

# Discussion of *Basu, Kim, and Singh* (2021): Tax Incentives, Small Businesses, and Physical Capital Reallocation

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# Tax Deductions Leads to Capital Investments

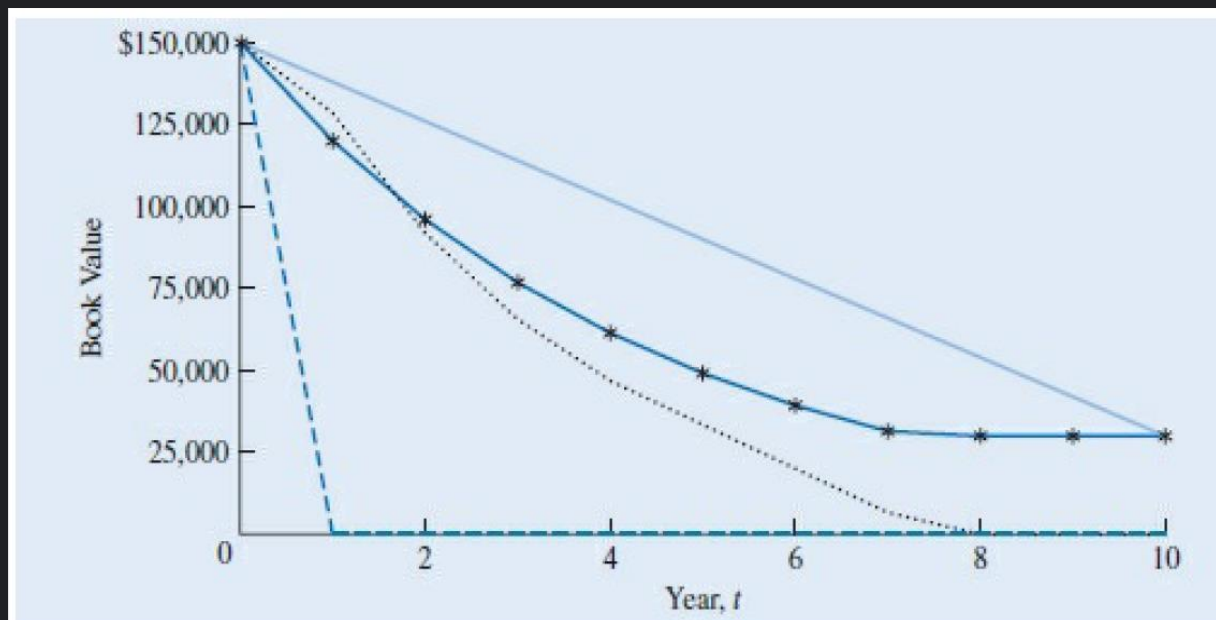
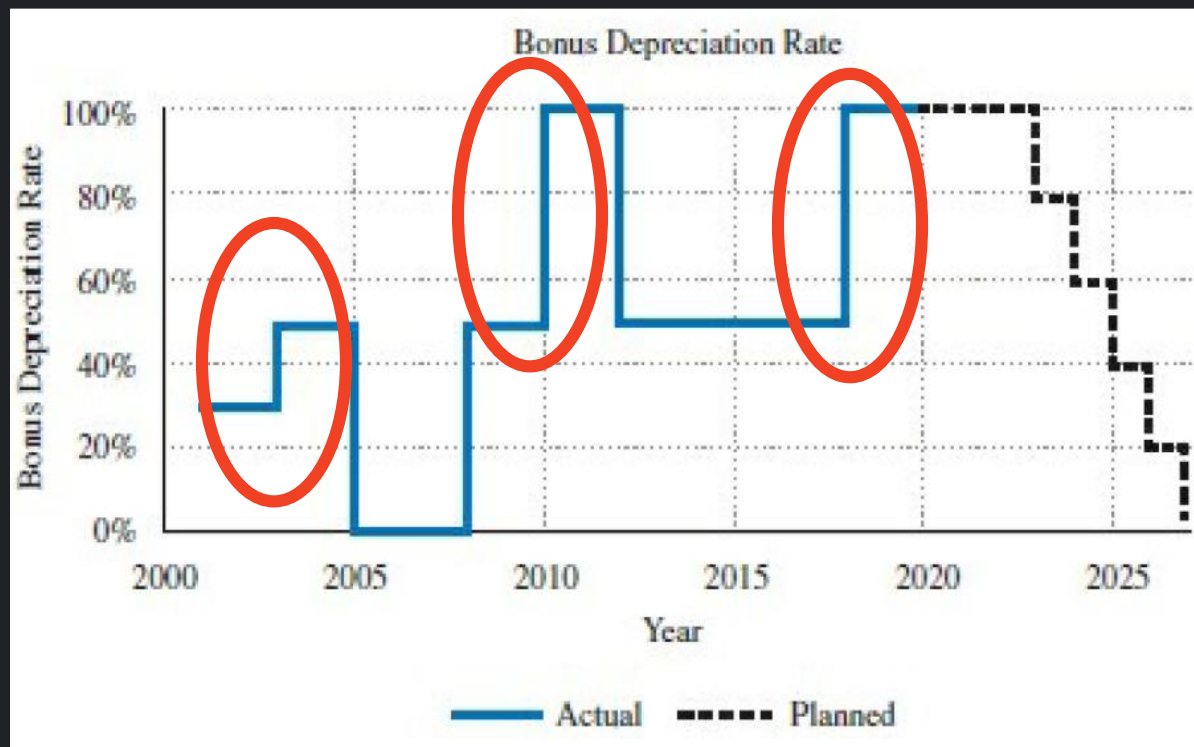


FIGURE 11-7 Comparing straight line (—), double declining balance (—\*), MACRS (.....), and 100% bonus depreciation (---).

