Experience Rating of Unemployment Insurance in the US: A Model for Europe?

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Introduction

Unemployment insurance (UI) is an important element of social security systems in OECD countries. Most UI systems use uniform payroll taxes to finance unemployment benefits. This method of UI financing is frequently criticised for distorting the layoff decisions of firms. Employers do not take into account the cost imposed on the UI system if workers are dismissed and become unemployed. This gives rise to too many layoffs, increasing UI contribution rates and unemployment. Moreover, these UI systems subsidise firms or sectors with high labour turnover and tax sectors with low turnover. For instance, empirical studies for Canada (OECD 2004) and Germany (Genosko, Hirte, and Weber 1999) show that the UI systems existing in these countries subsidise the construction sector and penalise service industries. This distorts the allocation of resources across sectors.

The UI system in the US tries to avoid these inefficiencies by means of experience rating (ER). ER implies that the UI contribution rate is firm specific and depends on the extent to which employees laid off by a firm claim unemployment benefits. Recently, proposals have been made to introduce ER in Europe as well.

How does ER work in the US?

In the US, each state administers a separate self-financing UI program within guidelines established by federal law. The Tax Equity and Fiscal Responsibility Act of 1982 imposes certain restrictions on the states' UI tax structure which effectively force the states to use ER in UI financing.

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In all states, employers pay UI contributions. The contribution rate is firm-specific and is adjusted yearly. The rate rises if UI benefits claimed by former employees of a firm increase and vice versa. It varies between a lower and an upper limit that differ from state to state. The base of UI contributions is limited to a certain amount of yearly wages per employee, the contribution ceiling. In 2005, the maximum rates range from 5.4 percent of taxable payrolls in Mississippi up to 11 percent in Minnesota and the minimum rates are between 0 percent in Hawaii and 1.9 percent in Connecticut. The lowest contribution ceiling is USD 7,000 in Mississippi and the highest USD 32,300 in Hawaii. Figure 1 shows the minimum and maximum rates of selected states, as well as the contribution ceilings.

States use different formulas to determine the yearly change in the firm-specific contribution rate. At present there are four methods, the reserve-ratio, the benefit-ratio, the benefit-wage-ratio, and the payroll variation method, as well as combinations of the methods. In 2004, the UI systems of the most popular type, the reserve-ratio systems, insured 57.93 percent of covered employment in the US. A brief overview of the methods is given in Table 1.

For instance, the reserve-ratio method implies that each firm has an individual account where contributions paid are credited and benefits received by employees dismissed by the firm are charged. The difference is related to the firm's average payroll during the last three years. The firm's contribution rate depends on how this ratio develops over time. The benefit-ratio method, in contrast, only considers the ratio between benefits claimed and the firm's payroll.
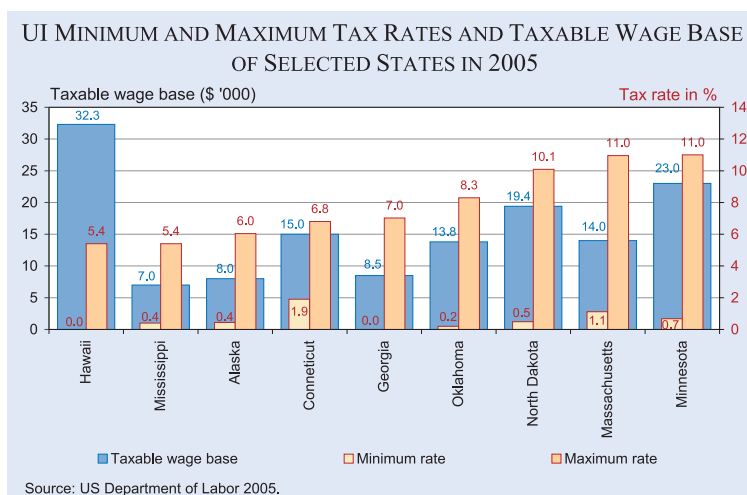
Figure 1

UI Minimum and Maximum Tax Rates and Taxable Wage Base of Selected States in 2005

Source: US Department of Labor 2005.

