

# Employment and Consumption Responses to Tax Cuts and Tax Hikes

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Do tax hikes on high-income earners discourage work and decrease consumption? Do these effects propagate to the rest of the economy affecting jobs and growth? Are these effects symmetric in the case of tax cuts? The standard predictions from neoclassical economics suggest the answer is ‘yes’, and they have been central to much of the fiscal policy recommendations throughout history. However, recent research has challenged this view. On the micro side, studies show that real labor supply responds very little to taxes (see Saez et al. 2012). In the case of salaried workers, small tax changes, adjustment frictions, and lack of knowledge about changes in the tax code could explain sluggish responses (Chetty et al. 2013). On the macro side, despite recent work by Zidar (2017) investigating whether tax cuts for the poor help more than tax cuts for the rich, credible empirical research on “trickle down” economics is still scarce, inconclusive, and remains a controversial topic.

In this project, I study the direct (individual) and indirect (market) effects of income tax hikes and cuts on labor supply and consumption. The role of frictions and the mechanisms behind these responses will also be explored. I exploit a unique quasi-experimental setting in Argentina for the years 2000 to 2016 that combines inflation, non-indexation of tax brackets, tax “patches”, and differential geographic exposure. In this period, accumulated inflation reached 1783% giving rise to the “bracket creep” phenomenon and drastic measures aimed at alleviating the increasing tax burden on high-income employees. The corresponding first-stage variation over the period is depicted in Figure 1. I combine two sources of administrative data. For employment, I use geo-coded employer-employee panel data from the social security covering the universe of registered salaried workers.<sup>1</sup> For consumption, I will use a panel of debt balance data of individuals and firms that the Central Bank gathers from every financial institution.<sup>2</sup> Both datasets are reported on a monthly basis and thus allow me to study employment and consumption dynamics in a context of high and persistent inflation.

In the first part of the project, I analyze the direct effect of taxes on labor supply and consumption. The reform I study split the universe of salaried workers into three groups based on prior earnings and two income thresholds. The first group was exempt from the income tax, the second group was partially compensated, and the third group continued paying the tax normally. This made that similar workers who coexist in the same labor market ended up with sharply different tax liabilities for 2.5 years between 2013 and 2016.<sup>3</sup> Comparing workers below and above two cutoffs using a regression discontinuity design

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<sup>1</sup> The data include about 450 thousands private firms and about 10 million salaried workers per month.

<sup>2</sup> The data include the end-of-month debt balance by line of credit, independently of whether it is paid or not (e.g. credit card balance, mortgage loans, personal loans, etc.). I will use this as a proxy for consumption.

<sup>3</sup> For example, workers earning about AR\$15,000 monthly in 2013 (decile 8) experienced a decrease in the MTR from 27% to 0% and a decrease in the ATR from 7% to 0%. For workers earning slightly more than AR\$15,000 in 2013, the MTR went from 27% to 35% and the ATR went from 7% to 14% between 2013 and 2016.

offers a unique opportunity to estimate the impact of a large and salient tax change on earnings and consumption. Although there are numerous papers studying labor supply responses to taxation, the natural experiment at hand is pretty unique due to its large first stage, the presence of a clear control group, and the use of an econometric tool with high internal validity that overcomes identification difficulties that plagued previous work, such as mean reversion and heterogenous income trends.

In the second part of the project, I will test for general equilibrium effects operating through aggregate demand. The research design I plan to use relies on a simple idea: cities with few workers paying the income tax should be less affected by income tax changes. Hence, I can identify the macro effect of tax changes by comparing economic activity across cities that differ in their income tax exposure but are otherwise comparable.<sup>4</sup> The strategy is similar to the one developed by Zidar (2017), but I will use variation across cities instead of across states. Other advantages of my setting are: the access to geo-coded microdata which provides more regional variation; that the parameters of the income tax did not change during the period of analysis despite the increasing tax pressure;<sup>5</sup> and, income tax changes were concentrated on high-income workers, which avoids contamination issues of comprehensive reforms that affect different income groups simultaneously. In this way, it constitutes a much more controlled setting.

