The optimal taxation of unskilled labor with job search and social assistance

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Abstract

In order to explore the optimal taxation of low-skilled labor, we extend the standard model of optimal nonlinear income taxation in the presence of quasi-linear preferences in leisure by allowing for involuntary unemployment, job search and an exogenous welfare benefit. In trading off low-skilled employment against work effort of higher skilled workers, the government balances distortions on the search margin with those on work effort. Higher welfare benefits typically reduce taxes paid by low-skilled workers and raise marginal tax rates throughout the skill distribution.
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1. Introduction

Widening wage dispersion raises the question how public policy should protect the living standards of unskilled workers, as policy makers are increasingly concerned about the adverse incentive effects of generous income support. In response to these concerns, many countries have cut taxes on unskilled work in order to combat poverty while at the same time encouraging unskilled workers to look for work. Both the United States and several European countries have already introduced or are considering in-work tax benefits for unskilled work in the form of an Earned Income Tax Credit (EITC). These tax policies

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are part of active labor-market policies and 'welfare-to-work' programs, where governments fight poverty by raising employment of unskilled workers.

To investigate the optimal response of tax policy to income support provided through the welfare system and to declining relative wages of unskilled labor, we extend the standard model of optimal nonlinear income taxation developed by Mirrlees (1971). In particular, we incorporate labor-market imperfections that induce governments to provide income support, namely search costs and involuntary unemployment.

In the presence of a search margin, the government has to account for not only the standard incentive compatibility constraint on work effort, but also a participation constraint on the willingness of low-skilled agents to look for work. Indeed, from an analytical point of view, our main contribution is to add a participation constraint to the optimal tax problem, including the decision regarding which types should optimally participate in job search. In doing so, we extend both the optimal tax literature, which typically abstracts from participation constraints, and the literature on optimal nonlinear monopoly pricing, which generally assumes that the lowest participating type is exogenously given. Within a nonlinear pricing framework, Rochet and Stole (2002) recently added an endogenous participation constraint by allowing agents to differ in both outside options and preferences for quality. Our analysis deviates from that of Rochet and Stole (2002) in two respects. First, in the nonlinear pricing problem explored in Rochet and Stole (2002), the monopolist cares only about profits earned on the participating agents. In our optimal tax problem, in contrast, also agents who do not participate appear in the objective function because the government is interested in the utilities of both participating and nonparticipating types. The second difference with Rochet and Stole (2002) is that we allow agents to differ in only one dimension; agents feature different skill levels but exhibit the same search costs. Within the context of our labor-market application, this is a reasonable assumption, which is in fact employed by most of the labor-market literature on search (see, for instance, Mortensen and Pissarides, 1999). This assumption implies that the participation constraint is binding only at the bottom of the skill distribution. Rochet and Stole (2002), in contrast, derive a binding participation constraint for each type.

The literature on optimal income taxation has modelled unemployment of unskilled agents as these agents reducing the hours they work in their jobs when they face low gross wages and rapidly rising marginal tax rates. Accordingly, low productivity workers are bunched in low- or zero-production jobs. By introducing a participation margin and positive search costs, we model another type of bunching at the bottom of the skill distribution: unskilled agents do not search for work and thus drop out of the labor force. Heckman (1993), for instance, stressed that 'a crucial theoretical distinction with important empirical pay off is that between labor supply choices at the extensive margin (. . .) and choices at the intensive margin'. Empirical work does in fact reveal that unskilled workers adjust their labor supply in response to tax and benefit programs on mainly the extensive margin (i.e. leaving the labor force altogether, for example through early retirement) rather than the intensive margin (i.e. reducing the hours they work in their jobs) (see, e.g. Eissa and Liebman, 1996; Kimmel and Kniesner, 1998; Blundell, 2001; Meyer and Rosenbaum, 2001; and Meyer, 2002). This explains the policy concern about welfare programs and high taxes on unskilled work discouraging low-income earners from looking for work.