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The effect of tax enforcement on tax elasticities: Evidence from charitable contributions in France☆

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ABSTRACT

In the "sufficient statistics" approach, the optimal tax rate is usually expressed as a function of tax elasticities that are often endogenous to other policy instruments available to the tax authority, such as the level of information, enforcement, etc. In this paper we provide evidence that both the magnitude and the anatomy of tax elasticities are extremely sensitive to a particular policy instrument: the level of tax enforcement. We exploit a natural experiment that took place in France in 1983, when the tax administration tightened the requirements to claim charitable deductions. The reform led to a substantial drop in the amount of contributions reported to the administration, which can be credibly attributed to overreporting of charitable contributions before the reform, rather than to a real change in giving behaviors. We show that the reform was also associated with a substantial decline in the absolute value of the elasticity of reported contributions. This finding allows us to partially identify the elasticity of overreporting contributions, which is shown to be large and inferior to -2 in the lax enforcement regime. We further show using bunching of taxpayers at kink-points of the tax schedule that the elasticity of taxable income also experienced a significant decline after the reform. Our results suggest that failure to account for the effect of tax enforcement on both the magnitude and the anatomy of the elasticity of the tax base with respect to the net of tax rate can lead to misleading policy conclusions, both for the global optimal tax rate (when all policy instruments are optimized) and the local optimal tax rate (conditional on all other policy instruments staying at their status quo levels, potentially away from the optimum).

1. Introduction

The "sufficient statistics approach" to optimal taxation has played a prominent role in bridging the gap between theory and data, enabling economists to make much more practical tax policy recommendations. Its core idea is to express general optimal tax formulae that are both functions of estimable statistics and robust to changes in the primitives of the underlying model. In the context of optimal income taxation for instance, Feldstein (1999), Saez (2001) have shown that optimal income tax rates can be expressed as simple functions of the elasticity of taxable income with respect to the net-of-tax rate. This has spurred a large literature trying to estimate the elasticity of taxable income in order to calibrate optimal income tax schedules. But this method has also been applied to a whole range of other tax (and non-tax) contexts, like for instance the optimal tax treatment of tax expenditures and the optimal subsidy towards charitable contributions (Saez, 2004; Fack and Landais, 2010), in which case the elasticity of reported charitable contributions with respect to the subsidy rate becomes a key "sufficient statistics" entering the optimal subsidy formula. Of course, these elasticities, like the elasticity of taxable income, may incorporate various margins of responses and may in fact be the sum of various behavioral elasticities, such as evasion or avoidance elasticities. But the interest of sufficient statistics approaches is that in certain cases, the anatomy of these elasticities is irrelevant for optimal policy (Feldstein, 1995; Chetty, 2009).

In practice, tax authorities have many more instruments than the mere tax rates. They can for instance adjust the level of information available to taxpayers, the level of tax enforcement or the audit rates on certain items of the income tax, or vary the size of the tax base by allowing or restricting certain deductions. An important characteristic of optimal tax formulae expressed in "sufficient statistics" is that the relevant statistics, and in particular the relevant tax elasticities needed to calibrate the optimal value of a particular tax rate or tax subsidy are potentially endogenous to the full set of policy parameters available to

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the social planner. This relationship between "tax elasticities" and other policy instruments has at least two critical implications for optimal policy.

First, the tax authority has access to various policy instruments that can potentially control the *magnitude of the behavioral elasticities* entering the optimal tax rate formula (Kopczuk and Slemrod, 2002; Kopczuk, 2005). As a consequence, estimates of the tax elasticities, which are often conditional on particular values of the other instruments, may be misleading when thinking about the global optimum, where all policy instruments are set optimally. Optimizing the tax rate for a given tax elasticity can lead to a local optimal tax rate that will be very different from the tax rate at the global optimum if tax authorities have access to another instrument that could set the tax elasticity itself at its optimal level. Even though the importance of the derivative of the taxable income elasticity with respect to other policy instruments such as tax enforcement or the size of the tax base has been discussed conceptually in (Kopczuk and Slemrod, 2002), little empirical evidence exists on the magnitude of this derivative.

Second, the policy instruments available to the government will often also control the *anatomy of the behavioral elasticities* entering the optimal tax rate formula. When there are no other external parties than the government, the aggregate impact of a tax change on government revenue is sufficient to identify the deadweight loss of taxation, and knowledge of the anatomy of the response is not necessary. However, in many contexts, such as in the presence of externalities, of preexisting distortions, or of transfer costs of tax sheltering, knowledge of the anatomy of behavioral responses will prove necessary to compute the deadweight loss associated with a given tax rate (Chetty, 2009; Giertz, 2012). In other words, in many contexts, the anatomy of responses to variations in the tax rate (cheating vs real responses, etc.) is critical to characterize the local optimum, i.e. the optimal tax rate conditional on all other instruments staying at their status quo level, potentially away from their own optimal level. In the context of charitable giving for instance, there are clearly external parties, and we believe that there might be externalities to these parties at the margin from additional giving. Failure to account for the anatomy of responses, which is endogenous to all policy instruments, will therefore also lead to misleading policy recommendations.

