Labor supply responses and welfare effects from replacing current tax rules by a flat tax: Empirical evidence from Italy, Norway and Sweden

Rolf Aaberge1, Ugo Colombino2, Steinar Strom3
1 Research Department, Statistics Norway 0033 Oslo, Norway (email: roa@ssb.no)
2 Department of Economics, University of Torino, via Po 53, 10128 Turin Italy (email: ugo.colombino@unito.it)
3 Department of Economics, University of Oslo, P.O. Box 1095, Blindern, 0317 Oslo, Norway (email: steinast@econ.uio.no)

Received: 19 May 1998/Accepted: 02 July 1999

Abstract. This paper employs a microeconometric framework to examine the labor supply responses and the welfare effects from replacing current tax systems in Italy, Norway and Sweden by a flat tax on total income. The flat tax rates are determined so that the tax revenues are equal to the revenues as of 1992. The flat tax rates vary from 23 per cent in Italy, 25 per cent in Norway, to 29 per cent in Sweden. In all three countries the labor supply responses decline sharply with pre-reform disposable income. The results show that the efficiency costs of the current tax systems relative to a flat tax may be rather high in Norway and much lower, but positive, in Italy and Sweden. In all three countries “rich” households – defined by their pre-tax-reform income – tend to benefit (in terms of welfare) more than “poor” households. In Italy and Sweden a majority will lose from a shift to a flat tax, while in Norway a majority is predicted to win.

JEL classification: D19, H31, J22

Key words: Labor supply, taxation, microeconometrics, cross-country analysis

---


We would like to thank Tom Wennemo for skillful programming assistance, Anne Skoglund for typing and editing the paper, and two anonymous referees for helpful comments. S. Strom and R. Aaberge are thankful to ICER (Turin) for providing financial support and excellent working conditions. U. Colombino gratefully acknowledges financial and organizational support from MURST (Italy) and from Statistics Norway. Responsible editor: John F. Ermisch.
1. Introduction

In recent years the growing concern in many OECD-countries about the costs of redistributing income has been used as a justification for introducing tax reforms with the purpose of enhancing economic efficiency. To achieve this goal the conventional wisdom in economics suggests less progressive tax systems. Relying on this wisdom the tax systems of most OECD-countries have been changed towards a proportional tax schedule and the most extensive reforms have reduced the marginal tax rates faced by top rate earners from 70–80% to around 40–50%, see Blundell (1996).

Labor has normally been considered to be the least mobile factor, at least when judged on the basis of European data. The dismantling of country-specific barriers within the European Economic Area has reduced mobility costs and may increase the mobility in European labor markets. Cultural differences and language problems may, on the other hand, have a substantial negative effect on mobility. Yet, institutional changes that reduce mobility costs and the fact that (some) high skilled workers and professionals are rather mobile may in the long run prevent European nations from allowing for considerable differences in the taxation of labor income. Thus, tax system competition may arise as a result of EU’s introduction of free mobility of goods, services, labor and capital. Since progressive tax systems normally tax the higher income of skilled workers and professionals more heavily than the lower income of the lesser skilled, tax system competition may strengthen the current trend away from highly progressive tax schedules. The current trends towards less progressive tax schedules and the tax discussions going on within EU give grounds for this paper.

To analyze the impact on household behavior and welfare from reducing the degree of progressivity in the tax systems we have taken the extreme position of analyzing the possible outcome of replacing “current” tax systems by a flat tax. We have employed a labor supply model – estimated on data from Italy, Norway and Sweden – to simulate labor supply responses and welfare effects of married couples from replacing the tax systems as of 1992 by a flat tax on total income. The focus on married couples is motivated by the fact that married females are considered to be more responsive to changes in tax rates than other individuals. The mean level and the distribution of labor supply responses depend on preferences, demographic and educational structure, tax and benefit rules, and other institutional constraints. Although the estimates of some of the key parameters are quite equal across the three countries, other parameters as well as tax systems and other aspects of the choice environment differ. Thus, it is of interest to study whether country-specific variations in preferences and budget constraints create significant differences in the labor supply responses when the households are exposed to similar changes in tax rules.

Key features of our modeling framework that distinguishes it from more traditional labor supply modeling say, the Hausman approach, Hausman (1979, 1980, 1981), Hausman and Ruud (1984), are:

– flexible functional form of the utility function that allows for rather general labor supply functions,
– exact representation of tax and transfer schemes when estimating the model,