The effect of unemployment benefits on re-employment rates: Evidence from the Finnish unemployment insurance reform

Roope Uusitalo [a,c,*], Jouko Verho [b,c]

[a] Government Institute for Economic Research, Finland
[b] Department of Economics, University of Helsinki, Finland
[c] Institute for Labour Market Policy Evaluation, Uppsala, Sweden

ARTICLE INFO

ABSTRACT

In January 2003, the unemployment benefits in Finland were increased for workers with long employment histories. The average benefit increase was 15% for the first 150 days of the unemployment spell. At the same time severance pay system was abolished. In this paper we evaluate the effect of the change in the benefit structure on the duration of unemployment by comparing the changes in the re-employment hazard profiles among the unemployed who were affected by the reform to the changes in a comparison group whose benefit structure remained unchanged. We find that the change in the benefit structure reduced the re-employment hazards by on average 17%. The effect is largest at the beginning of the unemployment spell and disappears after the eligibility period for the increased benefits expires.

© 2010 Elsevier B.V. All rights reserved.

1. Introduction

The Finnish unemployment insurance (UI) system was reformed in January 2003. As an attempt to simplify the benefit rules, a severance pay system that had existed until the end of 2002 was abolished and daily UI allowances correspondingly increased for 150 days. The average increase in the daily UI allowance was 15%, but only the unemployed with long employment histories were eligible for this higher allowance.

According to the search theory such a change from a lump-sum severance pay to a higher daily allowance should weaken the incentives of job search and increase the duration until re-employment. The effect on re-employment hazards should be largest at the beginning of the unemployment spell and decrease as the benefit expiry date approaches. In this paper we use the Finnish UI benefit reform to evaluate these predictions.

The Finnish benefit reform provides a relatively clean policy experiment that can be used to evaluate the effects of benefit structure on the re-employment rates. Since only part of the unemployed were affected by the reform, we can compare the changes in re-employment rates in a group whose benefit structure changed to a comparison group whose benefits remained unchanged. The reform also took place at a time when the macroeconomic environment was stable and at a time when no other major policy reforms were implemented. These

features minimise the risk that our results would be contaminated by macroeconomic cycles or other policy changes.

A fundamental identification problem in analysing the effects of UI benefits on re-employment rates is that UI benefits depend on previous earnings. However, pre-unemployment earnings are likely to be correlated with several other factors that affect re-employment rates. Lack of independent variation in UI benefits in a typical cross-section data makes it very difficult to disentangle the effect of UI benefits from the effects of these other factors.[1]

A common strategy to overcome this problem and to identify causal effects of UI benefits on re-employment rates is to exploit policy reforms that have led to different changes in benefits in different groups of unemployed workers. This approach has been used previously in evaluating policy reforms in Germany (Hunt, 1995), Sweden (Carling et al., 2001; Bennmarker et al., 2007), Austria (Lalive et al., 2006) and the New York State (Meyer and Mok, 2007).[2]

Our basic approach is similar to the approach used in these previous papers but our set up also differs in several ways. First, in most previous papers the identification is based on comparing the changes in re-employment rates across groups that face different changes in benefits

* Corresponding author. Government Institute for Economic Research, Finland. Tel.: +358 40 304 5512; fax: +358 9 703 2968.
E-mail address: Roope.Uusitalo@vatt.fi (R. Uusitalo).

---

[1] Krueger and Meyer (2002) provide a literature review on the effect of UI benefits on unemployment duration and a more detailed discussion on identification problem when using cross sectional variation in the replacement rates. Most previous Finnish studies on the effects of UI benefits rely on cross sectional variation (e.g. Kettunen, 1993).

[2] In addition to studies on benefit reforms, previous researchers have also attempted to identify the causal effects of UI-benefit by exploiting details in benefit rules that should have no effects of re-employment probability (e.g. Røed and Zhang, 2005).

because they differ in the pre-unemployment wage. We identify the effect of UI benefits based on the differences in the benefit changes across groups that differ mainly in the length of previous work experience. This may be important if demand for workers with different skills changes differentially at the time of the reform. Second, we examine a more experienced group that becomes unemployed after having been displaced from a permanent job. Third, in our case the benefit changes involve only new entrants to unemployment, which makes it easier to account for possible anticipatory effects. Finally, our setting involves not only an increase in benefits but also a removal of severance pay and replacing it with higher UI allowance paid conditional on remaining unemployed. Since the expected value of the benefit increase was roughly equal to the severance pay, our estimates should be interpreted as the effects of (dis)incentives created by UI benefits rather than a combined effect on liquidity constraints and incentives.

We have access to extremely detailed administrative data. Data contain the dates of entry into and exit out of unemployment. Our data also include detailed information on the benefits, reported by the UI funds themselves. We have information on the daily amounts of benefits, the dates when the benefits are paid out and, importantly, administrative information on the remaining benefit eligibility at the end of each quarter. The data also contain information on the key variables that determine the eligibility for the higher daily UI allowance and the eligibility for the severance pay. Unfortunately no information on the amount of severance payments is included in the data.