The aim of this paper is to provide evidence on the relationship between tax elasticities and one particular policy instrument traditionally available to tax authorities: the level of tax enforcement through third party reporting. We exploit a tax enforcement reform on charitable deductions in France to study the effect of an increase in the traceability of reported contributions on tax reporting behaviors, the elasticity of reported contributions and the elasticity of taxable income. Before 1983, taxpayers were automatically granted the tax deduction on the basis of their self-reported tax declaration, and had to keep a receipt of their contributions in the event of a tax audit. From 1983 onwards, the French tax administration required taxpayers to attach the receipts of their charitable contributions to their tax return when claiming the charitable deduction. In other words, taxpayers could only benefit from tax deductions if they provided the administration with a proof of the contribution issued by a third party — the charity. This tax enforcement reform allows us to study how different tax regimes affect the reporting of charitable contributions, the magnitude of tax elasticities and the anatomy of these tax elasticities.

Our paper contributes to the literature by first documenting the drastic effects on reported charitable contributions of this simple tax enforcement reform that tightened the reporting rules.[1] The reform was associated with a substantial drop in the amount of contributions reported to the administration: in the year following the reform, reported contributions dropped by more than 75% and never recovered half of their pre-reform level more than 25 years later. We show using external sources on contributions that this drop can be credibly attributed to a change in taxpayers' reporting behaviors, rather than to a real change in giving behaviors. We also provide clear evidence that a very large fraction of this drop is caused by the overreporting of charitable contributions before the reform rather than by the underreporting after the reform.[2] The fraction of overreported contributions in the lax enforcement regime before the reform was, even in the more conservative scenario, close to 40%, and around 60%, according to our preferred estimates. Apart from LaLumia and Sallee (2013) who analyze "missing children" that disappeared from income tax declarations when a reform made it difficult to falsely claim additional dependents, this is the first time such massive reporting effects of a simple tax enforcement reform are documented.[3]

The second and main contribution of our paper is to show that both the elasticity of reported contributions and the elasticity of taxable income are substantially affected by the tax enforcement reform. We use two strategies to estimate the elasticity of reported contributions with respect to the price of giving before and after the reform. We first exploit the system of family income splitting in the French tax system (Quotient familial) which creates substantial non-linearities in the tax schedule according to taxpayer's family structure. We next use the presence of a cap in the subsidy for a particular type of contributions as a source of exogeneous variation in the price of giving. Both strategies give very similar qualitative results and show that the reform was associated with a substantial decline in the absolute value of the elasticity of reported contributions with respect to the net-of-tax rate. This evidence of a decline in the absolute value of the elasticity of reported contributions is consistent with the fact that a large fraction of the drop in contributions is due to overreporting before the reform rather than to underreporting after the reform. We then show that the tax enforcement reform, by affecting the elasticity of one of the components of the income tax base, did significantly affect the elasticity of taxable income. We provide evidence of significant bunching of taxpayers at kink-points of the tax schedule before the reform. We show that bunching before the reform was correlated with the propensity of reporting positive contributions. After the reform, no such bunching can be detected at the kink points of the tax schedule, thus attesting that the elasticity of taxable income experienced a significant decline when enforcement rules where tightened.

We finally contribute to the literature by showing that the drop in the absolute value of the elasticity of reported charitable contributions can be credibly attributed to the fact that the elasticity of noncompliance (overreporting contributions) was large before the reform. We show how one can use the estimated change in the elasticity of reported contributions before and after the reform to partially identify the elasticity of overreported contributions before the reform. Our results suggest that the elasticity of overreporting contributions with respect to the net-of-tax rate was large and inferior to -2 in the lax enforcement regime before the reform. Interestingly, the elasticity of non-compliance using charitable contributions appears to be larger for taxpayers with little access to other margins for adjusting their taxable income: low income taxpayers and taxpayers with wage income only.

[1] To our knowledge, the only other available evidence of the presence of tax evasion in the context of the charitable deduction is Ackerman and Auten (2011), who analyze deductions for non-cash donations in the US, and show that following a reform that tightened the rules for appraising the value of donated cars, the amount of claimed deductions for car donations decreased significantly, suggesting that previous claims were overvalued. Yermack (2009) analyzes contributions of stocks by CEOs to their own private foundations and also finds substantial re-timing effects suggestive of tax avoidance.

[2] Rehavi and Shack (2013) provide evidence of underreporting of contributions in the US income tax system.

[3] A few papers have investigated how the elasticity of evasion may vary with the level of enforcement, but in a very different context than our paper, that does not involve reporting of taxable income by taxpayer. Marion and Muehlegger (2008), who study the introduction of a regulatory innovation (the addition of red dye to untaxed diesel) show a very large response to a tax enforcement reform. In the case of tariffs and customs duties, Mishra et al. (2008) show that the responsiveness of evasion with respect to tariffs varies with some characteristics of the products that can serve as a proxy for the tax enforcement cost.