- Getting tax deductions earlier the better (NPV)
- Does bonus depreciation (BD) lead to investments in both old and new capital? What is the mechanism?

# Empirical Strategy: Staggered DID



- BD reduces duration of tax deductions relatively more for assets with longer recovery periods (i.e., depreciation)
- Compare property purchase transactions between long- and short- recovery period industries before and after BD policy events

# Summary of Findings

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- Bonus Depreciation (BD) leads to investments in new capital
- For less financially constrained firms, new capital replaces old capital
  - Reduces old capital prices
- For more financially constrained small firms, bonus depreciation leads to investments in old capital

# Why are Findings Interesting?

- Novel finding of indirect effects of targeted BD for new equipment purchases only
  - 2 out of 3 BD tax policies applied only to new equipment, and not surprisingly we observe an increase in new equipment purchases
  - But...many new equipment purchases replaced old equipment, which in turn was absorbed by firms with less financial resources
- However, whether BD targeting of new equipment only improves overall welfare more so than indiscriminate BD (i.e., allowing old and new equipment) is not clear
  - This is what policymakers want to know and the paper should try to steer in this direction

# Comment 1: Welfare Analysis

- Unconstrained firms are better off with indiscriminate BD than BD for only new equipment, as they can deduct old equipment purchases now too
- Constrained firms...
  - Are more likely to take advantage of BD (tax deductions from old equipment purchases)
  - But may now compete with unconstrained firms for old equipment (maybe higher prices)
- Look at firm survivability (e.g., bankruptcy) and sales growth as outcome variables
  - Separate the staggered DID into 2 settings to study welfare effects (targeted BD vs. indiscriminate BD)
  - Interact Tax Cuts and Jobs Act of 2017 setting dummy with key independent

## Comment 2: What is Being Treated?

- Machines or firms? Strangely, the DID is estimated with a panel of **machine transaction-level** data in Table 4
- Interpreting the DID estimator as a firm effect is misleading
  - Pg. 18: “...~~firms~~ **machines** ~~in~~ **used in** treated industries ~~increase their purchase of new equipment by~~ **are** 5.5% **more likely to be new compared to machines used in control industries**”
  - **Aggregate results at firm level (Table IA2) should be the main table (more intuitive, at least to me)**

## Comment 3: Unbalanced Panel

- The transactional nature of the dataset suggests that some firms may appear only **after (not prior to)** BD events (e.g., to take advantage of tax incentives)
  - **More observations used for estimation post-BD than pre-BD**
  - **Firms founded after BD events may not be comparable to firms that existed since or prior to the BD events**
- Somewhat mitigated via industry-trends modeling
- Potentially better solutions:
  - Aggregate at the firm level (Table IA2) and only keep firms that are at least age 1 at time of BD events
  - Firm (buyer)-year fixed effects



## Comment 4: Expand on Table IA2

- Firm characteristics balance test: Other than differences in length of capital depreciation, are control and treated firms comparable?
  - Table 2 suggests no (crop production vs. rental and leasing services)...
- Do new/old capital acquisition trends at the firm level appear parallel prior to the BP events?
- Additional outcome variables to investigate for Table IA2:
  - Dummies for new/old capital purchases (extensive margins)
- Is the panel balanced for Table IA2 around BP events?
  - E.g., for firm-years in which capital purchase occurs, do you assign a zero?
- Various aggregation of the panel data is not intuitive
  - Reformulate variables suitable for firm-level analysis

# Minor Comments

- Why not use the same set of controls in Table 4 Panel A as in Table 4 Panel B (e.g., buyer fixed effects)?
- Pg. 14 mentions machine fixed effects. However, I only see equipment type fixed effects in the tables.
- Table 7: Shouldn't prices for new equipment increase, at least in the short-run?
- Consider Macaulay duration, the weighted average maturity of tax deductions, as another continuous treatment variable
- Need more details on the construction of the Zwick and Mahon (2017) PV(depreciation deduction) measure
  - Not a lot of variation from Table 3 (std. dev. Of 0.039 but a mean of 0.94; 10-%ile of 0.924 and 90-%ile of 0.948)
  - What discount rate is used? Does it vary by industry/equipment?

# Conclusion

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- Interesting finding, but policymakers will want to know welfare effects at the **firm level**
- Highly suggest authors to use firm-year aggregate panel to estimate main specification
- Polish the writing to be more precise