Social Exclusion and Optimal Redistribution

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Extended abstract

A common finding in the optimal tax literature is that marginal income tax rates should be high at low levels of income in order to support redistribution. The purpose is to target transfers to the poor while at the same time discouraging high income people from reducing income in order to reduce their tax burden. The downside is that the high marginal tax rates might induce a fraction of the low skilled population to stay outside the labor force. In a standard optimal income tax model, this is not very costly for the government, as these people would not have very large incomes if they would choose to be working. This policy prescription is often viewed as politically controversial as a common view is that individuals should work in order to qualify for transfers from the government. Importantly, it also ignores the potential negative externalities that might arise from having a non-negligible part of the population outside the workforce. In particular, non-employment might lead to people becoming socially excluded with large individual and social costs.

The purpose of this paper is to present a first analysis of social exclusion in the context of income redistribution programs. We believe this to be an important issue, especially in light of increasingly skill-intensive labor markets and large inflows of low skill workers due to migration in many European welfare states in recent years. We discuss the consequences of social exclusion not only in the context of optimal income taxation but also in relation to other policy tools such as education subsidies and public employment programs. The central contributions of our paper are as follows. First, we analyze how nonlinear income taxation should be designed in a dynamic optimal tax framework where workers face the risk of social
exclusion. Second, we analyze how the government can use additional policy tools to combat social exclusion. Notably, we allow the government to use public employment as a policy tool, being able to employ low skill workers in the public sector in an attempt to increase their chances to find regular employment in the future. Moreover, we analyze the effectiveness of education subsidies and publicly provided education to enhance the productive capacities of workers in a way that may lead to them to find regular employment.

Labor force participation has been considered in a variety of ways in the literature. In the standard optimal income tax problem, being outside the labor force corresponds to a corner solution in the individuals’ problem which arises when the individual indifference curve is steeper than the budget constraint induced by the nonlinear income tax schedule. Depending on the assumed structure of the utility function and the shape of the skill distribution, this might or might not create unemployment. To create an empirically relevant extensive margin in a wide variety of model specifications, the public finance literature has extended the heterogeneity in the optimal income tax model to not only encompasses heterogeneity in skills, but also fixed costs of work (see Saez 2002). The individual is then assumed to enter the labor force only if the utility from working, net of the fixed cost, exceeds the utility when not working (and receiving welfare benefits). This source of unemployment is perhaps mostly relevant to explain the labor force participation behavior of secondary earners in a household labor supply context.

Unemployment might also result from demand side restrictions. For example, the standard optimal income tax model might entail that a sizable fraction of the population would find it optimal to work a very small number of hours. However, if there is say, a fixed cost of training a worker at the workplace, an employer might only be willing to employ a worker if the number of working hours exceeds a certain threshold. In the presence of hours constraints, a larger fraction of individuals will find it optimal to stay outside the labor force as compared to the traditional optimal income tax model without hours constraints. The economic predictions from a model with hours constraints are similar to a model incorporating individual fixed cost of working. To the extent that hours constraints and fixed costs of working are empirically relevant aspects of the labor supply decisions, they play a role in the generation of long-term employment and social exclusion. In this paper we abstract from these sources of unemployment and focus instead on unemployment arising from the production side of the economy. An important assumption in the standard optimal income tax model is that the production technology is linear. This implies that there are employment opportunities at all skill
levels. In real economies, there is a sizable fraction of the population that cannot find work at prevailing minimum wages. These “minimum” wages can be the outcome of a centralized wage setting process between labor unions and firms or simply represent a threshold wage level below which there is no demand for labor, for example due to the fact that manual low skill labor is increasingly being replaced by machines (see for example the recent work by David Autor). This suggests that there is a “technological gap” in the skill distribution, i.e. an interval of workers who are not sufficiently productive to enter the labor force. We capture these features in a simple way by analyzing a nonlinear production technology that admits jobs in the economy that pay a wage according to a linear function of the individual skill level provided that the skill exceeds a threshold which we may label the “minimum wage”.

The problem of the joint design of education subsidies and optimal income taxation is not new. The novel focus in our paper is how education subsidies and other instruments can work towards enhancing the employment rate and reducing the welfare costs associated with long term unemployment. We also emphasize demand side restrictions in the types of jobs available in the economy. The vehicle of our analysis is three-period optimal income tax framework where individuals differ in their innate abilities and their costs of obtaining education. Workers who are not sufficiently productive to obtain regular employment in period 1 can enroll in education or become employed in the public sector in order to escape long-term unemployment.