This paper contributes to the literature in three ways. First, it extends the evidence of taxation on labor supply responses. Second, it speaks to the literature that studies individual spending responses to fiscal stimulus programs (e.g. Parker et al. 2013). Importantly, the variation at hand is much larger and salient than that used in previous studies, and identification hinges on a stronger research design. Third, it adds to a small but growing empirical literature on the macroeconomic *causal* effect of taxes on economic activity (e.g. Romer and Romer 2010; Nakamura and Steinsson 2014; Zidar 2017). Improving our understanding of the micro and macro effects of taxes is of central importance to policymakers and the society in general. The results from this paper will let me quantify the extent to which public policies aimed at reducing inequality, such as progressive income taxation, matter for employment, consumption, and growth and, ultimately, could guide federal policymakers in promoting equitable growth.<sup>6</sup>

## References

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<sup>4</sup> The federal income tax affects differently the regions of Argentina due to substantial variation in the income distribution across provinces.

<sup>5</sup> I.e., the progressive tax schedule, marginal tax rates, and the definition of the tax base remained unchanged.

<sup>6</sup> For example, by computing the marginal propensity to consume out of tax cuts, and its symmetry relative to tax hikes.

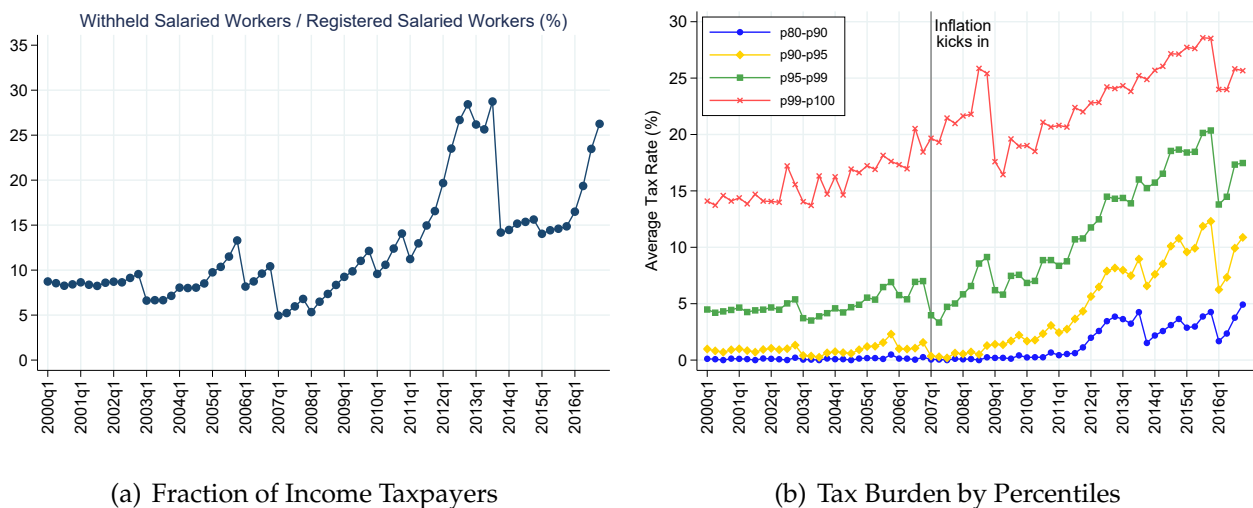
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**Figure 1:** Extensive and intensive margin of the personal income tax



(a) Fraction of Income Taxpayers

(b) Tax Burden by Percentiles

Note: Panel (a) shows the share of salaried workers subject to the income tax (extensive margin). Panel (b) shows the average tax rate by percentiles of gross earnings (intensive margin). p99-p100 refers to the top 1 percent, p95-p99 to the next 4 percent, etc. Source: own elaboration based on SIPA administrative data.