Table 1

Types of ER in the US

ER type			States*	Percentage of insured US employment (2004)
Reserve ratio	RR	$\dfrac{\text{firm's contributions minus benefits charged in the past}}{\text{3 years' average of firm's taxable payrolls}}$	33	57.93
Benefit ratio	BR	$\dfrac{\text{benefits charged (last 3 years)}}{\text{firm's taxable payrolls (last 3 years)}}$	17	40.46
Benefit-wage ratio	BWR	$\dfrac{\text{wage of dismissed employees (last 3 years)}}{\text{firm's taxable payrolls (last 3 years)}} * \dfrac{\text{total benefit payments (last 3 years)}}{\text{total wages of dismissed employees (last 3 years)}}$	2	1.39
Payroll decline	PD	firm's taxable payrolls (last 3 years)	1	0.23

Notes: The periods for which benefits, contributions and payrolls are accounted vary across states. The table shows the most frequently employed rules.
* Including DC, Puerto Rico and Virgin Islands.

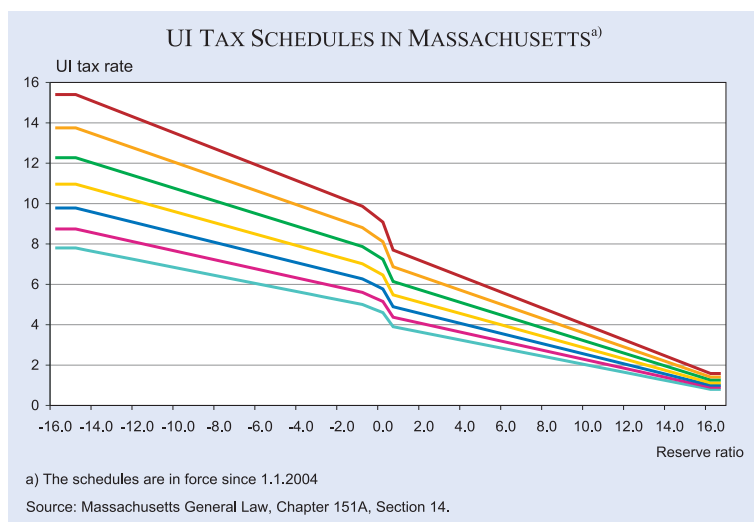Source: US Department of Labor (2004a and 2004b).

In most states, a rate schedule converts the ratio for each employer into an individual tax rate. The schedule determines the minimum and the maximum rate and accounts for the solvency of the aggregate state system. Figure 2 shows the range of rate schedules in Massachusetts. A higher fund balance triggers a rate schedule with lower rates and vice versa. Some states levy additional solvency taxes from employers in the case of low UI fund balances. Examples are given in Table 2.

There is an ongoing debate in the US about the fact that the existing UI systems are only imperfectly experience rated. The problem is that employers' contributions rise if firms lay off more workers but the rate increase reflects less than the full costs of unemployment benefits paid to the firm's former employ-ees. If the firm is already at the maximum rate, layoffs have no further impact on UI contributions.

Incomplete ER implies that the cost a layoff imposes on the UI system is not perfectly internalised. As a result, layoffs are encouraged and firms or sectors with low layoff risks subsidise those with high risks. Tannenwald, O'Leary and Huang (1999) show that the key features of the states' UI tax structure, which determine the differences in the degree of ER between the states, are the ER method, the taxable wage base, the range of tax rates and the solvency tax rates. The ER index in Table 2 calculates the share of benefits effectively charged to employers according to their layoff history divided by total benefit payments.[1] In 2002, North Dakota held the highest ER index value with 80 percent and Georgia the lowest with 14 percent.

Figure 2

UI TAX SCHEDULES IN MASSACHUSETTS[a]

a) The schedules are in force since 1.1.2004

Source: Massachusetts General Law, Chapter 151A, Section 14.

What are the economic effects of ER?

