Rate Cuts vs. Base Broadening: A Cost-Benefit Analysis of Corporate Tax Reform in Portugal

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1 Introduction and Motivation

How much revenue does it cost to improve a country's tax competitiveness, and who bears the burden? We study this question in the context of Portugal, whose corporate income tax (CIT) system combines a statutory rate close to the OECD average with progressive surcharges that push the top marginal rate to 30.5%—the third-highest in the OECD—and over 70 tax expenditures that add complexity while narrowing the base. This makes Portugal an ideal laboratory for the rate-versus-base tradeoff: the statutory rate can be significantly reduced—and the system simplified—by eliminating tax expenditures that narrow the base.

We combine three complementary sources of evidence: (i) a firm-level cost-benefit analysis using administrative data covering over 300,000 firms; (ii) an original survey of 1,092 Portuguese firms on tax salience, incentive access, and expected behavioral responses to rate cuts; and (iii) simulations of Portugal's position in the International Tax Competitiveness Index (ITCI). The convergence of administrative microdata, survey evidence, and international benchmarking within a unified framework is, to our knowledge, novel in the corporate

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tax reform literature.

Our work connects to several strands of research central to this conference. Building on the local labor markets approach of Suárez Serrato and Zidar (2016), we document how the *incidence* of corporate taxation varies across firm sizes: progressive surcharges, differentiated rates, and heterogeneous access to tax expenditures generate a 10-percentage-point spread in effective tax rates (18% to 28%), creating an implicit incidence pattern that disfavors mid-sized firms—too large for reduced rates but too small to exploit tax incentives. Our CBA decomposes how base broadening combined with rate cuts *redistributes* this burden across firms, sectors, and regions, showing that preserving R&D incentives is also a territorial equity measure—a consideration extending the analysis of tax complexity costs in Zwick (2021). Our firm survey provides direct evidence on how firms expect to allocate tax savings, with investment, human capital, and debt management shares varying systematically by firm size, complementing the investment-response heterogeneity in Zwick and Mahon (2017). Finally, we develop a novel method for recovering the unobserved corporate tax base from financial statements, applicable wherever tax returns are unavailable to researchers.

2 Institutional Setting and Data

Portugal's CIT has three layers. The general rate was 21% in 2023 (our data year), legislated to fall to 17% by 2028. SMEs pay a reduced rate (17%, falling to 15%) on the first €50,000 of taxable income. A progressive *state surcharge* applies 3%, 5%, and 9% on taxable income above €1.5M, €7.5M, and €35M. A *municipal surcharge* of up to 1.5% adds geographic variation. The resulting top marginal rate of 30.5% places Portugal 36th of 38 OECD countries on the ITCI corporate component. Simultaneously, approximately 70 tax expenditures operate, the largest being the R&D credit (SIFIDE) and the investment incentive (RFAI), together €730M. Large firms receive 40% of total tax expenditures despite representing 2% of firms.

Administrative data. We use the universe of non-financial firms from the Harmonized Central Balance Sheet Panel (CBHP/BPLIM, Banco de Portugal), covering 306,578 firms in 2023. These data contain income statements, balance sheets, and employment, but *not* the tax return (Modelo 22). We develop an iterative algorithm that inverts the observed current tax expense to recover firm-level taxable income, using the statutory rate schedule, municipality-specific surcharge rates, and firm-level tax expenditure data. Validation shows 85% coverage of official taxable income and 88% of total CIT revenue.

Behavioral responses. We decompose each reform into a *mechanical* effect (constant base) and a *behavioral* response using an ETI of 1.259, estimated by Agostini et al. (2026) for Portugal via bunching at the zero-profit threshold. This is high relative to international estimates (0.1–0.5), reflecting system complexity; results should be read as bounds.

Firm survey. We surveyed 1,092 Portuguese firms (657 full responses, April–June 2026) on obstacles to growth, tax incentive access, fiscal uncertainty, and expected allocation of tax savings.

