On-the-job search equilibrium with endogenous unemployment benefits

Arnaud Chéron*a,b,⁎, François Langota,c,d,e

a GAINS-TEPP (Université du Maine), France
b EDHEC, France
c Cepremap, France
d IZA, Germany
e ERMES (Université de Paris 2), France

ABSTRACT

This paper develops an on-the-job search model with wage posting where unemployment benefits are proportional to past wages. We emphasize that this contributes to increasing the reservation wages of unemployed workers and introduces a feedback effect of the distribution of wages on the distribution of unemployment benefits. We show that the model predictions are consistent with some stylized French facts and quantify the impact of inefficient rejections of low-wage offers by the unemployed. We find that, by reducing the indexing of unemployment benefits to previous earnings and increasing lump-sum transfers, it is possible to increase both employment and welfare.

© 2009 Elsevier B.V. All rights reserved.

ARTICLE INFO

Article history:
Received 18 April 2006
Received in revised form 21 September 2009
Accepted 24 September 2009
Available online 8 October 2009

JEL classification:
C51
J24
J31
J38

Keywords:
Unemployment benefits
Wage posting
Equilibrium unemployment

1. Introduction

In their seminal paper, Burdett and Mortensen (1998) (BM henceforth) not only show that pure wage dispersion can exist at equilibrium with the on-the-job search, but also that the interplay with unemployment benefits dispersion gives rise to “inefficient unemployment” according to BM’s definition. This means that some unemployed workers reject low-wage offers, which pushes up the unemployment rate. Although this dispersion of the unemployment benefits (UB) does not reflect any heterogeneity of workers’ ability, these job rejections are unambiguously inefficient. The distribution of UB should therefore collapse to a mass point. However, it is obvious that there is also an insurance motive for the UB system because consumption-smoothing raises the well-being of risk-averse workers.1 This argument favors the indexing of UB to previous earnings, which would lead to a dispersed distribution of UB. From another standpoint, Marimon and Zilibotti (1999) and Acemoglu and Shimer (2000) argue that a generous UB system can be considered as a subsidy to the search activity; this allows workers to find high productivity jobs and contributes to raising output and welfare. Overall, the indexing of UB to previous earnings introduces a trade-off between inefficient unemployment on the one hand, and insurance/subsidy motives on the other hand. The aim of this paper is to quantitatively analyze this trade-off by extending the BM framework to allow UB to be proportional to past wages.

In most OECD countries (see OECD (1994)), the UB distribution is not a mass point. UB systems therefore differ according to average replacement rates but also according to the heterogeneity of the unemployment compensations. The UB system typically embodies two components: a “Beveridge” component (lump-sums) associated with redistribution, and a “Bismarck” component associated with the insurance i.e. the UB indexing to previous earnings. The extent of this indexing differs largely across countries (between 57.4% and 75% of gross wages in France, 60% of the net wages in Germany, 40% of gross wages in Italy…). Moreover, the UK, Australia and New Zealand are noticeable exceptions where there are only lump-sum transfers (the “Beveridge” component).

The first goal of this paper is to show how the on-the-job search equilibrium with endogenous wage dispersion is affected by endogenous
unemployment benefits. Secondly, this paper aims at showing the main trade-offs behind the definition of an optimal UB system in the context of the on-the-job search equilibrium.

Previous works in line with BM assumed that the dispersion of unemployment reservation wages is exogenous. This implies that the position of workers within the unemployment distribution does not depend on the worker’s career and his previous wage earnings (see, e.g. Bontemp and Robin (2002)). Unemployed benefits/reservation wages dispersion modifies the shape of the wage distribution, but the latter has no feedback effect on the distribution of the unemployed. In this paper, we emphasize that the proportionality of UB to past wages implies an unexplored argument discussed in Marimon and Zilibotti (1999) and Fontaine et al. (2006) for alternative explanations of this mobility4).

Because the dispersion of UB is endogenous, our model is a useful tool to examine the impact of reforming the UB system, on unemployment, productivity and welfare. First, our model is well-suited to quantify the potential extent of inefficient unemployment for low-skilled workers in France. We then show that the optimal UB system for this population would correspond to a “Beveridge” system with only lump-sum transfers without any indexing of the UB to previous earnings.

The remainder of the paper is as follows. The first section presents the model. The second section is devoted to calibration, model assessment and policy analysis. The last section concludes.

2. A wage posting model with unemployment benefits proportional to past wages

This paper extends the job search-wage posting framework à la Burdett–Mortensen to allow for endogenous unemployment benefits which are proportional to past wages. Letting b denote this unemployed income, we assume:

\[ b = \rho w_{-1} + \alpha l \]  

where \( w_{-1} \) stands for the former wage, and \( \alpha l \) is a lump-sum transfer. The benefit \( b \) has therefore two components: all the Beveridge component associated with redistribution across the unemployed, and \( \rho w_{-1} \) the Bismarck component associated with insurance.

Overall, this implies that the equilibrium wage offer density function depends on the distribution of unemployed incomes, which in turn depends on the distribution of wage earnings. A first contribution of this paper is then to solve the corresponding fixed-point.

2.1. Labor market flows

We consider a minimum wage \( w \) which bounds below the wage distribution and gives the level of the iso-profit. This suggests that without any variation of the minimum wage, the number of vacancies is fixed as well as contact rates. Therefore, for simplicity, we consider two exogenous arrival rates of wage offers, \( \lambda u \) and \( \lambda 1 \), the unemployment and the employed, respectively.

We denote the steady-state number of employed workers being paid a wage no greater than \( w \) by \( G(w)(1-u) \), where \( G(w) \) is the distribution of wage earnings across employed workers and \( u \) the overall unemployment rate. Let \( F(w) \) be the distribution of wage offers, and \( s \) be the job destruction rate. At steady-state the flow of workers leaving employers offering a wage no greater than \( w \) equals the flow of workers hired with a wage no greater than \( w \):

\[ \lambda 0 \int_{w}^{w} F(w)-F(x)u(x)dx = (s + \lambda 1[1-F(w)])(1-u)G(w) \]

where \( F(w)-F(x) \) is the probability that an unemployed worker with reservation wage \( x \) receives and accepts a wage offer no greater than \( w \). \( u(x) \) gives the mass of unemployed workers with a reservation
دریافت فوری
متن کامل مقاله

امکان دانلود نسخه تمام متن مقالات انگلیسی
امکان دانلود نسخه ترجمه شده مقالات
پذیرش سفارش ترجمه تخصصی
امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
امکان دانلود رایگان ۲ صفحه اول هر مقاله
امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
دانلود فوری مقاله پس از پرداخت آنلاین
پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات