

Consumption Taxes and Corporate Income Taxes: Evidence from Place-Based VAT

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Transaction taxes are distortionary

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In this paper:

Evidence that VAT can distort corporate economic activity

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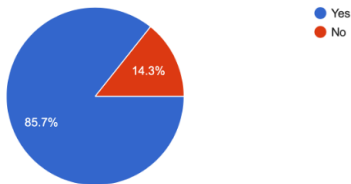
Almost no empirical evidence on how VAT affects economic activity

(VAT %-changes are small, sector-specific, difficult for counterfactual)

Expert survey to confirm VAT economic thinking (PRELIMINARY RESULTS)

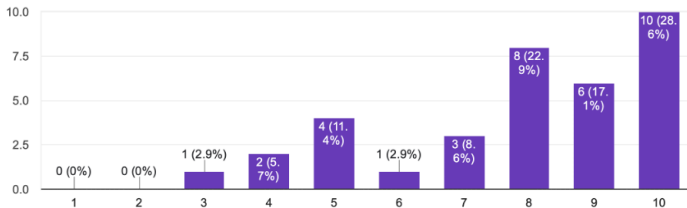
Do you consider yourself a tax expert?

35 responses



From a scale of 1-10, how much of your work is dedicated to taxation?

35 responses

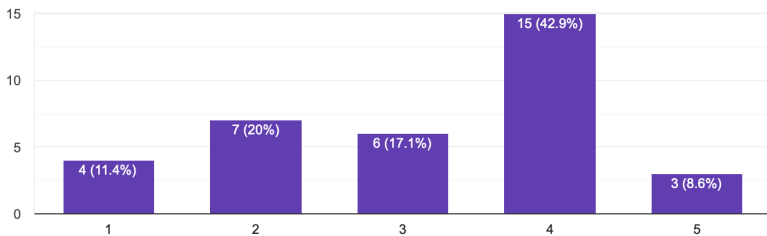


VAT considered an efficient tax

"VAT is an efficient tax: It generates tax revenue for the government without affecting negatively economics activity"

Definition note: An efficient tax in this case means minimizing distortions and maximizing the net benefit to society while raising necessary revenue

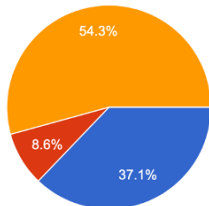
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Pass-through expected when VAT increases

Suppose a government implements a large VAT increase. (for example, VAT increases from 10% to 20% on all products/services) Corporations will...

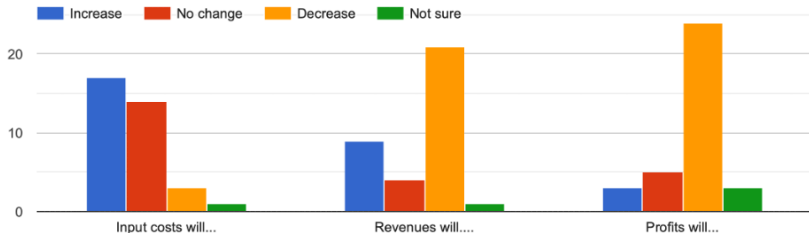
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- Pass the full cost to consumers (increase prices as much as the VAT increase)
- Pass more than the full cost to consumers (increase prices more than the VAT increase)
- Pass less than the full cost to consumers (increase prices less than the VAT increase)
- Absorb the full cost (no change in prices)

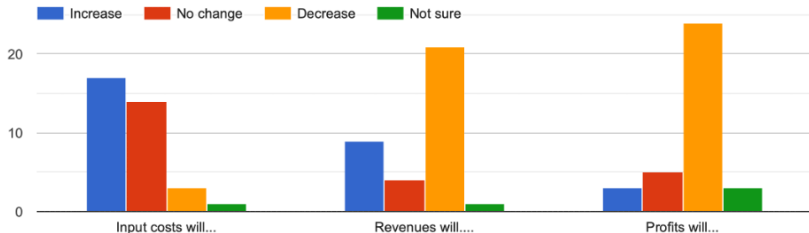
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Suppose a government implements a large VAT increase. (for example, VAT rate increases from 10% to 20% on all products/services) How would you expect corporations to be affected?



