



Historical trends in the degree of federal income tax progressivity in the United States[☆]

Timothy Mathews*

Department of Economics, Finance, and Quantitative Analysis, Coles College of Business, Kennesaw State University, 1000 Chastain Road, Kennesaw, GA 30144-5591, USA

ARTICLE INFO

Article history:

Received 14 May 2012
Received in revised form 21 October 2013
Accepted 21 October 2013
Available online 20 November 2013

JEL classification:

H20
H24
N42

Keywords:

Income taxation
Progressivity measures
U.S. economic history

ABSTRACT

This study examines how the degree of progressivity of the U.S. Federal income tax evolved between 1929 and 2009. Data from the Internal Revenue Service, U.S. Census Bureau, and Bureau of Economic Analysis is used to construct annual tax concentration curves and income concentration curves. Numerical values of four tax progressivity indices are determined. These values suggest that: (i) the degree of progressivity has varied greatly over time, (ii) taxation outcomes have become more progressive over the past four decades, (iii) the period from the early 1950s through 1974 was one of relatively low progressivity, whereas the period from 1975 through 2009 was one of relatively high progressivity, (iv) the most progressive outcomes of the last 67 years have been realized within the past decade, and (v) recent outcomes are much less progressive than were outcomes before 1942.

© 2013 Western Social Science Association. Published by Elsevier Inc. All rights reserved.

1. Introduction

This study provides insights on how the degree of progressivity of the U.S. Federal income tax has changed since 1929. It builds upon existing theoretical studies that focus on alternative approaches to measuring tax progressivity. Defining average tax rate (ATR) as the ratio of taxes paid to income, a progressive tax is one for which ATR increases as

income increases. As noted by Kiefer (2005), while there is general agreement on this definition of progressivity, there is no such consensus regarding how to measure the degree of progressivity. For example, consider the U.S. Federal income tax. From inspecting either marginal tax rates or the resulting ATRs of different segments of taxpayers, this tax has always been a progressive tax.¹ However, it is not clear when this tax was most progressive. This issue is addressed by calculating numerical values of four previously defined income/tax concentration based progressivity indices for the U.S. Federal income tax for each year between 1929 and 2009.

[☆] This paper was presented at the 2011 Western Social Sciences Association conference in Salt Lake City, UT and the 2011 Western Economic Association International conference in San Diego, CA. I am thankful to participants of these conferences for their helpful feedback. I would also like to thank Ruth Schwartz of the Internal Revenue Service, Statistics of Income Division for making some of the data used in this study publicly available and, finally, Scott Carson and two anonymous referees for helpful comments and suggestions which greatly improved the paper.

* Tel.: +1 678 797 2072.

E-mail address: tmmathews@gmail.com

¹ Tax Foundation (2009a) reports relevant Marginal Tax Rates for each year over the entire history of this tax; the final table in Tax Foundation (2009b) summarizes the resulting Average Tax Rates for different income groups for each year from 1980 to 2008.

In contrast to previous studies that focus only on the population of individuals filing tax returns, the degree of tax progressivity over the entire population are calculated. Results indicate that the degree of progressivity has varied greatly over time. Furthermore, taxation outcomes have become increasingly progressive over the past four decades. The period from the early 1950s through 1974 was among the least progress, whereas the period from 1975 through 2009 was the most progressive. However, recent outcomes are much less progressive than were outcomes before 1942.

1.1. Federal US income taxation

Two of the more important reasons social scientists are concerned about the degree of tax progressivity are how taxes spread the burden of financing government activities and the extent to which taxes alter the distribution of societal income.

