter in two ways for UI taxable wage base indexation.

First, consistent with the literature on policy feedback, or the ways in which past policies provide resources and opportunities for future policy making (see, e.g., Pierson 1993), I expect that future policies are more likely to be successful when they can be framed as being concordant with past policy structures (see Weir, Orloff, and Skocpol 1988; also see Skocpol 1992). A number of states previously indexed their maximum UI benefits to match growth in average wages throughout the 1950s to the 1970s. I hypothesize that states that previously indexed their benefits will have been more likely to index their taxable wage bases since legislators and bureaucrats in indexing states were more likely to view indexation as a viable policy tool consistent with past state UI policy.[16] In order to measure a state's prior experience with indexation, I code whether states had benefit indexation in place for each year in my sample using summaries of state UI laws provided by the Department of Labor. Because the observed effect ought to occur over time, I lag this variable by 1 year (a 5-year lag yields

15. It is worth noting that my results are robust to using alternate measures of partisanship, including coding dummy variables for Republican, Democratic, and split party control of state government, as well as measures of state government ideology.

16. Another reason is that states with indexed benefits but without indexed taxes will, over time, experience financial pressure as rising wages increase benefits without a corresponding increase in the tax base, but this should be captured in the UI trust fund reserve ratio variable.

similar results). This also ensures that I do not consider states that index both benefits and tax bases at the same time.

Second, when the gap between the taxable wage base and average wages in the state economy is larger, I expect it will be easier for opponents to claim that the economic costs of indexation will be especially high for employers. This is because subsequent increases in the taxable wage base in a state with a low taxable wage base will represent a larger percentage increase compared to a state that has a higher taxable wage base.[17] Because the success of policy proposals is often sensitive to how actors frame the level and distribution of costs and benefits flowing from that policy, framing the cost of indexation as particularly burdensome can determine whether or not it is implemented. Policies are more likely to be passed when benefits are highly salient and can be easily touted by the policy's advocates and when costs are obscured and hard for the policy's opponents to exploit (see, e.g., Weaver 1986; Arnold 1990; Pal and Weaver 2003; Hacker and Pierson 2005; Martin 2010). The salience of the costs of a policy is likely to be even more important than the benefits of the policy, given the well-documented cognitive bias toward loss aversion, or the fact that people tend to strongly prefer avoiding losses to acquiring gains (Kahneman and Tversky 1985).

To measure the distance between average wages and taxable wages, I include the ratio of the taxable wage base to average wages in the state's labor force, calculated from the US Department of Labor's state UI data. To ensure that this variable is not endogenous to the decision to index a state's taxable wage base, I lag this variable by 1 year (a 5-year lag yields similar results).[18]

In addition to my proposed model, I consider three alternative explanations for UI indexation and fiscal constriction. First, a wide body of re-

17. To see why this is true, imagine two states with average wages of $40,000 each. One has a taxable wage base of $7,000, and the other has a taxable wage base of $20,000. Both states implement indexation, and in the following year average wages grow to $42,000. The increase implied by the implementation of indexation is $2,000 in each state, which represents a much higher percentage increase in the state with the lower taxable wage base than the state with the higher taxable wage base. As I later show, employer groups cited these larger percentage increases as a reason to oppose taxable wage base indexation.

18. The results are robust to using the ratio of taxable to total wages as well; I opt for the ratio of the taxable wage base to average wages because it is closer to the concept of cost framing I am trying to capture.

search in American politics points to a role for policy diffusion across the states, with states looking to their peers (particularly neighboring states) for positive and negative lessons to inform their own policy choices (see, e.g., Karch 2007). And indeed an examination of table 4 reveals that there does appear to be geographic clustering of states choosing to index their taxable wage bases. This theory would thus predict that states that are geographically close to another state that has implemented indexation will be more likely to introduce indexation. There are two potential mechanisms by which policy diffusion of taxable wage base indexation could operate. First, states could look to their neighbors for policy lessons: if Idaho implements indexation and it substantially improves the state's finances, Montana may take notice of Idaho's success and choose to index its own taxable wage base (often referred to as social learning [e.g., Boehmke and Witmer 2004]). Second, geographic diffusion could reflect the alleviation of regional competitive pressures (e.g., Peterson 1995); having a neighboring state implement indexation might make state governments more willing to implement indexation because they no longer fear losing jobs or firms to the neighboring state. In order to measure the effect of geographic diffusion, I create a dummy variable that indicates if in a particular year a state is bordering an indexing state.