In addition to estimating the average effect of the change in benefit structure on the re-employment hazard, we also estimate the effect of benefit structure on the entire re-employment hazard profile. In practise this is done by allowing the effect of the reform to vary across elapsed duration of unemployment as predicted by the search theory. A similar approach has been used in Lalive et al. (2006) and Bennmarker et al. (2007). In contrast to these papers, we find that the increase in the unemployment benefits had a large and statistically significant negative effect on the re-employment rates during the first months after entry into unemployment. As predicted by the search theory, this effect disappears after eligibility for the higher benefits expires. If we restrict the effect to be constant over elapsed duration, we find a relatively large, 17%, decline in the re-employment hazard. This corresponds to an 12% increase in duration until employment.

The remaining part of this paper is organised as follows. In Section 2, we describe the details of the Finnish unemployment benefit system and the 2003 benefit reform. Section 3 describes the data and Section 4 the empirical methods. The main results are presented in Section 5 and further results regarding the effects of abolishing the severance pay system in Section 6. Section 7 concludes.

2. The Finnish unemployment benefit system

The Finnish unemployment benefit system consists of an earnings-related unemployment allowance paid by the unemployment insurance funds and a flat-rate labour market subsidy paid by the State through the Social Insurance Institution. Membership of UI funds is voluntary, but 85% of all workers and about 90% of the workers over 35 belong to a UI fund, usually the one administered by their trade union.

Eligibility for the earnings-related unemployment allowance requires that the applicant has been employed for at least 43 weeks during the past 28 months and has been a member of a UI fund for at least ten months before becoming unemployed. Those unemployed who do not belong to a UI fund, who do not fulfil the employment condition, or who have exhausted their UI benefits are eligible for the labour market subsidy or the flat-rate basic allowance. In the end of year 2002 the full rate of both the labour market subsidy and the basic unemployment allowance without child supplements was 22.75 euros per day, or 21% of the median wage.

The earnings-related allowance consists of a basic component equal to the basic allowance and an earnings-related component that is 45% of
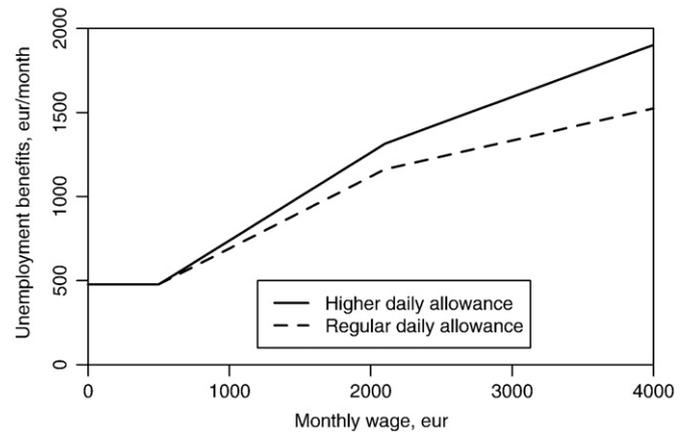

Fig. 1. Earnings-related UI benefits as a function of the pre-unemployment wage. Note: the kink in the benefit schedule is caused by decrease in benefit accrual rate for incomes exceeding 2047 euros.

the difference between the previous daily wage[3] and the basic daily allowance. There is no cap in the benefit level but the monthly wages exceeding 2047 euros (in 2002) increase the benefits by only 20% of the exceeding amount. This causes a kink in the benefit formula displayed in Fig. 1. For a median earner (2300 euros/month) the earnings-related benefits are 53% of the pre-unemployment wage. For a low-income earner (1500 euros/month) the benefits are 61% and for a high-income earner (4000 euros/month) 39% of the pre-unemployment wage.

Both UI benefits and wages are subject to progressive income tax. The net of tax replacement rates are also affected by the earned income tax deduction that cannot be made from UI benefits and by housing subsidies that the unemployed may be eligible for depending on the family size and the incomes of other household members. According to a microsimulation model used at the Government Institute for Economic Research, the net replacement rates for a single earner without children were on average 10 percentage points higher than the gross replacement rates in 2002, but this varies across income levels and, because taxation is based on annual earnings, depends on the number of months that a person is unemployed during the year.

The earnings-related unemployment allowance can be paid for five days per week up to 500 days after which those who are still unemployed may receive the labour market subsidy. At the end of 2002, a total of 130,000 persons were receiving the earnings-related allowance, 19,000 the basic unemployment allowance and 151,000 the labour market subsidy.

The severance pay was a lump-sum payment paid by the Redundancy Payment Fund for the workers who had lost a permanent job because their employer had to reduce workforce due to "economic or production-related reasons" and whose re-employment was expected to be difficult due to "age or other reasons". The lower age limit was 45 and the required continuous work history was 5 years with the previous employer or 8 years with the two previous employers. The size of the severance pay depended on age, previous earnings and number of years employed with somewhat different rules in different sectors. The severance pay was exempt from the income tax and corresponded to roughly one month's pay.

An important feature of the Finnish unemployment benefit system is a benefit extension for those who are over 55 when they become unemployed. In 2002, these unemployed workers could receive earnings-related unemployment benefits up to age 60 and then apply for an unemployment pension. This benefit extension has dramatic effects for the unemployment rates for those over 55 (Hakola and Uusitalo, 2005; Kyyrä and Wilke, 2007). To make sure

---

[3] Holiday pay is excluded and the compulsory employee pension and UI contributions (4.8%) are deducted from wages before calculating the UI benefits.