Journal of Public Economics 87 (2003) 1231–1258

JOURNAL OF PUBLIC ECONOMICS

www.elsevier.com/locate/econbase

The effect of marginal tax rates on income: a panel study of 'bracket creep'

Emmanuel Saez*

Department of Economics, Littauer Center, Harvard University and NBER, Cambridge, MA 02138, USA

Received 27 April 2001; received in revised form 7 October 2001; accepted 11 October 2001

Abstract

This paper uses a panel of individual tax returns and the 'bracket creep' as source of tax rate variation to construct instrumental variables estimates of the sensitivity of income to changes in tax rates. From 1979 to 1981, the US income tax schedule was fixed in nominal terms while inflation was high (around 10%). This produced a real change in tax rate schedules. Taxpayers near the top-end of a tax bracket were more likely to *creep* to a higher bracket and thus experience a rise in marginal rates the following year than the other taxpayers. Compensated elasticities can be estimated by comparing the differences in changes in income between taxpayers close to the top-end of a tax bracket to the other taxpayers. These estimates, based on comparisons between very similar groups, are robust to underlying changes in the income distribution, such as a rise in inequality. The elasticities of taxable income and adjusted gross income are around 0.4 and significant but the elasticities of wage income are in general insignificant and close to zero.

Keywords: Income taxation; Behavioral responses; Bracket creep

JEL classification: H31; J22

1. Introduction

The response of taxpayers to changes in marginal rates has long been of interest

*Tel.: +1-617-495-0586; fax: +1-617-495-8570.
E-mail address: saez@fas.harvard.edu (E. Saez).

0047-2727/02/$ – see front matter
PII: S0047-2727(01)00178-5

to economists. The magnitude of this response is of critical importance in the formulation of tax and transfer policy. However, the empirical literature has failed to generate a consensus on the magnitude of the elasticity of income with respect to marginal tax rates. The empirical estimates range from no effect to extremely large effects.

The labor supply literature focuses mostly on the elasticity of hours of work with respect to marginal tax rates and finds in general small responses to taxation.[1] The results of this literature might not be fully relevant to tax policy issues because hours of work are not the only dimension of behavioral responses to taxation. For example, individuals may vary effort on the job or the type of job they choose when taxes change.

Recent studies have looked directly at the sensitivity of overall income with respect to marginal rates using tax reforms to identify the parameters of interest. Therefore, these studies capture the response of taxpayers along all dimensions and not only hours of work. Most of these studies have used the US tax reforms of 1981, 1986, and 1993 to estimate taxpayers' responses. The results from this literature are controversial. The earliest studies by Lindsey (1987) and Feldstein (1995) using the tax reforms of 1981 and 1986 (respectively) found very large elasticities in excess of one. More recent studies by Navratil (1995) and Auten and Carroll (1999), using the same reforms but better data, found smaller elasticities (around 0.7). Finally, studies using the recent 1993 income tax rates increases have found large short-term responses but small medium-term responses (Sammartino and Weiner, 1997; Goolsbee, 2000). Gruber and Saez (2000) summarize this literature and provide estimates based on the entire period 1979 to 1990 that are of modest size (around 0.4 for taxable income and 0.2 for gross income).

Two reasons might explain the discrepancies between the findings. First, most of the tax reforms introduced many changes in the definition of taxable income besides tax rate changes. As a result, it is often problematic to compare reported income before and after the tax reform. Second, these studies often rely on comparisons of high income taxpayers (who experienced large tax rate changes) to low and middle income taxpayers (who experienced almost no tax rate changes). Therefore, this methodology amounts to attributing the widening in inequality to the tax reforms of 1981 and 1986[2] but economists have proposed many other explanations for increased income inequality.

These objections suggest that a research design to estimate behavioral responses to marginal tax rates should meet two conditions. First, the tax change should affect only marginal tax rates without introducing many changes in tax rules. Second, the tax change should affect differently groups of taxpayers that are comparable (i.e., whose incomes and other economic characteristics are close).

[1] Blundell and MaCurdy (1999) provide a comprehensive survey.

[2] Note that the bias goes in the other direction for the tax increases of 1993.