An alternative explanation is that indexation in a given state may be a rational response on the part of legislators to changes in the economy or the labor force. If this theory is true, legislators would more likely introduce indexation when faced with insolvent trust funds or during economic downturns when they are anticipating increased strains on their UI trust funds. Likewise, state governments might rationally choose to index their taxable wage base when the ratio of their taxable wage base to average wages is low. Finally, legislators may be more attentive to indexation during periods of high inflation. This is consistent with what Kent Weaver finds in his study of indexation of federal programs (see, e.g., the case of Social Security's taxable wage base [Weaver 1988, 69–70]). I use the year-to-year percent change in the average Consumer Price Index calculated by the Bureau of Labor Statistics in order to measure price growth.

A third explanation is ethnic heterogeneity. A considerable amount of academic research has identified a negative correlation between ethnic heterogeneity and social spending, both cross-nationally (e.g., Alesina and Glaeser 2004) and across the states (e.g., Hero 1999). Within the United States, comparative historical research finds that divisive racial relations—

especially in the South—were a key impediment to the development of a centralized, generous, and redistributive welfare state (Quadagno 1988; Katznelson 2005; Poole 2006). This line of inquiry would predict that legislators in states with more diverse populations are less likely to implement generous UI benefits and more likely to prefer fiscal constriction by avoiding indexation of the taxable wage base. I thus estimate a model to examine the correlation between the share of white, non-Hispanic individuals in a state's population, using estimates from the March Current Population Survey (King et al. 2011), and the implementation of indexation.

Although there are certainly many other factors that could be considered in this event history analysis, I deliberately restrict the number of variables because of the sparseness of the data, which includes only 17 instances of taxable wage base indexation. In logistic regressions with a low event to variable ratio, coefficients and standard errors can both be seriously biased (Peduzzi et al. 1996). Therefore, while it would be ideal to include a full set of all potentially relevant variables, I focus on my own model and the three alternative explanations (for a similar approach, see Chen [2007]).

To conduct the analysis of the correlates of indexation, I largely follow the methodology described by Nathaniel Beck and coauthors (1998) in employing a logit model with implementation of taxable wage base indexation as my outcome, as follows:

$$\log\left(\frac{P_{t,s}}{1-P_{t,s}}\right) = \beta_0 + \beta_1 x_{t,s} + \beta_2 z_t.$$

The outcome is $P_{t,s}$, or the probability that state s indexes its taxable wage base in year t, which I model as a function of state-specific, time-varying characteristics x, as well as national, time-varying features z, which include a yearly time trend.[19] My unit of analysis is thus a state-year combination, and as is required by the event history analysis set-up, states remain in my sample until they index their taxable wage base. I use Huber-White corrected standard errors clustered at the state level unless otherwise noted. My data span 1964 to 2008, which is the longest period of time for which I could maximize continuous data availability for my independent variables. Still, even within this time period some of my variables do not have full coverage.

19. Specifying duration using a logged time trend produces substantively identical results.

TABLE 5. Descriptive Statistics for Indexation Event History Analysis (1964–2008)

Variable	Source	Observations	Mean	SD	Min	Max
Indexation dummy	DOL	1,794	.01	.10	0	1
Union membership	Hirsch et al. (2001)	1,794	18.07	8.84	2.30	44.80
Democratic control of veto points	Klarner (2013)	1,631	1.84	1.07	0	3
Indexed benefits dummy (one lag)	DOL	1,539	.48	.50	0	1
Taxable wage base/average wages	DOL	1,743	.42	.14	.13	.85
Neighboring state indexed dummy	DOL	1,794	.57	.49	0	1
State unemployment	BLS	1,186	5.93	2.05	2.30	17.40
National inflation rate	BLS	1,794	4.61	2.82	1.30	13.50
UI reserve ratio (one lag)	DOL	1,743	1.83	1.37	−.38	5.59
White, non-Hispanic share	CPS	1,151	.77	.15	.18	.99

Sources.—DOL = US Department of Labor, *Financial Data Handbook* 394; CPS = Integrated Public Use Microdata Series, Current Population Survey; BLS = Bureau of Labor Statistics, Local Area Unemployment Statistics.

In this analysis, I only consider the first instance when states began indexing their taxable wage bases, and I do not consider instances when the states may have changed the provisions of their indexation formula, nor instances where states stopped (temporarily or not) indexing their wage bases, since the factors that converge to make a state first index its taxable wage base may be quite different from the factors that cause a state to change its indexation policy over time. Moreover, there is more variation in state UI finances between states with and without indexation than within the subset of states with indexation in place.