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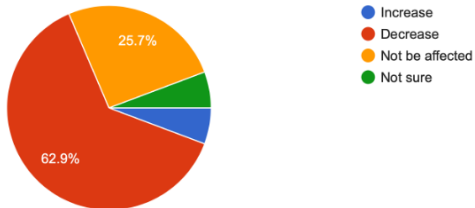


Most mention **lower demand** due to price increase, as a reason for lower profits

CIT revenue expected to fall when VAT increases

Suppose a government implements a large VAT increase and collects more VAT revenue. At the same time, government revenue from the corporate income tax will...

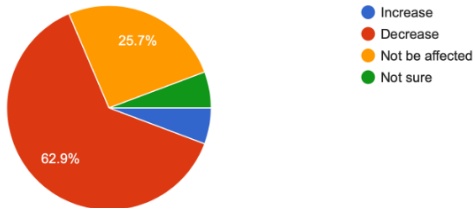
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Note that neither economic policy nor academic literature has accounted for cross-CIT effect of VAT despite expert expectation (!)

Survey results and contribution

1. VAT considered efficient by many (but not all)
2. Full or some pass-through expected to consumer
3. Unsure what happens to input costs
4. Majority expects Revenue & Profits & CIT to fall (contradicts efficiency!)

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In this paper: **real economic effects in response to VAT increase**

- ▶ Evidence that corporation experience revenue/profit decrease
- ▶ Evidence of negative elasticity of corporate income tax wrt VAT increase
- ▶ Suggests distortions and cross-CIT revenue effects

Institutional Background

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We use Ionian islands as control (similar activity, always at mainland rate):

Kefalonia, Zante, Lefkada, Meganisi, Corfu, Paxoi and Kythira



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We compare corporate responses against those in islands not part of the reform

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- ▶ 1,042 corporations in control group, 1,152 in treatment group
- ▶ Balanced panel over 8 years: 12,798 observations

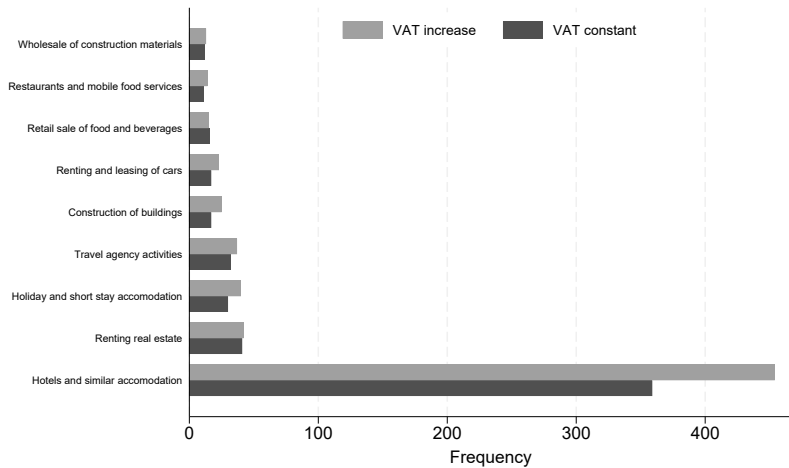
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4. Time-varying control variables
 - ▶ Monthly number of hotel accommodation nights per island
 - ▶ Monthly hotel capacity booked

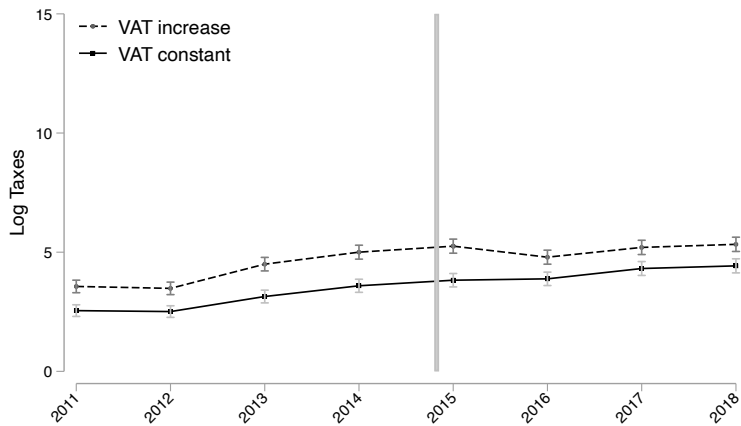
Sample Statistics

	VAT Constant Islands				VAT Increase Islands			
	Gross Revenues	Taxable Profits	Losses	CIT	Gross Revenues	Taxable Profits	Losses	CIT
Mean	971,780	74,441	114,697	21,588	1,726,187	166,564	182,837	48,213
Median	192,022	0	0	0	370,420	3,189	0	924
Sample	1,042	1,042	1,042	1,042	1,152	1,152	1,152	1,152

