

Dyanmic General Equilibrim Tax Scoring with Micro Tax Simulations *

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Abstract

This paper ...

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1 Introduction

2 Details of the Macro Model

2.1 Demographics

2.2 Households

2.3 Firms

2.4 Market Clearing

2.5 Solution and Simulation

3 Incorporating Feedbacks with Micro Tax Simulations

Follow this algorithm:

- Period 1
 - Use current IRS public use sample.
 - Run the following within-period routine
 - * Do the static tax analysis of this sample, save the results
 - * Summarize the public use sample by aggregating into bins over age and earnings ability
 - * Use this as a starting point for the dynamic macro model
 - * Get values for fundamental interest rates and effective wages for next period
- Period 2
 - Age the public use data demographically by one year.
 - Let wages and interest rates rise by the amounts predicted in the macro model.
 - Rerun the within-period routine
- Iterate over periods until end of forecast period is reached.

4 Calibration

4.1 Tax Bend Points

We use IRS data which summarizes individual tax returns for 2011 by 19 income categories and 4 filing statuses. For each filing status we fit the mapping from reported income into adjusted gross income (AGI) using a sufficiently high-order polynomial.

We then use this function to solve for the income level which corresponds to each of the five bend points in the tax code for each filing type.

Table 1: AGI and Income Bend Points

AGI Bend Points				
Tax rate	Married Joint	Married Separate	Head of Household	Single
10%	17,400	8700	12,400	8700
15%	70,700	35,350	47,350	35,350
25%	142,700	71,350	122,300	85,650
28%	217,450	108,725	198,050	178,650
33%	388,350	194,175	388,350	388,350

Corresponding Reported Income Bendpoints				
Tax rate	Married Joint	Married Separate	Head of Household	Single
0%	5850	91	756	1435
10%	22,932	8591	12,911	9956
15%	75,181	34,592	47,023	36,021
25%	145,866	69,768	120,200	85,244
28%	219,162	106,245	194,176	176,270
33%	386,798	189,674	380,043	381,524

We then fit a bivariate probability density function over income and filing type from the data. For each bendpoint we calculate the probability density at that bendpoint and use these as weights in a weighted average over filing types to generate an aggregate bendpoint.

Table 2: Aggregated Bend Points

Tax rate	Bend Point
0%	2889
10%	15,116
15%	52,580
25%	114,552
28%	196,201
33%	380,657

5 Conclusion

TECHNICAL APPENDIX

References

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