Descriptive statistics for each of the substantive variables are summarized in table 5, and table 6 presents the results of the regressions. First, consistent with the predictions of my own conceptual model, union membership, Democratic control of veto points, past benefit indexation, and the ratio of the taxable wage base to average wages are all strongly and positively correlated with adoption of UI indexation in model 1.[20] A state with complete Democratic control of legislative veto points has a predicted probability of indexation that is about five times higher than the probability of indexation for a state with complete Republican control, holding all

20. I focus on the levels of (as opposed to the changes in) these variables, since I am trying to capture the enduring effects of these features of the strategic context of UI policy making. At the advice of one of the reviewers, however, I explored whether these variables had effects both as levels and changes. I found that both benefit indexation and the ratio of the taxable wage base to average wages had statistically and substantively strong effects when entered as lagged variables and first-differenced variables simultaneously. This means that the move from unindexed to indexed benefits, as well as an increase in the ratio of the taxable wage base to average wages, had independent effects that increased the probability that states would index their taxable wage bases aside from the levels of those variables.

TABLE 6. Event History Analysis of State Unemployment Insurance Taxable Wage Base Indexation

Variable	Baseline (1)	Baseline with Interaction (2)	Diffusion (3)	Economic Conditions (4)	Race (5)	Full (6)
Union membership	.07*	.07*				.00008
	(.04)	(.04)				(.08)
Democratic control of veto points	.58*	.22				−.49
	(.23)	(.17)				(.50)
Benefits indexed (one lag)	2.90**	2.05+				.25
	(.97)	(1.06)				(1.10)
Taxable wage base/ average wages (one lag)	4.69*	4.67*		9.45**		8.30*
	(2.13)	(2.13)		(3.08)		(3.69)
Democratic control × benefits indexed		.39				.84
		(.28)				(.54)
Policy diffusion dummy			.62			.89
			(.53)			(.69)
State unemployment				.05		.13
				(.12)		(.11)
National inflation rate				−.11		−.10
				(.13)		(.13)
UI reserve ratio (one lag)				.08		.43
				(.35)		(.51)
White, non-Hispanic share					3.56	.94
					(3.40)	(5.30)
Year trend	Yes	Yes	Yes	Yes	Yes	Yes
N	1,425	1,425	1,794	1,186	1,151	868

Note.—Robust standard errors (clustered at the state level) in parentheses below unstandardized logit coefficient estimates. Note that constants are not shown. Data are for 1964 to 2008.

+ $p < .10$

* $p < .05$.

** $p < .01$.

other variables at their observed values. Similarly, a state with the highest union density has a predicted probability of indexation that is nearly 20 times higher than a state with the lowest union density. Having benefits previously indexed and having a high ratio of the taxable wage base to average wages similarly increases the probability of indexation. Individual outlier states or years do not appear to be driving these results. Jackknifed estimates of the model, in which I successively leave out each state or year, produce similar results as the baseline model (results not shown). The results are also robust to estimating the model using the rare events correction method as proposed by Gary King and Langche Zeng (2001; results not shown).

Model 2 shows support for interactive effects between the political strength of UI advocates and policy legacies and framing, suggesting that policy legacies and framing matter more for Democrats than Republicans. An interaction between Democratic control of veto points and the existence of UI benefit indexation produces a substantively and statistically significant probability increase.[21] The positive effect of Democratic control of veto points on taxable wage base indexation appears to be driven entirely by states with previously indexed UI benefits. This suggests that having a favorable policy environment is an important precondition for advocates wishing to implement taxable wage base indexation.

Models 3–5 examine the three alternative theories of taxable wage indexation. In brief, I find no support for these other explanations. Model 3 finds no relationship between the policy diffusion variable and implementation of indexation, at least at conventional levels of statistical significance. Model 4 tests the relevance of economic conditions, and it finds no support for state unemployment, national inflation, or UI trust fund solvency as predictors of indexation. As before, the ratio of the taxable wage base to average wages is positively correlated with indexation, which is the opposite of what would be predicted by the economic conditions theory. Finally, I find no correlation between the racial composition of a state and implementation of taxable wage base indexation in model 5.[22]

I produce a fully specified estimation with all of the relevant variables in model 6. The interaction between prior benefit indexation and Democratic control of state veto points again produces statistically significant changes in the probability of indexation. Increasing the number of veto points held by Democrats from zero to three nearly triples the predicted probability of indexation, though only in states that previously indexed their benefits to wage growth. Increases in the ratio of the taxable wage base to average wages also independently produce statistically and substantively significant increases in the probability of indexation. No other variables appear to be statistically significant at conventional levels of significance.

