

The Effect of Marginal Tax Rates on Taxable Income: A Panel Study of the 1986 Tax Reform Act

Martin Feldstein

Harvard University and National Bureau of Economic Research

This paper uses a Treasury Department panel of more than 4,000 taxpayers to estimate the sensitivity of taxable income to changes in tax rates on the basis of a comparison of the tax returns of the same individual taxpayers before and after the 1986 tax reform. The analysis emphasizes that the response of taxable income involves much more than a change in the traditional measures of labor supply. The evidence shows an elasticity of taxable income with respect to the marginal net-of-tax rate that is at least one and could be substantially higher. The implications for recent tax rate changes are discussed.

Changes in marginal tax rates induce taxpayers to alter their behavior in ways that affect taxable income and therefore tax revenue. The magnitude of this response is of critical importance in the formulation of appropriate tax and budget policies. This paper reports new estimates of the sensitivity of taxable income to changes in tax rates based on a comparison of the tax returns of the *same* individual taxpayers before and after the 1986 tax reform. This comparison is done

This paper extends a previously circulated unpublished paper ("A Preliminary Report on the Effects of Marginal Tax Rates on Taxable Income," May 1993). A more extensive version appeared as NBER Working Paper no. 4496 (October 1993). I am grateful to John Navratil and Dan Feenberg for their help with the calculations and for discussions about this subject. I have also benefited from comments on the previous version by Michael Boskin, David Bradford, Kate Feldstein, John Gruber, James Heckman, Jim Hines, Jeff Liebman, Larry Lindsey, Jim Poterba, Jonathan Skinner, and other colleagues at the NBER and Harvard. This paper is part of the NBER study of the Effects of Taxes on Economic Activity.

[*Journal of Political Economy*, 1995, vol. 103, no. 3]

© 1995 by The University of Chicago. All rights reserved. 0022-3808/95/0303-0002\$01.50

TABLE 1
RESPONSE OF TAXABLE INCOME OF NONAGED MARRIED TAXPAYERS TO CHANGES IN MARGINAL TAX RATES BETWEEN 1985 AND 1988

1985 MARGINAL TAX RATE	1985 AGI (\$'000) (1)	OBSERVATIONS (2)	Net of Tax Rate (3)	Adjusted Full AGI (4)	PERCENTAGE CHANGES OF			Adjusted Taxable Income Plus Gross Loss (7)
					Adjusted AGI Excluding Capital Gains (5)	Adjusted Taxable Income (6)		
22	30.7	800	9.0	9.4	8.4	13.6	13.4	
25	36.1	909	13.3	4.5	2.4	3.5	3.7	
28	42.7	713	16.3	3.9	4.7	6.0	5.0	
33	51.5	771	8.7	2.2	2.2	2.5	2.5	
38	67.5	345	16.1	8.0	8.1	9.6	8.8	
42	94.3	152	24.1	18.8	14.7	22.0	22.3	
45	126.9	45	30.9	12.4	14.8	18.5	15.3	
49	177.7	35	41.2	27.1	29.6	42.7	33.9	
50	479.0	22	44.0	18.4	70.6	92.4	51.1	
22-38		3,538	12.2	5.1	4.6	6.2	6.4	
42-45		197	25.6	17.0	14.7	21.0	20.3	
49-50		57	42.2	21.3	53.7	71.6	44.8	

NOTE.—All observations pertain to married taxpayers under age 65 who filed joint tax returns for 1985 and 1988 with no age exemption in 1988. Taxpayers who created a subchapter S corporation between 1985 and 1988 are eliminated from the sample.

TABLE 2

ESTIMATED ELASTICITIES OF TAXABLE INCOME WITH RESPECT TO NET-OF-TAX RATES

Taxpayer Groups Classified by 1985 Marginal Rate	Net of Tax Rate (1)	Adjusted Taxable Income (2)	Adjusted Taxable Income Plus Gross Loss (3)
Percentage Changes, 1985-88			
1. Medium (22-38)	12.2	6.2	6.4
2. High (42-45)	25.6	21.0	20.3
3. Highest (49-50)	42.2	71.6	44.8
Differences of Differences			
4. High minus medium	13.4	14.8	13.9
5. Highest minus high	16.6	50.6	24.5
6. Highest minus medium	30.0	65.4	38.4
Implied Elasticity Estimates			
7. High minus medium		1.10	1.04
8. Highest minus high		3.05	1.48
9. Highest minus medium		2.14	1.25

NOTE.—The calculations in this table are based on observations for married taxpayers under age 65 who filed joint tax returns for 1985 and 1988 with no age exemption in 1988. Taxpayers who created a subchapter S corporation between 1985 and 1988 are eliminated from the sample.

method, that is, by comparing the differences in the percentage change in taxable income between pairs of marginal tax rate groups to the differences in the percentage change in the net-of-tax rates between the same groups.

This method implicitly assumes that there is a relation between the percentage change in taxable income between 1985 and 1988 and the percentage change in the net-of-tax rate with a common "constant term" that does not differ between marginal tax rate groups. The differencing eliminates the common constant term and provides an estimate of the slope term. Since both changes are measured as percentages, this slope coefficient is an estimated elasticity.²⁰

Consider for example the comparison of the middle and high marginal tax rate groups. The net-of-tax rate increased by 12.2 percent for the first group and by 25.6 percent for the second group (shown

²⁰ John Navratil has repeated this analysis for the years 1983 and 1985, when there were no changes in tax rates or tax rules, to see whether there is any systematic tendency for higher marginal tax rate individuals to experience relatively greater income increases. He found no evidence of faster income growth among higher marginal tax rate groups, confirming that the patterns reported in tables 1 and 2 are due to the 1986 tax reforms.