When assessing tax equity or fairness, it is common to apply the ability-to-pay principle, which states that tax payments should be based on an individual's capacity to pay. Vertical equity refines this principle by requiring individuals with greater economic capacity to have greater tax burdens, which means that individuals of greater financial means bear a greater burden of paying taxes. If economic capacity is equated to income and tax burden is equated to ATR, then vertical equity justifies progressive taxation² because progressive taxation puts a disproportionate amount of the tax burden, relative to income, on individuals with high incomes. Two different taxes that each adhere to vertical equity can differ in regard to how much of the burden of paying the tax is borne by different segments of the population. Depending upon its definition, a measure of tax progressivity sheds light on which segments of the population are bearing the burden of taxes.

In market economies, the distribution of income/wealth influences the distribution of consumption goods across households. As a result, a more equal distribution of consumption is realized by imposing a tax which reduces income inequality. Alternative theories of justice have been proposed by scholars over the years, offering various arguments either in favor of or against income redistribution,³ and depending upon its definition, an index of tax progressivity sheds light on how a tax alters the distribution of income.

1.2. Quantifying tax progressivity

So, "How progressive should income tax be?" Atkinson (1973) set out to provide insight on this matter in an article by this very name. However, he does not make any "attempt to provide a definite answer to the question posed in [his]

² Note however that if tax burden is instead equated to dollars paid in taxes, then even a regressive tax (that is, one for which ATR decreases as income increases) does not immediately violate the notion of vertical equity.

³ See Konow (2003) for a survey of the prominent and diverse notions of justice articulated by individuals such as Bentham, Marx, Mill, Nozick, and Rawls.

title" since "such an answer cannot be given without further clarification of social objectives" (Atkinson, 1973, p. 90). The present inquiry is in the same spirit. No attempt is made to offer normative insights on tax progressivity. Rather, what is presented is a positive analysis of various tax progressivity indices. Any such index can be thought of as a yardstick to use to measure the degree of tax progressivity. Kiefer (2005) summarizes the varied approaches used to quantify the degree of tax progressivity. The focus of the present study considers indices which Kiefer termed "distributional" indices, the value of which depends upon both the tax structure and the distribution of income over the population being taxed.⁴ Thus, the realized value of a distributional progressivity index depends on not only tax policy but also on income levels and distribution.

The current focus is on distributional indices defined in terms of concentration curves, such as the well-known Lorenz Curve. Two of the more widely used progressivity measures of this type were developed by Musgrave and Thin (1948) and by Reynolds and Smolensky (1977), each of which is defined as a function of the pre-tax and post-tax values of the Gini-Coefficient. Subsequently, several tax progressivity indices defined as the relation between an income concentration curve and a tax concentration curve were developed by Kakwani (1977a), Suits (1977), and Stroup (2005). Mathews (2013) fully characterizes the relationships between these different measures and develops a fourth previously undefined, closely related index. When determining progressivity index values, it is necessary to define the population over which the values are calculated. Should the income concentration curves and tax concentration curves be constructed over all adults in society or over all taxpayers? If only a relatively small fraction of the population pays the tax, then dramatically different numerical values result from focusing on all adults in society versus all taxpayers. Considering this issue over time is important if there is considerable change in the fraction of the population subject to the tax, which over time, has been the case for the U.S. Federal income tax. In previous studies, index values were obtained focusing on the population of "all taxpayers," whereas in the present study index values are computed for both the population of "all taxpayers" and "all adults in society." Our primary aim is to determine how the degree of progressivity of the U.S. Federal income tax over the entire adult population has changed over the past century. By first obtaining values calculated over only taxpayers, we illustrate how this approach understates the degree of progressivity.

1.3. Previous observations on numerical values of progressivity indices

Numerical values of these four distributional progressivity indices for the U.S. Federal income tax have been

⁴ In contrast, the value of a "structural" index depends upon the tax structure, but not on the distribution of income. Musgrave & Thin (1948) discuss common structural measures such as "average rate progression," "marginal rate progression," "liability progression," and "residual income progression."

Download English Version:

<https://daneshyari.com/en/article/140182>

Download Persian Version:

<https://daneshyari.com/article/140182>

[Daneshyari.com](https://daneshyari.com)