21. Interactions between union membership and benefit indexation are not statistically significant at conventional levels, nor are interactions with the ratio of the taxable wage base to average wages.

22. I find stronger, but less robust, results for the African American share of the state's population. A larger African American population is negatively correlated with taxable wage base indexation, but this correlation disappears in the fully specified model.

Overall, then, these models provide strong evidence for the model of indexation I advance premised on control of veto points and policy design and framing. Consistent with the notion that indexation of the taxable wage base is necessary to prevent erosion of UI benefits through fiscal constriction, I find that indexation was most likely when UI advocates were in control of legislative veto points (or conversely, when UI opponents were not in control of those veto points) and when those UI advocates could successfully draw upon a favorable preexisting policy environment.

Two changes in the American political economy may help to explain why there have not been recent successful efforts at indexation of state taxable wage bases. First, union membership is in steep decline, weakening a key interest group that would lobby for indexation. Barry Hirsch and his coauthors report that union membership fell from 29 percent of nonagricultural wage and salary workers in 1964 to 12 percent in 2010 (2001). The decline of unions may directly reduce the probability of indexation and may also have indirect effects on the behavior of political parties toward UI policy, especially for Democrats. New research on parties emphasizes the central role that organized interests play in determining party policy positions. Thus it is plausible that as labor unions fall in power, their priorities are less likely to be reflected in the policies pursued by Democrats, including UI solvency improvement (see, e.g., Karol 2010; Bawn et al. 2012).

Second, the ratio of the taxable wage base to average wages has fallen dramatically in nonindexing states, giving opponents of the system an opportunity to frame taxable wage base indexation as a large tax hike on employers. Indeed, business groups at the state and national levels have employed precisely this logic to oppose further increases or indexation of state taxable wage bases. For example, the Arkansas State Chamber of Commerce referenced the gap between the taxable wage base ($12,000 in 2012) and proposed increases to $20,000 or $25,000 as a "damaging 100 percent increase in Arkansas' UI taxes" (Hall 2011, 5). Similarly, the National Federation of Independent Business (NFIB) in Pennsylvania expressed strong opposition to President Obama's proposals to increase and index the federal taxable wage base, starting at $15,000, citing the large gap between that new base and Pennsylvania's base ($8,000 in 2012), and stating that, "it is difficult to imagine a more powerful disincentive to hiring new workers than a massive tax penalty for hiring new workers" (NFIB, n.d.).

At the national level, too, the US Chamber of Commerce opposed proposed increases in the taxable wage base in 1991—even when paired with

a reduction in employer tax rates—because of the large difference between the current taxable wage base and the new wage base. In Congressional testimony, the Chamber wrote: "The sponsors of H.R. 1367 propose a mammoth employer tax increase. They claim to balance this by a reduction in the tax rate, but the reduction does not even come close to offsetting a more than seven-fold multiplying of the wage base. . . . Even looking at the annualized average weekly wage . . . rather than the maximum taxable wage base, this increase will result in . . . a three-fold increase" (US House of Representatives, Ways and Means Committee 1991, 115). In the same Congressional hearing, a representative of the Council of State Chambers of Commerce bemoaned that the "increased taxes on employers by raising the wage base to an ever-escalating FICA tax base is [*sic*] enormous, even with gradual decreases in the FUTA tax. The 1992 tax increase for an employer with an average maximum wage base of $27,900 is 273 percent" (US House of Representatives, Ways and Means Committee 1991, 118). In each of these cases, employer groups who were opposed to increasing UI spending framed the tax increase associated with indexation and an increase in the taxable wage base in terms of the percentage difference between the old and the proposed tax base, a gap that had only grown larger precisely because of the lack of indexation in most states.

CONCLUSION

This article evaluates the correlates of long-term erosion in state UI finances and concludes that the largest contributors to variation in state UI trust fund solvency have been changes in UI taxes, not overly generous benefits or poor economic conditions. In particular, states are reducing the proportion of wages on which employers pay UI taxes. Diminishing UI trust fund solvency threatens the ability of the program to offer automatic stabilization to the economy and also means that states cannot make important expansions necessary to ensure that the program remains effective over time, thereby retrenching the program's protections.