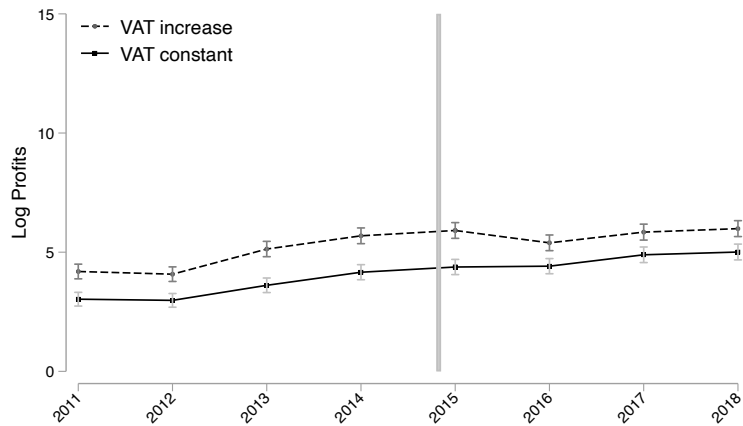
Corporate Activity



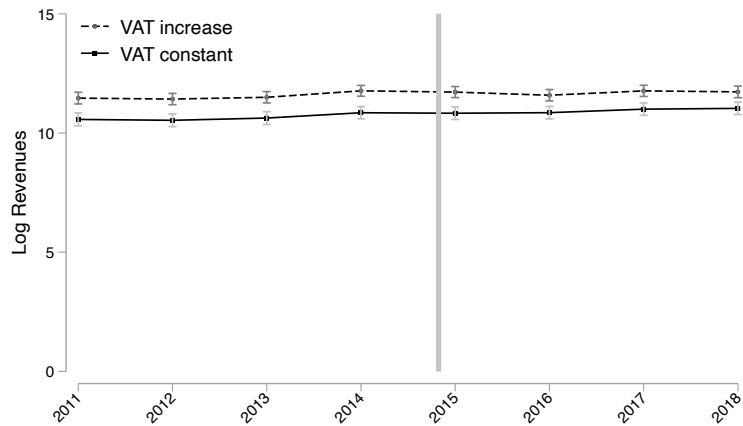
Unconditional Differences in CIT



Unconditional Differences in Profits



Unconditional Differences in Revenue



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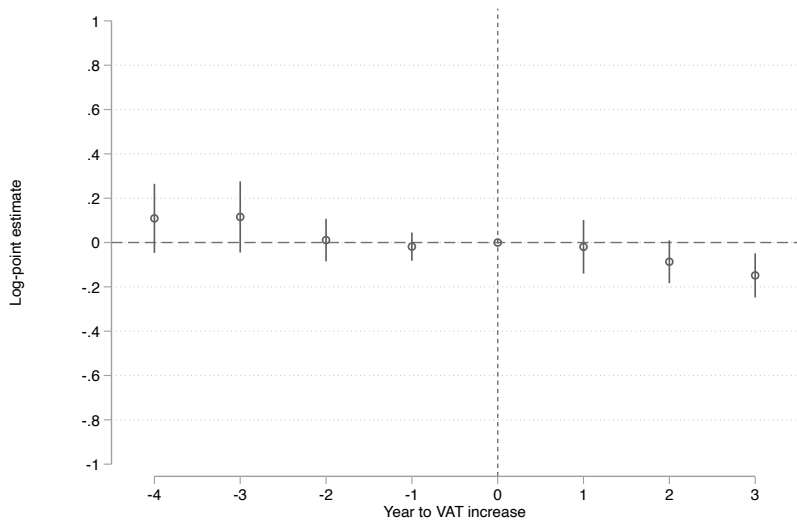
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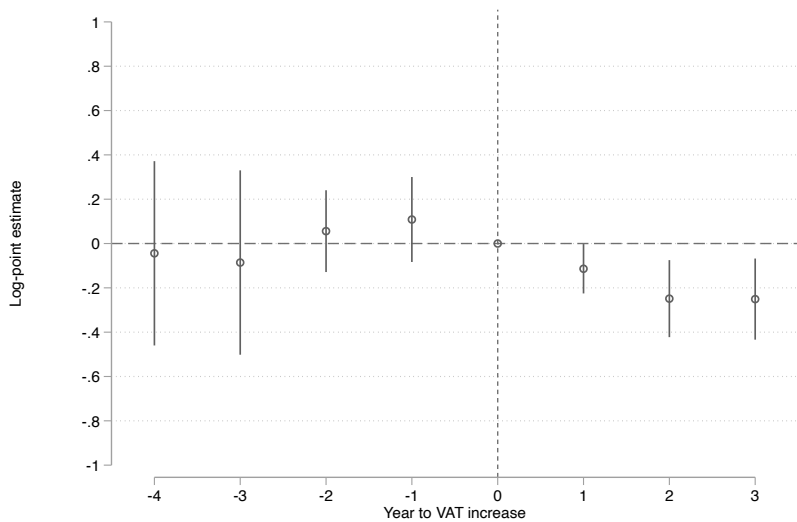
Specification:

