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Tax reform and the Dutch labor market: an applied general equilibrium approach

A. Lans Bovenberg[a], Johan J. Graafland[b], Ruud A. de Mooij[c,*]

[a]*Tilburg University, P.O. Box 90153, 5000 LE Tilburg, The Netherlands*
[b]*CPB Netherlands Bureau for Economic Policy Analysis, P.O. Box 80510, NL-2508 GM, The Hague, The Netherlands*
[c]*CPB Netherlands Bureau for Economic Policy Analysis, P.O. Box 80510, NL-2508 GM, The Hague, The Netherlands*

Abstract

This paper develops an applied general equilibrium model to explore various tax cuts aimed at combating unemployment and raising labor supply. The model calibrates modern labor-market theories on wage setting, job matching, labor supply and labor demand on Dutch data. It represents the core of a larger applied general equilibrium model for the Netherlands called MIMIC. Simulations reveal that targeting in-work benefits at the low skilled is the most effective way to cut economy-wide unemployment. However, targeting is likely to damage the quality and quantity of labor supply. Tax cuts in the higher tax brackets boost the quantity and quality of formal labor supply but are less effective in reducing unemployment and in raising unskilled employment and female labor supply.

Keywords: Tax policy; Structural unemployment; Labor supply; Applied general equilibrium model; The Netherlands

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1. Introduction

Many European countries suffer from high structural unemployment, especially

*Corresponding author. Tel.: +31-73-383-364; fax: +31-73-383-350.
E-mail address: radm@cpb.nl (R.A. de Mooij).

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among the unskilled. Various reforms of labor-market institutions and the tax and social insurance systems have been put forward to fight this unemployment. These proposals include, in addition to reducing social benefits and minimum wages, cutting social insurance premiums and payroll taxes on low-skilled work, introducing wage subsidies for the long-term unemployed, and providing in-work benefits (see Snower and De la Dehesa, 1996; Haveman, 1996; Sørensen, 1997). The latter proposals aim to enhance low-skilled employment without seriously damaging the incomes of transfer recipients.

At the same time, the aging of the population implies that the increasing burden of social insurance benefits paid to the elderly must be financed by a relatively small number of workers. The rising ratio between the number of inactive people collecting social insurance benefits and the labor force is a growing cause for concern. To mitigate this trend, many EU countries aim at stimulating labor supply. Indeed, the low labor-force participation of women and the elderly in many EU countries leaves substantial scope for raising labor supply. Proposals to raise labor supply include cutting marginal tax rates, reducing tax benefits to households with a non-participating partner, and decreasing early retirement benefits.

This paper develops an applied general equilibrium model to explore various tax policies aimed at combating unemployment and raising labor supply. The model focuses on adequately describing wage formation, labor supply and demand, and the process of job matching between vacancies and the unemployed looking for a job. By including elements of wage bargaining and costly job matching, the model describes equilibrium unemployment in terms of the structure of the tax system and the features of social insurance. The key parameters in wage formation are estimated from Dutch time series data.

The model developed in this paper represents the core of a larger applied general equilibrium model for the Dutch economy, called MIMIC. The latter model is designed so as to help Dutch policymakers in investigating the structural labor-market implications of changes in the systems of taxation and social insurance. Compared to the small model, MIMIC contains more heterogeneity, more economic mechanisms and an elaborate description of the actual tax and social insurance systems in the Netherlands. This institutional detail makes MIMIC especially relevant for policy making because actual policy proposals typically involve particular details of the tax and social insurance systems.

The contribution of this paper is four-fold. First, it calibrates modern theories of the labor market, such as wage bargaining and job matching, on Dutch data. In doing so, it accounts for some of the important institutional details of the Dutch labor market and the Dutch tax system. Second, the paper provides empirical and theoretical support for real wage resistance in the Dutch economy so that labor taxes are not fully borne by workers in the long run. While the estimated wage equation indicates that real wage resistance is present in the Dutch economy, we provide a theoretical explanation for this phenomenon in terms of an informal