I characterize this phenomenon of deliberate erosion in a policy's tax base as fiscal constriction, a strategy employed by opponents of a social program to achieve retrenchment through a deliberate failure to maintain a program's tax base. Consistent with this concept of fiscal constriction, I find that, historically, indexation of a state's taxable wage base was most

likely to occur in a state when advocates of more generous UI benefits controlled key veto points in the state legislative process; indexation was less likely to occur when advocates of UI retrenchment held those veto points and could stymie legislative action to improve solvency. But political strength has been insufficient on its own; advocates of more generous UI needed to be able to draw on favorable past policy and to avoid the possibility that indexation would be framed as a massive tax hike on employers. Together, these results suggest that future action to improve UI solvency through increased taxes (and tax bases in particular) is unlikely to occur at the state level in the absence of a federal intervention, since important advocates of UI tax base indexation are in decline and the proposals can be increasingly framed as requiring huge hikes in employer taxes.

Perhaps the most straightforward intervention would be for the federal government to index its own UI taxable wage base, which would set an indexed floor for all states to follow. Barring such a direct intervention, the federal government could also offer financial incentives to states that adopt reforms to improve UI solvency. One model for the federal government to consider might be the UI Modernization Program that Congress included in the 2009 American Recovery and Reinvestment Act (commonly called the Stimulus). The Modernization Program offered states incentive payments to defray the costs of their UI programs if they adopted certain measures to improve access to UI benefits, especially for disadvantaged workers. In all, 39 states claimed at least some of their incentive payments, collectively passing a number of reforms that broaden eligibility for the program for an estimated 200,000 unemployed workers each year (NELP 2012). A similar incentive program might encourage states to improve their finances, especially through indexing their taxable wage bases.

In addition to suggesting options for future reform of the UI system, these findings highlight two specific areas of the American unemployment insurance system that deserve further study from scholars of social policy. First, more comparative historical work is needed to understand how individual states passed indexation and other UI tax reform legislation. Understanding the contextual features surrounding state-level changes to the UI system will be important to outlining the possibilities and requirements for future reform efforts. Second, future research ought to probe why the federal government failed to pass a requirement that all states index their taxable wage bases, and more generally, why no reforms to-

ward stronger national standards have succeeded in the UI system. Comparisons with Social Security would be especially useful here given that the Social Security tax base was ultimately indexed by Congress, while the unemployment insurance tax base was not. And even before Congress indexed the Social Security taxable wage base, it raised the base many more times than it did for unemployment insurance.

Finally, this study provides important lessons for students of the welfare state, and for policy makers more generally, about policy design and strategies for social benefit retrenchment. The work of Paul Pierson and his collaborators in the edited volume *The New Politics of the Welfare State* (Pierson 2001) had a major influence on the study of welfare state retrenchment. But one key recommendation of Pierson's work has gone unheeded: the need for researchers to focus on the "programmatic structure" (205) of policies, or details about a policy's eligibility, benefit, and financing provisions (see also Pierson 1995). Pierson's work emphasizes programmatic design as a crucial way that legislators could make changes to a policy, including cuts, in ways that were hard for the public and other actors to recognize. Recent work seeks to remedy that lacuna, focusing on the politics of benefit indexation in particular (see, e.g., Green-Pederson et al. [2013] and the edited volume more generally), but generally does not examine the politics of financing social benefits.

The concept of fiscal constriction that I introduce in this article is one that could be fruitfully applied to the financing mechanisms of other social programs aside from unemployment insurance, particularly other social insurance schemes. In this way, fiscal constriction provides an avenue for returning a focus to programmatic design and the ways that technical changes in policy parameters can result in gradual but ultimately substantial changes in those policies over time. More practically, the study of fiscal constriction provides insight for policy makers who wish to construct social programs that are durable over the long run. Legislators and advocates must be mindful of how sensitive their policies are to changes in the programs' tax bases; otherwise those programs may be prone to gradual erosion over time, as with American unemployment insurance.

NOTE

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opment of unemployment insurance, the politics of taxation in advanced economies, and the political mobilization of business. He acknowledges very helpful feedback from the journal's reviewers and editors, as well as participants in workshops at Harvard and the Tobin Project. He also acknowledges financial support from the National Science Foundation's Graduate Research Fellowship Program and the Tobin Project.

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