$$\underbrace{Y_{i,z,t}}_{\text{Outcome variable}} = \alpha + \overbrace{\beta \text{Post}_t \times \text{VAT}_{i,z}}^{\text{VAT increase indicator}} + \underbrace{X_{i,t}}_{\text{Time-varying corporate variables}} + \overbrace{W_{z,t}}^{\text{Time-varying island variables}} + \delta_i + \lambda_z + \zeta_t + \epsilon_{i,z,t}$$

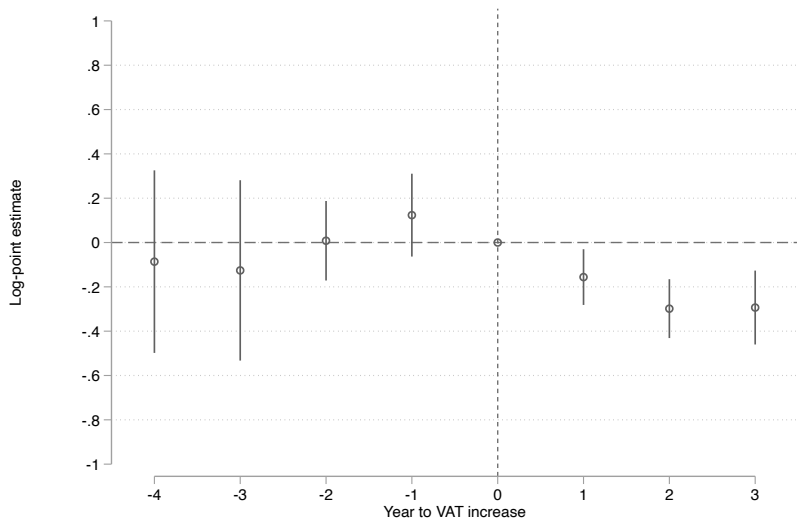
Revenues



Profits



Corporate Income Taxes



Main Regression Results (PPML)

