Do People Know Their Effective Marginal Tax Rates?

Silvia Vannutelli

March 20, 2017

"Given our ignorance about tax awareness or tax consciousness, it is surprising that some economists are so willing to predict the effects of changes in the tax structure on individual behavior. If we do not know people's tax consciousness, how can we know the extent to which changes in their tax burden will affect their behavior?" Enrick (1963).

1 Introduction

A vaste body of theory considers the effects of tax incentives on individuals' labor supply and saving decisions. However, observed behavioral responses to tax rates differ sharply from those predicted. As suggested by Enrick over 50 years ago, reconciling theory and empirical evidence requires accounting for perceptions. If perceived tax rates, rather than actual ones matter for individual choice, and if subjects misperceive tax rates, than observed and predicted behaviors can drastically differ.

Perceptions and awareness of the tax system have attracted growing attention in the literature. A number of studies suggest that individuals are not fully aware of tax and transfer policies, and that they base relevant economic choices on their perceived rather than actual rates (e.g., de Bartolome 1995; Duflo et al. 2006; Chetty, Looney, and Kroft 2009; Jones 2010; Liebman and Luttmer 2011). Chetty et al. (2013) estimate behavioral responses to the Earned Income Tax Credit, exploiting variation in program knowledge across neighborhoods. Using data from online survey experiments, Kuziemko et al. (2015) show that Americans are ex-ante deeply misinformed about the estate tax and react to correct information by strongly changing their policy preferences.

While providing suggestive evidence of the importance of perceptions for behavioral responses to tax incentives, previous studies focused on knowledge of specific tax rates and/or transfer programs (e.g. income tax rates, EITC). However, to understand fully if people know their tax rates and how they react to fiscal incentives, it is crucial to account for the tax and transfers system in its entirety (Kotlikoff et al. 2002).

In this work, I will be able to provide agents with an estimate of their total effective marginal tax rates, taking into account all the different components of the complex US tax and transfers scheme. This allows me to answer three questions: (i) Do people know their marginal tax rates? (ii) If not, what determines these misperceptions? Which parts of the tax code are more salient in shaping individuals' perceptions of tax rates and influencing their behavior? (iii) Once confronted with their total effective MTR, are subjects willing to change their labor supply and savings' decisions? On a

more general note, assessing knowledge and salience of tax rates is crucial as they play an important role in individuals' decisions that go beyond labor supply and savings. Perceived marginal tax rates can impact tax avoidance and evasion, perceptions of fiscal fairness, and even political preferences.

2 Methodology

To estimate the individual-specific average and marginal tax rates, I will use The Fiscal Analyzer (TFA), a program developed by Alan Auerbach and Laurence Kotlikoff. TFA incorporates federal and state personal income taxes, the FICA payroll tax, federal and state corporate income taxes, federal and state sales and excise taxes, Social Security benefits, Medicare benefits, Medicaid benefits, Foods Stamps, welfare (TAFCD) benefits, and other transfer program benefits. In this way, TFA can precisely calculate total effective marginal tax rates households face for each additional dollar earned/saved.

To conduct the analysis, I will collect individuals' detailed economic information using the Maxifi planner, an online financial planning program that will be soon released by Laurence Kotlikoff's company, the Economic Security Planning, Inc. The resulting data will be inputed in the TFA to estimate actual marginal tax rates and compare them with perceived rates. I will then perform a regression analysis to understand the determinants of observed differences, and the impact of providing subjects with correct information about their effective MTR on their labor supply and savings decisions.

3 Data Sources

I plan to collect a sample of 2000 individuals, representative of the US working-age population, using Amazon's Mechanical Turk (mTurk). mTurk is a flexible online platform that can be used to carry out social and survey experiments and has become increasingly popular among social scientists (Horton, Rand, and Zeckhauser, 2011).

Individuals who qualify for the survey will be first asked a comprehensive set of questions, including demographics, political opinions, and tax-related questions, to assess their perceived tax rates and their knowledge about US fiscal system. Afterwards, they will be redirected to the Maxifi Planner. The program will ask respondents to input detailed economic information, which will be recorded in an anonymous way. Finally, I will show respondents their effective tax rates and ask them some further questions, to assess whether and how knowledge of their actual tax rates affect their decisions on labor supply and savings.

The total estimated survey completion time is around 40 minutes. I plan to set total compensation to $5, which works out to a $7.5 hourly wage, well above average mTurk wage. Furthermore, subjects will receive a permanent Maxifi Planner license (whose commercial value is $99).

The study will be conducted upon Boston University Institutional Review Board (IRB) approval. The resulting database could be made available for future research to the maximum extent possible (upon subjects' consent to share their de-identified personal information).

References

[1] Chetty, Raj, Adam Looney, and Kory Kroft. 2009. “Salience and Taxation: Theory and Evidence.” American Economic Review 99 (4): 1145–77.

[2] Chetty, Raj, and Emmanuel Saez. 2013. “Teaching the Tax Code: Earnings Responses to an Experiment with EITC Recipients: Dataset.” American Economic Journal: Applied Economics.

[3] de Bartolome, Charles. 1995. “Which Tax Rate Do People Use: Average or Marginal?” Journal of Public Economics 56 (1): 79–96.

