



The Public Defense
of the Doctoral Thesis in Economics

by

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on

BEHAVIOURAL RESPONSE TO INCOME TAXATION:
A STUDY OF THE HUNGARIAN TAX SYSTEM

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Examination Committee

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The doctoral thesis is available for inspection
at the CEU Economics Department

Abstract

In the last few decades the literature on the behavioural effects of tax reforms has grown substantially. This literature focuses on the elasticity of taxable income (ETI) to changes in the marginal tax rate. The usual finding is a significant positive effect of marginal tax rate changes to taxable income. The ETI is especially important when governments reduce the tax rates substantially in order to boost their economic and tax revenues. Many Central and Eastern European countries are adopting flat tax schemes with this aim. There are signs that some countries manage to improve both their economic performance and tax revenues with tax reforms, but it is hard to differentiate the behavioural response to tax changes from the effect of increased tax enforcement. Whereas real behaviour response results in increased production through higher labour supply increased enforcement only results in higher tax revenues. Therefore the very nature of the behavioural response to tax changes is important to understand when designing tax reforms.

The first chapter of this thesis addresses this gap by estimating the elasticity of taxable income in Hungary, one of the region's "outliers" in terms of not having a flat tax scheme. Since only tax rates changed during this reform and tax enforcement remained unchanged, the measured ETI estimates are only a result of the marginal tax rate changes. Taxpayer behaviour is analysed using a medium-scale tax reform episode in 2005, which changed marginal and average tax rates but kept enforcement constant. A Tax and Financial Control Office (APEH) panel dataset from 2004 to 2005 is employed with roughly 215,000 taxpayers. Results suggest a relatively small but highly significant tax price elasticity of about 0.06 for the population earning above the minimum wage (around 70% of all taxpayers). This number increases to around 0.3 when we focus on the upper 20% of the income distribution, with some income groups exhibiting even higher elasticities (0.45).

Using these results, this thesis quantifies the impact of a hypothetical flat income tax scheme. Calculations indicate that, while there is room for a parallel improvement of budget revenues and after-tax income, such gains are modest (2% and 1.4%, respectively). Moreover, such a reform involves important adverse changes in income inequality, and its burden falls mostly on lower-middle income taxpayers.

In the second chapter, I analyse the elasticity of reported income to tax rates of the self-employed. The ETI captures several margins of adjustment. Most importantly, labour supply is adjusted after tax rate changes, but taxpayers also adjust in their income underreporting behaviour. Changes in concealment might be even more substantial in the case of small enterprises as opposed to wage earners and within economies with extensive black economies. Hungary introduced a new type of tax for small enterprises with a substantially lower tax rate. I analyse the elasticity of reported income to tax rates of the self-employed based on this tax reform, also employing a large-scale APEH dataset containing individual tax report data. The overall ETI of the self-employed is about twice as large as for the total employee population (12%). I demonstrate that at least part of the income elasticity covers the adjustment of income underreporting besides the adjustment of real income-generating efforts, and the ETI falls to around half when also controlling for tax evasion (4-5%). This latter measure is the true labour supply elasticity of the self-employed.

In the third chapter, I estimate the distributional implications of income tax evasion in Hungary, based on a random sample of the administrative tax records of nearly 230,000 individuals. Income underreporting has a serious implication for income distribution as it alters the disposable income of households through the altered payment of tax. In this exercise gross incomes declared in the administrative tax returns are compared with incomes stated in a nationally-representative household budget survey (on the assumption that tax evaders are more likely to report their true income during an anonymous interview). Estimates show that the average rate of underreporting is 8-18%, although this conceals a substantial difference between the self-employed (who hide a greater part of their income) and employees.

The estimated underreporting rates are used in a tax-benefit microsimulation model to calculate the fiscal and distributional implications of underreporting, taking account of all major direct taxes and cash benefits, as well as their interactions. Tax evasion reduces households' personal income tax payment by about 8-20%. Poverty and inequality seem significantly higher if calculations are based on true income rather than its reported figure, suggesting that high-income households are likely to evade paying tax proportionately more. Finally, tax evasion greatly reduces the progressivity of the tax system.

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