Most of the debate on the economic effects of ER focuses on its impact on labour turnover, employment and welfare.[2]

[1] Non-charged benefit payments are those for which employer taxes do not fully cover the benefits charged. They also result from charges to employers who have gone out of business and from benefits which for certain reasons are excluded from charging.
[2] For the following and for an overview over the theoretical and empirical literature, see Anderson and Meyer (2000) as well as Cahuc and Malherbet (2004).

Table 2

UI financing in selected states

State	Formula type	UI solvency tax	Benefits charge to employers*	ER index (2002)
Alaska	PD	/	In proportion to base-period wages	Not applicable
Connecticut	BR	/	In proportion to base-period wages	68
Georgia	RR	/	Most recent employer	14
Hawaii	RR	/	In proportion to base-period wages	51
Massachusetts	RR	0.3–0.9%	Inverse chronological order	56
Minnesota	BR	/	In proportion to base-period wages	30
Mississippi	BR	1.0%	In proportion to base-period wages	44
North Dakota	RR	/	In proportion to base-period wages	80
Oklahoma	BWR	Not specified	In proportion to base-period wages	22

Notes: A detailed comparison of the UI systems currently in force is given by US Department of Labor (2004a).
* Adopted in 34 States, the most widely used charging method is the one that charges benefits to all employers in proportion to the wages earned by the worker with the employer. The principle of charging the most recent employer is applied in 12 states.

Sources: US Department of Labor (2003 and 2004a).

ER reduces labour turnover

Theoretical and empirical findings (for example Topel 1983 in an empirical analysis for the US and Malherbet and Ulus 2003 in a recent theoretical analysis) suggest that an increase in the degree of ER reduces labour turnover and smoothes employment over the seasons and the business cycle. This is intuitively plausible: ER makes layoffs more costly and thus induces firms to use other methods for capacity adjustment than layoffs and hiring.

ER increases equilibrium employment and welfare

Theoretical predictions on the effects of ER on equilibrium employment are less obvious. In his early contribution to the debate, Feldstein (1976) points out that ER makes layoffs more costly, so that firms will be more reluctant to dismiss workers at any point in time. But on the other hand, as Burdett and Wright (1989) emphasise, ER will also reduce job creation because firms anticipate that it will be more costly to dismiss workers in the future. More recent theoretical studies (for example Albrecht and Vroman 1999, and Fath and Fuest 2005a) find that the first effect dominates, so that overall employment increases as a result of introducing ER. Anderson and Meyer (2000) confirm this result in their empirical study for the US. There are several possible explanations for this finding. Firstly, ER induces firms to lay off fewer workers as mentioned above. Secondly, firms have incentives to support dismissed workers in their search for new employment. Thirdly, ER implies that firms have an incentive to review claims and contest those who are not really the result of a layoff. This relieves the UI fund of unjustified claims and reduces labour costs. As a consequence of the cost reduction, overall employment rises.

In models with imperfect labour markets and involuntary unemployment, policies that increase employment will usually also enhance economic efficiency. Accordingly, most studies of the efficiency properties of ER find positive welfare effects.[3]

Would ER be a desirable element of European UI systems?

If it is true that the costs of layoffs in terms of benefits to the unemployed should be borne by those firms responsible for the layoffs, the case for ER should be much stronger in Europe than in the US because unemployment benefit levels in Europe are usually much higher. Despite this fact, ER in Europe is the exception rather than the rule.

ER in Europe

Several European countries use elements of firm-specific ER in UI financing, but its application is much less substantial than in the US. Table 3 shortly describes the respective UI financing systems.

Next to elements of firm-specific ER, there are also systems where contribution rates reflect differences in labour turnover across sectors. These systems do not try to internalise costs of layoffs at the firm level but address the problem of cross-subsidisation

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[3] For instance, in an implicit contract model, Fath and Fuest (2005b) show that UI without ER gives rise to too many layoffs whereas an experience rated system does not have this disadvantage.

