

DISCUSSION OF
“FISCAL CONSOLIDATION AND FIRM INVESTMENT:
EVIDENCE FROM THE GERMAN MANUFACTURING
INDUSTRY”

BY

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SUMMARY

This paper

- ▶ **measures** effects of aggregate tax shocks on investment
- ▶ **finds** investments fall after positive tax shocks
- ▶ **finds** some heterogeneity across tax types

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 1. changes in tax revenues
 2. manufacturing micro data on investment
- ▶ Method: linear regressions
- ▶ Identification: Romer-Romer (2010) tax changes

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Discussion

- ▶ Aggregate shock elasticity
- ▶ Heterogeneity across firms
- ▶ Heterogenous response to different taxes

AGGREGATE SHOCK ELASTICITY

Main regression

$$\Delta \log I_{i,t} = \alpha_i + \sum_{m=-2}^{m=2} \beta_m \tau_{t+m} + \text{controls}_{i,t} + \epsilon_{i,t}$$

- ▶ $I_{i,t}$ —realized or (half-year-in-advance) planned investment
- ▶ τ_{t+m} —“exogenous” and “unanticipated” tax changes

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- ▶ panel $I_{i,t}$ vs. time-series τ_{t+m}

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What to expect?

- ▶ $\beta_{t+m} = 0$ for $m > 0$
- ▶ $\beta_{t+m} \leq 0$ for $m \leq 0$

AGGREGATE SHOCK ELASTICITY

$$\beta_{t+m} \leq 0, \quad m \leq 0$$

How taxes affect investment? Channels

- ▶ Firms: how much to invest, employ labor, etc.?
- ▶ Households: how much to save, consume, work?
- ▶ All of these choices interact in GE and affect investment!

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Examples

1. Increase in consumption taxes

- ▶ Household demand for goods fall $\Rightarrow I \downarrow$
- ▶ Household labor supply falls $\Rightarrow w \uparrow \Rightarrow I?$
- ▶ Household savings increase $\Rightarrow I \uparrow$
- ▶ Auerbach-Kotlikoff (1987), Heijdra-Lightart (2000): $I \uparrow$

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Aggregate shock elasticity

- ▶ measures the net impact of all of these effects

AGGREGATE SHOCK ELASTICITY

Dependent variable:

Investment growth

	(1)	(2)	(3)	(4)	(1991-2010)	(1970-1990)
Lead 2 Fiscal shock	2.659*** (0.922)	1.239 (0.940)	0.584 (0.945)	0.135 (0.970)	2.126* (1.150)	3.085 (2.022)
Lead Fiscal shock	0.895 (0.896)	0.056 (0.904)	-0.020 (0.910)	-0.037 (0.925)	0.642 (1.208)	4.563** (1.923)
Fiscal shock	-8.949*** (0.952)	-8.502*** (0.960)	-8.724*** (0.960)	-8.469*** (0.979)	-8.789*** (1.245)	-2.359 (1.811)
Lag Fiscal shock	-2.901*** (0.849)	-4.682*** (0.876)	-4.853*** (0.883)	-5.412*** (0.904)	-1.704 (1.056)	-7.072*** (1.824)
Lag 2 Fiscal shock	0.858 (0.941)	-1.757* (0.986)	-2.164** (0.993)	-2.84*** (1.026)	0.529 (1.248)	-3.275* (1.895)

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- ▶ *Size of the effect:* manufacturing value added in GDP = 23%
 ⇒ 1% of GDP tax increase reduces investment by 60%
 (Romer-Romer 2010: 11%)
- ▶ It is informative to compare to aggregate I_t reaction

TAXES DISAGGREGATION

Tax groups

- ▶ “Income tax”
(personal income tax, pension and savings tax)
- ▶ “Property tax” or “corporate taxes”
(corporate and business tax, energy tax, property tax)
- ▶ “Consumption tax”

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Interesting results

- ▶ When added one-by-one, all taxes are equally important
- ▶ In a single regression, “consumption” and “income” taxes are equally important

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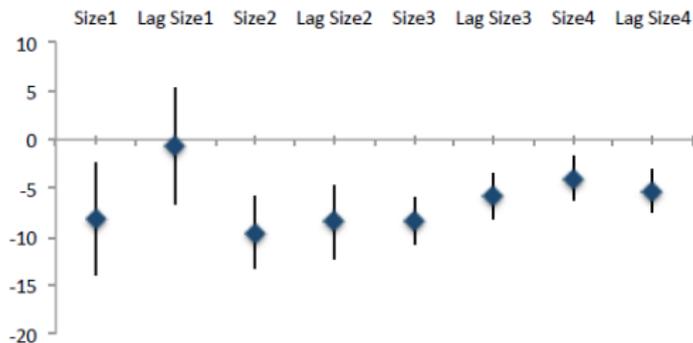
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- ▶ In a single regression, “consumption” and “income” taxes are equally important