3 Key Results

3.1 Cost-Benefit Analysis: Building Blocks and the Combined Package

Table 1 summarizes the fiscal cost of five individual reforms and the combined package.

Reform	Mechanical (€M)	Behavioral (€M)	Net cost (€M)
(1) CIT rate: 21% → 17%	−1,057	+340	−717
(2) SME rate: 17% → 15%	−111	+12	−99
(3) Eliminate state surcharge	−921	+388	−533
(4) Eliminate municipal surcharge	−547	+162	−385
(5) Eliminate tax expenditures	—	—	+1,068
(6) Combined package	−1,134	+433	−701

Table 1: **Fiscal cost of CIT reforms** (2023, 306,578 firms). Negative = revenue loss. Exercise (5): income deductions and tax credits only; infra-marginal, so no behavioral component. Package (6): CIT 17% + SME 15% + surcharge 9% above €17.7M + eliminate expenditures excl. SIFIDE/RFAI. Net cost = 0.26% of GDP, +7 ITCI positions. Behavioral response recovers 30–42% of mechanical cost.

Two facts stand out. First, tax expenditure elimination generates €1,068M—enough to finance a 4pp rate cut (€265M per point). Second, the reforms have complementary distributional profiles. Figure 1 decomposes the combined package by revenue bracket: the rate cut (blue) benefits all firms but disproportionately the largest; the SME rate (green) targets the smallest; the surcharge reform (orange) benefits firms above €10M; and tax expenditure elimination (red, below zero) penalizes mid-sized firms that are intensive users of deductions. The net effect (diamond) is positive across all brackets. This heterogeneous

incidence—where the benefits and costs of CIT changes are unevenly distributed across firm types—parallels the spatial incidence patterns in Suárez Serrato and Zidar (2016).