Table 3

European UI systems with firm-specific ER

Denmark	UI funds are organised by trade unions. The UI scheme is voluntary and covers about 90 percent of the workers. Insured employees pay uniform base membership fees to the UI funds. The government subsidises the fund to balance any deficit. *Experience rating*: In the case of unemployment of the laid-off person, the employer has to pay an amount equivalent to the daily cash unemployment benefit for the first and the second day of unemployment.
France	Contributions are paid by employees and employers (total rate in 2004: 6.4 percent; employees: 2.4 percent, employers: 4 percent). The UI scheme is self-financing, contribution rates are adjusted regularly. *Experience rating*: 1. "Contribution delalande" for dismissed persons at the age of and above 50 up to a payment of 12 months of gross earnings dependent on the size of the firm and the age of the laid-off person. 2. Penalty to employers (payment of one month of gross earnings to the UI fund) for not proposing the "PARE anticipé" ("return to employment aid plan") at the beginning of the period of notice.
Germany	Employers and employees both pay proportional contributions of 3.25 percent of gross earnings to the UI fund. The government covers shortfalls of the fund. *Experience rating*: Employers compensate the fund for the amount of benefit payments to dismissed workers at the age of and above 57. The liability arises for long-term employees (more than 10 years) at large firms.
Italy	The UI contribution rate is 2.51 percent of gross earnings (employees: 0.3 percent, employers: 2.21 percent). Employers in manufacturing pay further 2.2 percent to the wage compensation fund (Cassa Integrazione Guadagni) which entitles the unemployed in this sector to higher benefits from the fund. The government balances shortfalls of the National Institute of Social Insurance. *Experience rating*: In the case of permanent collective dismissals, the employer has to pay six times the initial monthly benefit a laid-off worker is entitled to. This amount is reduced to 50 percent if the redundancy is based on a trade union agreement.
Norway	Employers' contributions are enclosed in the payment of 14.1 percent of payrolls to the social insurance system. The government balances any deficit of the UI scheme. *Experience rating*: In the case of "temporary layoffs", unemployment benefits of the first three days are borne by the employer.

Sources: European Commission (2005), European Foundation for the Improvement of Living and Working Conditions (2003), Werner and Winkler (2004), *Denmark*: Arbejdsministeriet (2001), *France*: Assédic (2004), *Germany*: SGB III, §147a (valid on 1 April 2005), *Italy*: European Commission (2003).

between sectors by levying higher contribution rates in sectors with high labour turnover and vice versa. Table 4 gives a short description of the European UI systems with sector-specific ER.

Sector-specific ER may not only reduce distortions in the intersectoral allocation of resources. It may also change the wage-setting behaviour of the trade unions. In the cases of Sweden and Finland, unions are responsible for a part of the UI funding and decide on sector-specific contribution rates. Holmlund and Lundborg (1988) show that an increase in the funding responsibility of wage-setting unions (which means an increase in the degree of sector-specific ER) reduces wages and therefore raises employment. Unions have to take into account that the premiums for their members depend on the number of unemployed fund members. This may dampen wage claims of the trade unions.

Summarising, Tables 3 and 4 show that there are some elements of ER in European UI systems, but these elements are quite weak, compared to the US. Why is there so little ER in Europe? Firstly, one might argue that employment protection legislation,

which is much more strict in Europe than in the US, serves as a substitute for ER. Secondly, ER may not be adopted because it may reduce risk sharing across firms, sectors or regions. For instance, if a sector is affected by a negative economic shock, ER will increase the cost of adjusting to this shock if this adjustment requires layoffs.

Is employment protection legislation a substitute for ER?

There are only few contributions in the literature that analyse the relationship between ER and employment protection legislation. Cahuc and Malherbet (2004) analyse this issue in a model with search frictions, minimum wages and firing costs due to employment protection legislation. In their model, introducing ER increases employment and the welfare of low skilled workers for reasonable parameter values. Fath and Fuest (2005b) consider an efficiency wage model with heterogeneous workers, where labour turnover under laisser faire is inefficiently high. They compare ER and employment protection legislation as alternative means of reducing labour turnover. It turns out that ER reduces labour turnover and increases employment and