Comment

- ▶ Why not use finer tax disaggregation?
- ▶ Few observations can be extended by cross-country data

CROSS-SECTIONAL IMPLICATIONS

Firm groups: 1 – 49, 50 – 199, 200 – 999, > 1000

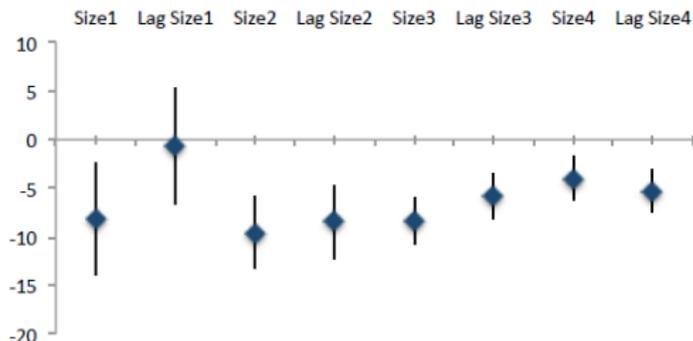


Result

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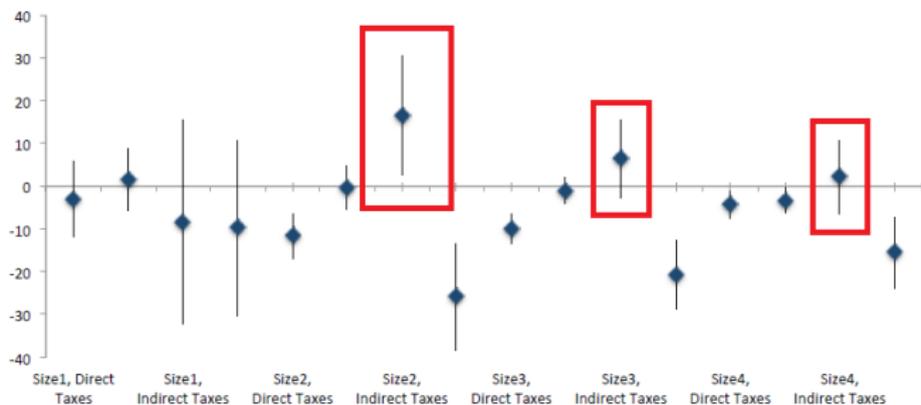
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Comment

- ▶ Different age groups reaction?

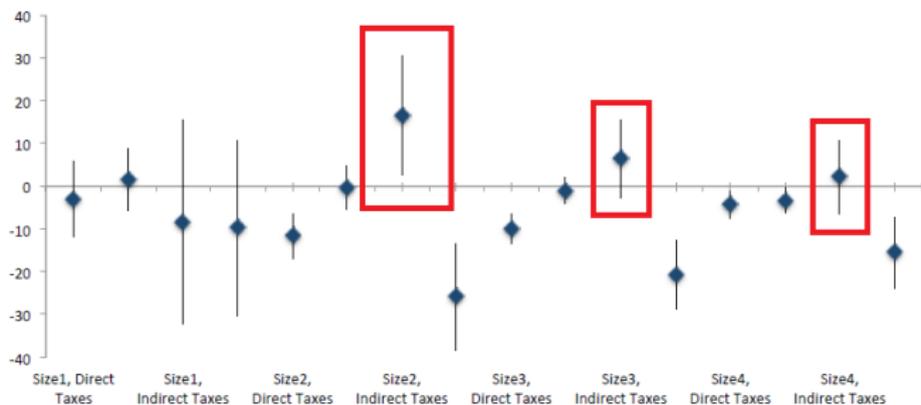
CROSS-SECTIONAL IMPLICATIONS OF DIFFERENT TAXES



Result

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Comment

- ▶ Explore this more: finer tax disaggregation

CONCLUSION

- ▶ An interesting and promising paper!
- ▶ Main comments
 - ▶ Aggregate shock elasticity interpretation
 - ▶ Explore more tax disaggregation
 - ▶ Explore more heterogenous firm response