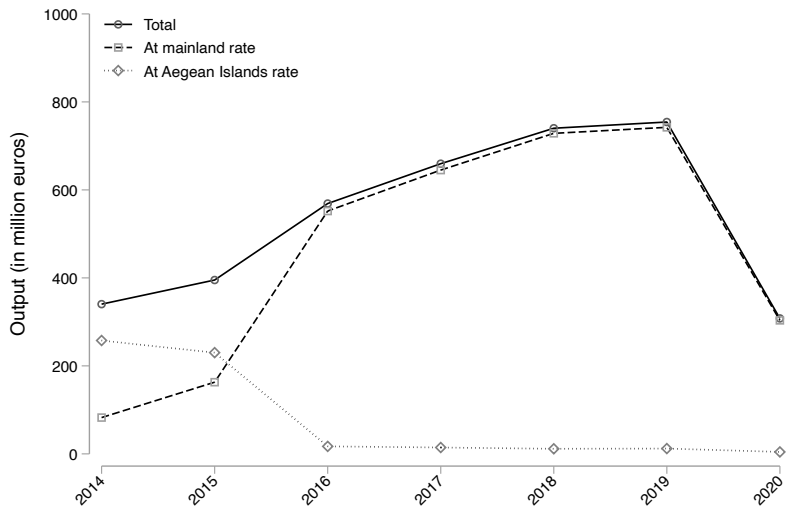
	(1) Corporate Income Tax	(2) Gross Revenues	(3) Profits
2011 × VAT ↑	-0.0863 (0.2101)	0.1090 (0.0795)	-0.0442 (0.2122)
2012 × VAT ↑	-0.1258 (0.2076)	0.1154 (0.0819)	-0.0859 (0.2122)
2013 × VAT ↑	0.0080 (0.0915)	0.0111 (0.0489)	0.0558 (0.0942)
2014 × VAT ↑	0.1236 (0.0954)	-0.0185 (0.0324)	0.1083 (0.0978)
2016 × VAT ↑	-0.1560** (0.0642)	-0.0193 (0.0617)	-0.1139** (0.0568)
2017 × VAT ↑	-0.2983*** (0.0677)	-0.0867* (0.0493)	-0.2487*** (0.0886)
2018 × VAT ↑	-0.2934*** (0.0850)	-0.1483*** (0.0508)	-0.2508*** (0.0933)
Log cash	0.0557*** (0.0059)	0.0329*** (0.0097)	0.0558*** (0.0058)
Log dividends	0.0395*** (0.0067)	0.0011 (0.0013)	0.0389*** (0.0066)
Log net fixed assets	0.0075 (0.0382)	0.1615*** (0.0292)	0.0126 (0.0396)
Log accommodation nights	0.7148* (0.3955)	0.9142*** (0.2674)	0.7009 (0.4740)
Annual hotel capacity	-0.0156** (0.0069)	-0.0119*** (0.0036)	-0.0149* (0.0083)
Corporate t-varying controls	Yes	Yes	Yes
Island t-varying controls	Yes	Yes	Yes
Corporation-Postcode FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Number of Observations	12798	12798	12798
Number of Postcodes	46	46	46
Ps. R-squared	0.90	0.97	0.88

VAT Returns Breakdown

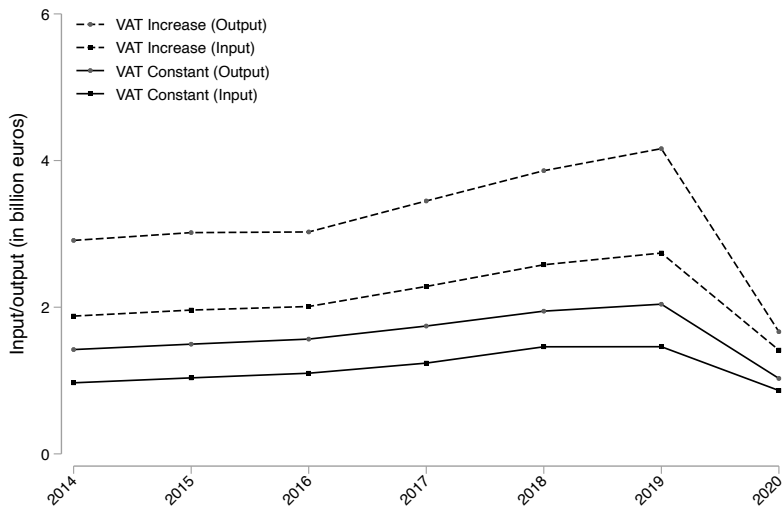
B. TABLE OF OUTPUTS – INPUTS after the reduction (according to the VAT rates) of refu

a	Taxable OUTPUTS (supply of goods or services, etc) INTRA-COMMUNITY ACQUISITIONS AND REVERSE CHARGE TRANSACTIONS that mechanisms applied.	VAT Rate %	VAT AMOUNT OF OUTPUTS DUE
I. OUTPUTS, INTRA- COMMUNITY ACQUISITIONS & REVERSE CHARGE TRANSACTIONS in Greece apart from the Aegean Islands	301	13	331
	302	6	332
	303	24	333
II. OUTPUTS, INTRA-COMMUNITY ACQUISITIONS & REVERSE CHARGE TRANSACTIONS in the Aegean Islands and from the rest of Greece towards the Aegean Islands	304	9	334
	305	4	335
	306	17	336
TOTAL TAXABLE OUTPUTS	307	TOTAL VAT	337