[4] Duflo, Esther, William Gale, Jeffrey Liebman, Peter Orszag, and Emmanuel Saez. 2006. “Saving Incentives for Low- and Middle-Income Families: Evidence from a Field Experiment with H&R Block.” Quarterly Journal of Economics 121 (4): 1311–46.

[5] Enrick, Norbert Lloyd. 1963. “A Pilot Study of Income Tax Consciousness.” National Tax Journal 16:169–73.

[6] Gokhale, Jagadeesh, Laurence J. Kotlikoff, and Alexi Sluchyrisky (2002). "Does It Pay to Work," NBER working paper no. 9095.

[7] Horton, J. John, David G. Rand, and Richard J. Zeckhauser (2011). “The online laboratory: Conducting experiments in a real labor market.” Experimental Economics 14(3), pp. 399–425.

[8] Jones, Damon. 2010. “Information, Preferences, and Public Benefit Participation: Experimental Evidence from the Advance EITC and 401(k) Savings.” American Economic Journal: Applied Economics 2 (2): 147–63.

[9] Kuziemko, Ilyana, Michael I. Norton, Emmanuel Saez and Stefanie Stantcheva. 2015. "How Elastic Are Preferences for Redistribution? Evidence from Randomized Survey Experiments." American Economic Review, 105(4): 1478-1508.

[10] Liebman, Jeffrey, and Erzo Luttmer. 2011. “Would People Behave Differently If They Better Understood Social Security? Evidence From a Field Experiment.” National Bureau of Economic Research (NBER) Working Paper 17287.

BUDGET - Expected Project Expenses

1. mTurk data collection (compensation ($5) + fees, per subject (est. $2.5)).	$ 15,000
2. Web developer for survey design (estimated hourly wage $20, exp. time 50 hours).	$ 1,000
3. Research Assistants (estimated hourly wage $15, exp. time 250 hours).	$ 3750
TOTAL	$19,750

Silvia Vannutelli

Boston University
Department of Economics
270 Bay State Rd
Boston, MA 02215

Email: svann@bu.edu
Phone: +1 617-763-6562

Research Interests

I am interested in Public Economics and Taxation, with a special focus on Inequality and Redistributive Policies. I am also interested in Behavioral Economics and Political Economy.

Education

Ph.D. Candidate, Department of Economics, Boston University, 2015 - current

M.A. Political Economy, Boston University, Boston, MA, 2017 (expected)

Msc. European Economy and Business Law, *Summa cum Laude* University of Rome Tor Vergata, 2015

B.S. Political Science, *Summa cum Laude* University of Roma Tre, 2013

B.S. Political Science and International Relations, Universite Paris-Sorbonne and Science Po, 2012 (*Erasmus Exchange Awardee*)

Research

Work in Progress

"Income Inequality, Political Participation and Electoral Outcomes"

Academic Experience

Boston University

Research Assistant for Professor Raymond Fisman, 2016 - present

Teaching Fellow for Public Finance and Development Economics (Undergraduate), Fall 2016

University of Tor Vergata - PROXENTER (Research Center in Procurement and Supply Chain)

Research Assistant for Professor Elisabetta Iossa, 2013 - 2015

University of Roma Tre

Teaching Assistant for Statistics, Quantitative methods for Social Sciences, 2011-2013

Work Experience

United Nations - International Fund for Agricultural Development

Procurement Office Assistant, 2015 - 2016

Conferences and Presentations

Institute for New Economic Thinking CEEL Trento Summer School on Inequality and the Changing Distribution of Income, Student Fellowship, Summer 2015

Computer Skills

STATA, R, Tex, Microsoft Office

Fellowships and Awards

Bank of Italy Doctoral Research Fellowship, Summer 2017

Boston University Dean's Fellowship, 2015-2016

Institute for New Economic Thinking Summer Student Fellowship, 2015

University of Tor Vergata Distinguished Graduate Student Award, 2015

Personal Information

Languages

Italian (Native), English (Proficient -C2), French (Proficient - C1), Spanish (Intermediate - B1).

Citizenship

Italian, F1 Visa

Date of Birth

April 28th, 1992

Last updated: March 21, 2017

Dear NBER Colleagues,

Silvia Vannutelli is one of my star graduate students. She is proposing a very important line of research, namely comparing the actual remaining lifetime marginal effective net tax rates people face on supplying additional labor with what they perceive. This project will incorporate a highly precise marginal tax calculator, which I've developed with Alan Auerbach -- one that incorporates all aspects of federal and state fiscal policy. The use of online surveying makes it possible to gather a significant sample at relatively low cost.

This is one of those first-order questions whose answer is vital to our understanding of the economy no matter the nature of the answer. Given the complexity of our fiscal system, both tax and transfer programs, it's inconceivable that people precisely know their marginal taxes. The question, though, is how far off they are and how do their misconceptions vary based on their characteristics.

Public finance economists have been concerned about distortionary taxation for roughly a century. We now have the means to assess the extent of distortions as perceived by the public. What Silvia will find, with your support, should materially alter for the better how public finance economists assess fiscal reforms.

Sincerely yours,

Larry

--
Laurence J. Kotlikoff
A William Fairfield Warren Professor, Boston University
Professor of Economics, Boston University
270 Bay State Rd.
Boston, MA 02215
www.kotlikoff.net