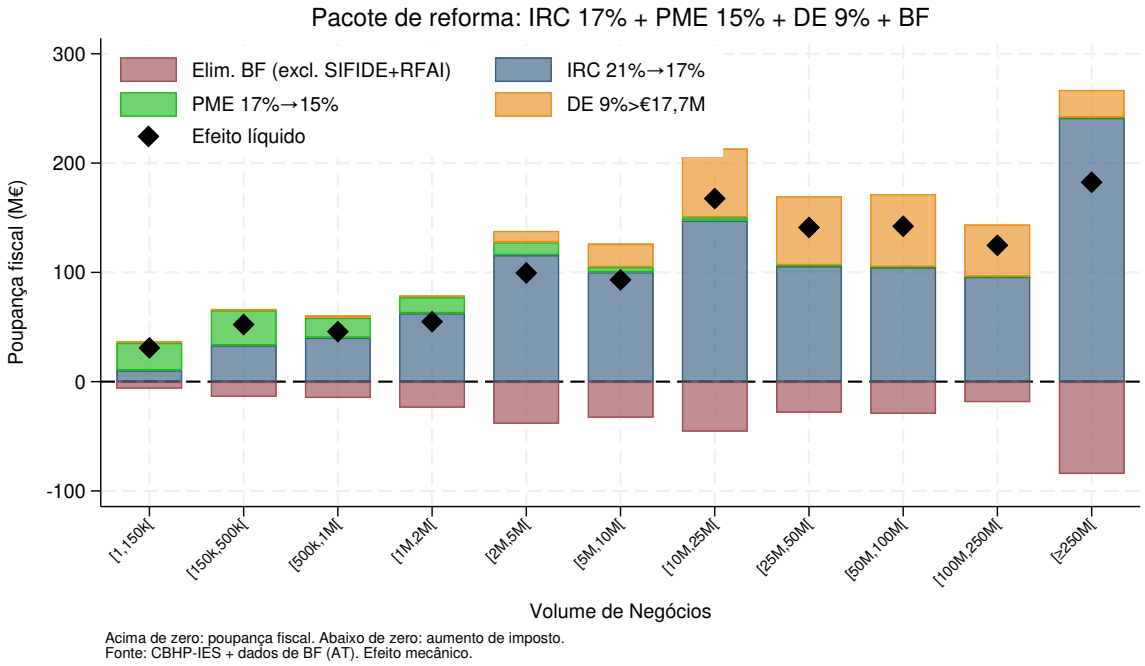


Figure 1: **Distributional decomposition of the combined reform package by revenue bracket.** Mechanical effects only. Above zero: tax savings for firms; below zero: tax increase. Blue = CIT rate 21%→17%; green = SME rate 17%→15%; orange = state surcharge reform (9% above €17.7M); red = elimination of tax expenditures (excl. SIFIDE/RFAI). Black diamond = net effect. X-axis: firm revenue brackets (€). Source: CBHP-IES + tax expenditure data (Tax Authority), 2023.

Revenue-neutral scenarios, where expenditure elimination finances the rate cut with zero net fiscal impact, yield a neutral CIT rate between 17.6% (all expenditures eliminated) and 20.3% (preserving SIFIDE/RFAI). The 2.4pp spread is the *price of R&D incentives*: keeping them costs 2.4 points of rate reduction, but sectoral decomposition shows it prevents a redistribution from manufacturing and interior regions toward Lisbon and services—an equity-competitiveness tradeoff.

3.2 Survey Evidence: Tax Complexity and Expected Firm Responses

Our survey reveals large fixed costs of tax complexity that parallel the compliance cost patterns in Zwick (2021). 70% of firms report not using any tax incentives; among non-users, 44% cite access difficulty and 35% lack of awareness. Usage rises steeply with firm

size (15% of micro firms vs. 61% of large firms). Only 36% of firms correctly identify the legislated 2028 CIT rate, suggesting information frictions that may attenuate investment responses to pre-announced rate cuts. Only 18% report full certainty about their annual CIT liability.

Table 2 shows how firms plan to allocate savings from the legislated CIT rate reduction, by firm size.

Allocation of tax savings	Micro	Small	Medium	Large	All
Investment	21%	24%	29%	26%	27%
Human capital	22%	24%	23%	15%	23%
Debt mgmt / liquidity	28%	24%	22%	30%	25%
R&D	5%	5%	7%	10%	6%
Sales & marketing	8%	8%	7%	8%	8%
Other	16%	15%	12%	11%	11%

Table 2: **Expected allocation of tax savings by firm size** (2026–2028 horizon). $N = 657$. Restricted to firms expecting a tax burden reduction. Large firms prioritize liquidity and investment; medium-sized firms shift toward investment over longer horizons; micro/small firms spread savings more evenly—echoing the heterogeneous investment responses in Zwick and Mahon (2017).

4 Contribution and Next Steps

This project makes four contributions. *Methodologically*, we develop a tax-base inversion algorithm applicable wherever tax returns are unavailable to researchers. *Empirically*, we provide the first comprehensive CBA of rate-versus-base reform using firm-level data for a high-tax OECD economy. *For policy design*, we show the rate-base tradeoff is not merely fiscal but also distributional and territorial: preserving R&D incentives has a measurable cost in foregone rate reduction but buys sectoral and geographic equity. *On firm behavior*, our survey provides novel evidence on tax salience, incentive access barriers, and expected allocation of tax savings, connecting to the literatures on corporate tax incidence (Suárez Serrato and Zidar, 2016) and tax complexity costs (Zwick, 2021).

Ongoing work includes: (i) obtaining Modelo 22 tax return data to validate the inversion algorithm at firm level; (ii) estimating heterogeneous behavioral responses by firm size and sector, relaxing the uniform ETI assumption; (iii) exploiting the legislated rate trajectory (2024–2028) as a quasi-experiment to estimate actual investment responses, validating the survey evidence; and (iv) extending the tax expenditure incidence analysis to the corporate group level using ownership data.