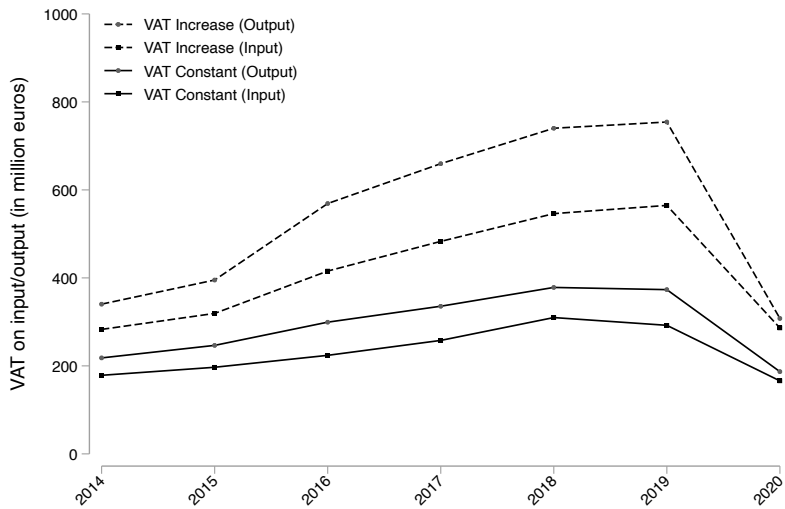
Responses in VAT Returns (Treatment Group)



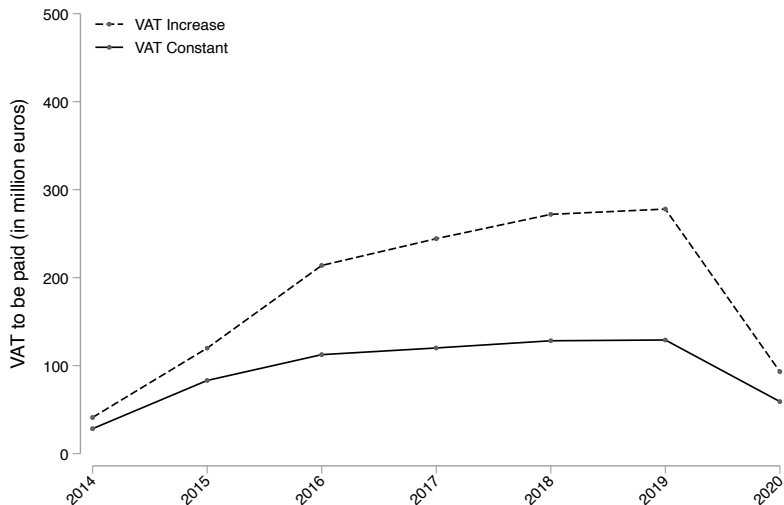
Input and Output



VAT on Input and Output

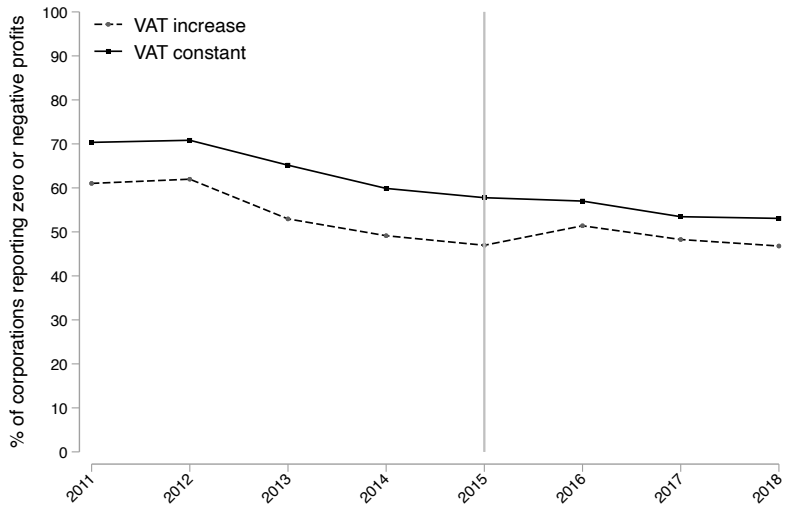


VAT Paid (VAT on Input minus VAT on Output)



Corporations in treatment islands faced an increase in VAT payments

Zero or Negative Profits



Economic effects

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Economic implication: we should investigate VAT optimality under market imperfections, production inefficiencies and asymmetric pass-through

Fiscal effects

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Work ongoing on: a VAT-CIT model, costs, price pass-through