Table 4

European UI systems with sector-specific ER

Finland	UI funds are organised by trade unions. Membership in an UI fund is voluntary. 80 percent of the employees are organised in trade unions and generally are also members of an UI fund. Earnings-related UI benefits are financed by insurance premiums and via general contributions of employees (0.25 percent of gross earnings) and employers (0.6 percent up to EUR 840,940 and 2.5 percent on payrolls beyond this amount). The scheme is subsidised by the government. *Experience rating*: UI funds of the trade unions pay 5.5 percent of the daily benefit to unemployed union members. Contribution rates are yearly adjusted by the union councils. At present, the premium rate in the construction trade union is 0.5 percent of gross earnings whereas the metalworkers' union members pay 0.35 percent of gross earnings to the fund. In the 1990s, the premium rates varied across industries from 0.1 percent to 2.2 percent.
Netherlands	At present the contribution rates for the general unemployment fund (Algemeen werkloosheidsfonds) are 5.85 percent for employees and 2.45 percent for employers. Contributions to the fund for dismissal indemnity (Wachtgeldfonds) are paid by employers with varying rates across sectors. The UI scheme is self-financing. Contribution rates of the two funds are yearly adjusted. *Experience rating*: The first six months of unemployment benefits are paid from sector specific funds (Wachtgeldfonds). At present, the contribution rates to these funds range from 0.66 percent of earnings in the banking sector up to 6.62 percent in temporary employment companies.
Spain	Employers and employees both pay UI contributions. The government balances the benefit payments not covered. *Experience rating*: In the case of a permanent employment contract, the contribution rate is 7.55 percent (employees: 1.55 percent, employers: 6 percent). For fixed-term contracts, employees pay 1.6 percent and employers pay 6.7 percent for full-time work and 7.7 percent for part-time work or if the employer is an agency specialising in temporary work contracts.
Sweden	Employees may be voluntary members of one of the 38 UI funds that are mostly organised by trade unions or employer organisations. The UI scheme covers over 80 percent of the employees. Insured employees pay a specific financing contribution and employers pay 3.7 percent of payrolls. Uncovered expenditures are financed by state resources. *Experience rating*: The membership fees to the funds vary across industries. At the moment, the AEA (fund for graduates) collects an amount of SEK 1,080 (EUR 118) per year from each member whereas the fund for the construction sector takes SEK 1,416 (EUR 155) and Ledarna (fund for managers and professionals) takes SEK 2,256 (EUR 248) per year.

Sources: European Commission (2005), *Finland*: European Commission (2002), Sinko (2004), Työttömyyskassojen Yhteisjärjestö, *The Netherlands*: Uitvoeringsinstituut Werknemersverzekeringen (2005), *Sweden*: Arbetslöshetskassorna Samorganisation.

welfare. Employment protection legislation in the form of mandatory severance payments may also reduce labour turnover but has the negative side effect of reducing employment. These results suggest that employment protection legislation is a poor substitute for ER.

The problem of risk sharing

The fact that a system of UI with full ER internalises the costs of layoffs may increase the efficiency of layoff decisions, but it may also include the cost of reducing risk sharing. If it is the purpose of UI systems to provide insurance across firms and sectors, full ER is not appropriate. Firms affected by negative shocks will usually have to dismiss workers. ER would increase the costs of this adjustment and might even lead to bankruptcies. As Blanchard and Tirole (2003) state, this suggests that UI systems should not necessarily imply full ER. A degree of ER below unity may reflect a compromise between the desirability of internalising the costs of layoffs and

the objective to provide some risk sharing with respect to layoff costs across firms and sectors. Moreover, a certain time lag between an increase in layoffs and the corresponding increase in contribution rates may be helpful to avoid ER imposing inappropriate costs on firms affected by negative shocks.

Conclusions

The financing of unemployment benefits by uniform payroll taxes distorts layoff decisions and leads to a cross subsidisation across sectors with different labour turnover. ER makes it possible to avoid these distortions. Although there are important differences between the European and US labour markets, there are good reasons to expect significant gains from the introduction of ER in Europe. If risk sharing across firms and sectors is considered to be a desirable element of UI systems, this could be taken into account by introducing partial rather than full ER into the UI financing of European countries.

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