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Discussion of “Navigating emission reduction: The interaction of disclosure regulation and institutional support in China”

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Summary of the paper

- RQ:
  - Does a disclosure regulation on carbon-reduction activities induce firms to cut carbon emissions?
  - Does the availability of institutional support induce firms to cut carbon emissions when facing the disclosure regulation?
- Setting:
  - The 2021 CSRC requirement that all listed firms in China disclose carbon-reduction activities if carbon emissions are substantial.
  - Affected firms vs. firms without disclosures but having similar emission levels
- Key findings
  - 1) Basic finding: affected firms reduce carbon emissions (intensity and amount) after the disclosure regulation.
  - 2) Institutional support: the results are primarily driven by firms with institutional support (human capital, environmental subsidy, and green financing).

Strength of the paper

- Addressing an important question: the conditions under which disclosure regulations can affect firms' carbon emissions.
- Clear writing
- Comprehensive analyses

Comment #1 – The scope of the analyses

- Real effect of disclosure regulations
  - See the review from Leuz and Wysocki (2016, JAR), Kanodia and Sapra (2016, JAR), Roychowdhury, Shroff, and Verdi (2019, JAE)
- Real effect of ESG disclosure regulation
  - See the quasi-review from Christensen, Hail, and Leuz (2021, RAST)
  - Christensen et al. (2017, JAE): mine safety regulation in the U.S.
  - Chen et al. (2018, JAE): CSR disclosure regulation in China
  - Downar et al. (2021, RAST): carbon disclosure mandate in the U.K.
  - Fiechter et al. (2022, JAR): CSR reporting directive in the EU

Comment #1 – The scope of the analyses (cont'd)

- RQ:
  - Does a disclosure regulation on carbon-reduction activities induce firms to cut carbon emissions?
  - Does the availability of institutional support induce firms to cut carbon emissions when facing the disclosure regulation?
- Suggestion
  - Dropping RQ#1 because it is not new to the literature and the findings are consistent with the findings of prior research using different regulations.
  - Focusing on RQ#2
    - This RQ is new to the literature.
    - It sheds light on what factors influence firms' decisions when facing with regulations and the trade-off between financial and environmental performance.
    - It highlights the complementary measures governments need to take.
    - Motivation from the survey evidence: 45% of the disclosing firms indicate that they did not increase carbon reduction efforts.

SMU Classification: Restricted

Comment #2 – The control firms

- The research design: the CSRC regulation on disclosure of carbon-reduction activities
  - Pros: exogenous shock to the disclosure (and thus carbon emissions)
  - Cons:
    - Potential confounding effects (e.g., central government's "dual carbon" goals, targets for local governments)
    - The regulation affects all firms with "substantial" carbon emissions, and thus there are no natural control firms.
    - If non-disclosure firms have insignificant carbon emissions, then their changes in carbon-reduction activities are not a good control for treatment firms. → matching design

Comment #2 – The control firms (cont'd)

- The choice of control firms:
  - Firms with carbon emissions matched with treatment firms
    - Inherent logic issue with the matching design: if the control firms have similar level of carbon emissions, then they should provide disclosures (and thus become treatment firms).
    - Unfortunately, there are no clear guidance on the level of "substantial" carbon emissions. Otherwise, one can use firms around the specified level to select treatment and control firms.
    - The actual level of carbon emissions of control firms is not small (8.7 for control vs. 10.2 for treatment firms based on Figure 2).
  - Alternative choice: Firms subject to exchange CSR reporting requirements (Chen et al. 2018)
    - Not perfect because the regulations are different.

SMU Classification: Restricted

Comment #2 – The control firms (cont'd)

- Suggestion: Acknowledging the caveat that some firms do not follow the CSRC disclosure requirement (e.g., choosing not to disclose)
  - Not ideal because disclosure becomes firms' choice.
  - This caveat is reasonable given that 2021 is the first year of the regulation: among the non-disclosure firms,
    - 31% are "unclear about the disclosure requirements"
    - 15% indicate "other reasons" for non-disclosures
    - only 52% indicate "inherently low carbon emissions"
  - The paper discuss extensively why it is unlikely for firms to avoid disclosures.
    - The determinant analysis suggests that firms with significant carbon emissions provide disclosures, but it does not reject the notion that all firms with significant carbon emissions provide disclosures.
    - Provide more discussions of the penalty for non-complying non-disclosures.
  - Likely to be a concern if focusing on treatment firms with institutional support and those without institutional support.

Comment #3 – Measurement of institutional support

- Key measures of the paper: institutional support
  - Human capital: the presence of authorized carbon emission verification agencies
  - Environmental subsidies: carbon-reduction subsidy policies
  - Green financing: re-leading policies backing green initiatives
- Comments
  - All measures are not at the firm-year or firm-level; they are related to market conditions (human capital) or government policies (environmental subsidies, green financing)
  - To strengthen the measures
    - confirming the link between government policies and firm-level measures: firm-year level of environmental subsidies and firm-level green financing
    - Positioning "past experience in carbon management" as an alternative measure of human capital

Comment #4: Minor issues

- Provide more discussions about the measures for institutional support in Introduction
- Expand the post-regulation sample to fiscal years 2022 and 2023 (if data is available) so that both pre- and post-regulation periods have three years and dynamic treatment effects can be detected.
- The presence of authorized carbon emission verification agencies near a firm's headquarters (the proxy for human capital) can capture the enforcement of the disclosure requirement.
- Table 3: provide summary statistics separately for treatment and control firms
- Table 5: provide discussions on
  - why is the coefficient on *Post* × *InstSupport* positive?
  - The net effect is zero for *Treat* × *Post* and *Post* × *InstSupport*.

Summary

- An interesting paper addressing an important question: how institutional support affects firms’ decisions to cut carbon emissions when facing disclosure regulation
- Suggestions
  - To refine the focus of the paper
  - To acknowledge the caveats with the choice of control firms
  - To confirm the link between government policies and firm-level activities

Good luck with the paper

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Thank you!