

Application form for extended proposal

Title:

No Incidence Left Behind – Towards a Complete Understanding of Tax Incidence

Description:

This project aims to provide evidence on the incidence of taxes on the profits of companies. By exploiting experimental variation in the assignment of hypothetical permanent tax increases and decreases, we examine the symmetry of profit tax incidence and whether it is sensitive to the size of the tax change.

Your most important question:

Assume: Your company has a permanently lower/higher profit tax burden by (1%/10%/25%) due to a tax cut/tax increase.

How do you distribute the additional funds?/From which areas do you finance the additional tax burden?

Authors:

Richard Winter, Philipp Dörrenberg, Fabian Eble, Davud Rostam-Afschar and Johannes Voget

Theoretical background (max. 2 pages):

Who bears the incidence of profit taxes? The answer to this question has fueled academic and policy debates for decades, as it has important implications for distributional aspects of the tax system. Capital income tends to fall on the affluent, and therefore, whether the economic incidence of its taxation predominantly lies with its owners or other agents of the economy directly affects the progressiveness of these taxes. Although this issue is of vital importance to optimal tax policy, the theoretical and empirical literature in this field so far produced rather mixed results. In principle, there are three main stakeholder groups that can bear the incidence of profit taxes: Workers, capital owners, and customers. The extent to which each of these groups shares in the economic burden of the tax is ultimately an empirical question.

In this project, we use survey data of high-level decision makers in German firms to provide complementary evidence to the existing findings from the literature in order to facilitate a better understanding of profit tax incidence. We take a straightforward approach to tackle this issue by bluntly asking firm decision makers about the profit tax incidence in their companies, thereby circumventing many challenges inherent to studies relying on observational data. For this purpose, we randomly assign survey respondents hypothetical permanent tax increases and decreases in varying magnitudes and inquire either how the additional funds available after a tax cut would be used or from which sources funds would be diverted to pay for the increased tax burden. By random assignment of the sign of the tax change we are able to test for asymmetries in the stated incidence reported by survey participants, whereas the experimental variation in the size of the tax change allows us to tease out the sensitivity of profit tax incidence with respect to treatment intensity.

Design Plan (study type, study design, hypotheses, randomization):

Description of study design.

Study type: Experiment

Study design

Comparison between and within groups

Hypotheses 1

The incidence of profit taxes is significantly different between tax increases and decreases

Hypotheses 2

There are incremental effects of a differentially sized tax change on certain incidence categories

Randomization

Random assignment of study participants to groups

Sampling design (sample size and stratification, filtering rules, power calculation):

Sample size and stratification

Following our power calculation below, we aim for 1000 respondents per treatment arm. As our experiment consists of 6 treatments, this would result in around 6000 observations in sum. No stratification is applied.

Filtering rules

None – Groups are randomly assigned

Power calculation

Used stata command:

```
power twomeans 17, alpha(0.05) power(0.8) diff(2.5) sd(20)
```

t test assuming $sd1 = sd2 = sd$

Ho: $m2 = m1$ versus Ha: $m2 \neq m1$

Study parameters:

- $\alpha = 0.05$
- $\text{power} = 0.80$
- $\text{delta} = 2.5$
- $m1 = 17$
- $m2 = 19.5$
- $\text{diff} = 2.5$
- $sd = 20$

Estimated sample sizes per group:

1,006

Estimated sample size overall (6 Treatments):

6,036

Variables (treatment variables, observation variables):

Treatment variables 1: `tax_exp`: Randomized hypothetical tax increase (decrease) of (1/10/25%).

Observation variables 20:

Outcomes:

Depending on sign of the tax change share attributed to each category. Range [0,100], must sum to 100 across categories.

Tax Decrease:

tax1: increased payment to employees (wages, variable compensation)
tax2: creation of additional jobs
tax3: increased income for partners
tax4: higher distributions to shareholders
tax5: increase in retained earnings/reserves
tax6: price reductions (for customers)
tax7: higher investments
tax8: less use of tax saving opportunities
tax9: others
tax10: decrease of debt capital

Tax Increase:

tax11: decrease payment to employees (wages, variable compensation)
tax12: reduction of jobs
tax13: decreased payout to partners
tax14: lower distributions to shareholders
tax15: decrease in retained earnings/reserves
tax16: price increases (for customers)
tax17: lower investments
tax18: more use of tax saving opportunities
tax19: others
tax20: increase in debt capital

Analysis plan (statistical models, explorative analysis):

Means tests, regression analysis (Ordinary Least Squares, Multinomial Fractional Logit)

Expected contribution

By random assignment of the sign of the tax change we are able to test for asymmetries in the stated incidence reported by survey participants, whereas the experimental variation in the size of the tax change allows us to tease out the sensitivity of profit tax incidence with respect to treatment intensity. To the best of our knowledge, our paper is the first to provide evidence from a large-scale survey of companies that is able to distinguish the effects of differently signed tax changes as well as differences in treatment intensity. Our paper therefore provides additional evidence to a literature which reached a wide range of possible conclusions about the incidence of profit taxes.

Estimated survey time (max. 5 Minutes): 3 Min. (Median: 15 Minuten für den gesamten Survey)

Content ...

Assume: Your company has a (1%/10%/25%) permanently lower (higher) profit tax burden as a result of a tax cut (increase).

1 = 1% permanently lower profit tax burden

2 = 10% permanently lower profit tax burden

3 = 25% permanently lower profit tax burden

- 4 = 1% permanently higher profit tax burden
- 5 = 10% permanently higher profit tax burden
- 6 = 25% permanently higher profit tax burden

Tax Decrease

How do you distribute the additional funds?

Please enter shares that add up to 100.

- tax1 increased payment to employees
- tax2 creation of additional jobs
- tax3 increased income for partners
- tax4 higher distributions to shareholders
- tax5 increase in retained earnings/reserves
- tax6 price reductions (for customers)
- tax7 higher investments
- tax8 less use of tax saving opportunities
- tax9 others

Tax Increase

Assume: Your company has a permanently higher profit tax burden by (1%/10%/25%) due to a tax increase.

How do you finance the additional burden?

Please enter shares that add up to 100.

- tax11 decrease payment to employees
- tax12 reduction of jobs
- tax13 decreased payout to partners
- tax14 lower distributions to shareholders
- tax15 decrease in retained earnings/reserves
- tax16 price increases (for customers)
- tax17 lower investments
- tax18 more use of tax saving opportunities

tax19 others

tax20 increase in debt capital