Discussion of ‘The Business Investment Response to the Domestic Production Activities Deduction’

Owen Zidar
Chicago Booth and NBER

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Interesting paper!

1. **Important Question:** How do investment rates respond to lower taxes?

2. **Clever Idea:** Compare responses of firms with different treatment intensities

3. **Provocative Results:** Large investment responses

   “This large response suggests DPAD, or more generally $\tau^c$, is an investment stimulus policy far superior to other inventive such as the Bush Tax Cuts and Bonus Depreciation.”
Key Issue: what are counterfactual investment rates?

QPAI by Sector

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Key Issue: what are counterfactual investment rates?

Baseline Investment Rate: \( \frac{I}{K} = \delta \)

Use Market

Investment Market

\( R \) \( K \)

\( P \) \( I \)

\( D(R) \)

\( S(P) \)
Key Issue: what are counterfactual investment rates?

Approaches in Paper

1. Include firm and year fixed effects
2. Include controls
3. Include industry fixed effects
4. Compare responses by group (e.g. small, young firms to large, old ones)
5. Try to measure and adjust for cyclical sensitivity
   - Drop extreme beta industries
   - Control for beta
   - Use residual investment

Suggestion #1: Show your cyclical adjustments graphically
**Suggestion #2: Help reader compare estimates**

**Simplified Model for firm investment rate:**

\[ \frac{I_t}{K_{t-1}} = b_0 + b_1 \text{TaxDeduction} + b_2 \text{Controls} + e \]

**Baseline Result:**

\[ \varepsilon = \frac{b_1}{\mu} = \frac{.14}{.45} = .31 \approx 3.5 \]

**Other Specifications:**

- Numerator varies across specifications
  1. Log Investment 2005-2008: \( \frac{.012}{.45} \approx .026 \Rightarrow \varepsilon \approx 0.3 \)
  2. Industry FX: \( \frac{.55}{.45} \approx 1.2 \Rightarrow \varepsilon \approx 13.6 \)
  3. Residual Investment: \( \frac{6.96}{.45} \approx 15.4 \Rightarrow \varepsilon \approx 171.9 \)

- Not clear denominator should be .09 \( \Rightarrow \) larger \( \varepsilon \)
Suggestion #3: Show aggregate results
Suggestion #3b: Show aggregate results by type
Other Suggestions

1. Show raw data for 1990-2000 placebo and treatment
2. Theory on $\pi'(I) = x$. May have different $\pi(I)$ functions or be at different parts of this function so comparative statics not as obvious
3. Test explanation why nontaxable group shows bigger effect (i.e. see if prior investment was higher)
4. How big would adjustment costs have to be to rationalize your effects for constrained firms? Is this plausible?
5. Defend not clustering standard errors at industry level (with industry level DPAD shock)
6. Minor: fix definition of d in theory section