

Reviews of ECONJOURNAL-D-25-00100R4

The Impact and Mechanism of the Creation of China's Ecological Civilization
Building Demonstration Zones on Labor Employment

Round 1

Reviewer 1

- 1.The abstract should be more concise and avoid vague phrases such as "passed a series of robustness tests." Consider rephrasing to clearly state (i) the research question, (ii) methods, (iii) key findings, and (iv) policy implications.
- 2.While the empirical results are well presented, the discussion section would benefit from a stronger integration with economic theory (e.g., compliance cost theory, innovation-offset hypothesis). The implications are discussed in light of the classic labor and environmental economics literature.
- 3.Please elaborate on why only the first five batches of the ECCDZ (2017-2021) were used in the analysis. Was 2022 excluded because of data availability or other confounding factors such as COVID-19?
4. The variables "green innovation acquisition" and "environmental protection investment" are technically defined but may benefit from more intuitive examples or explanations, especially for international readers who are unfamiliar with Chinese reporting systems.
5. The practical implications section (5.2) would be more impactful if structured by target audience (e.g., central government, local policymakers, firms) and supported by specific policy tools (e.g., green job subsidies, tax incentives for eco-innovation, and labor retraining programs).

Reviewer 2

This paper is practical, and this study results have important significance for achieving ecological civilization construction and stable employment, while also making certain contributions to ecological economics. But before considering publication, there are still some issues that need to be addressed.

- 1.The author should consider whether the introduction section provides too much description of China's policies, and suggest adding a description of the practical significance of the research.
- 2.The literature review section mainly presents existing research, and it is suggested to add the latest research results in the past three years, as well as to systematically sort out and critically evaluate key controversial viewpoints.
- 3.The "In recent years, the DID approach has become..." in the lines 3-4 on page 9 is not clear enough, need evidence to support your statement.

5. China has released the list of the seventh batch of ecological civilization construction demonstration zones. Will the latest data have an impact on the research conclusions? The next step is to update the data.
6. There are some inaccurate or redundant terminology used in section 3.3, and some chart annotations are incomplete. It is recommended that the author carefully check the terminology and chart information.
7. The practical implications proposed in the paper are relatively general. It is suggested that the author combine research findings to provide more specific and targeted practical suggestions.
8. Some expressions in the paper are too colloquial or informal, and the use of first person plural "we" to refer to common phenomena should be avoided, such as the lines 23 on page 9, the lines 1,4 on page 10, etc. Ensure that the language style of the entire text remains formal, objective, and rigorous. This paper has clear innovative points, rigorous logical arguments, and has publication value after revision. Looking forward to your efficient modifications.

Editor

This manuscript addresses an important and policy-relevant topic by empirically examining how the establishment of the ECCDZ in China affects labor employment. The authors use a quasi-natural experiment and a multi-period DID approach with an extensive dataset to investigate the mechanism through which the ECCDZ impacts enterprise labor demand. While this study presents promising insights, several methodological and interpretive weaknesses must be addressed.

1. The study's core claim that ECCDZ establishment negatively affects labor employment is interesting and aligns with the existing expectations. However, the authors should clearly state the paper's contribution relative to the past literature. Many of the cited works have already examined the effects of similar environmental regulations on labor outcomes.
2. Although the use of a difference-in-differences framework is appropriate, the current implementation of the DID model lacks sufficient justification regarding treatment timing, staggered adoption across regions, and parallel trend assumptions beyond a single visual test period. A placebo test was performed, but further statistical evidence (e.g., pre-trend coefficients with confidence intervals) would enhance credibility.
3. The use of Callaway and Sant'Anna (2021) to address treatment heterogeneity is another strength of this study. However, the discussion and interpretation of the results of this model are minimal. The rationale for using all four estimators (Simple ATT, Group ATT, Dynamic ATT, and Calendar ATT) should be better contextualized in future studies.
4. The definition of treatment ($Treat \times Post$) appears to be oversimplified. The ECCDZ status is implemented across multiple years and administrative

units. It would improve clarity to explain more precisely how each city's treatment year was determined and whether dynamic treatment effects or anticipation effects were considered.

5. The analysis relies heavily on panel data from listed companies and city-level macroeconomic variables; however, the alignment between firm- and city-level datasets is not well explained. It is unclear how enterprise-level employment was aggregated or matched with city-level ECCDZ designations.

6. The manuscript often conflates statistical significance with economic relevance. The authors report highly significant coefficients (e.g., -0.059), but provide little interpretation of effect sizes in practical terms (e.g., how many jobs lost per unit change or % reduction).

7. The writing quality is generally acceptable, but the manuscript contains grammatical inconsistencies and overly long sentences that obscure the key points. Phrases such as "rendering the ECCDZ establishment a more distinct impediment..." or "incessant consolidation of ecological civilization" can be revised for clarity.

8. Several references are cited to support relatively strong claims but are not thoroughly integrated into the argument section. For example, the role of public supervision in affecting firm behavior could be explored more deeply in relation to policy design and institutional theory.

9. The policy implications are well-intentioned but remain vague. More specific recommendations, such as differentiated labor policy compensation or retraining programs in ECCDZ zones, would increase the paper's practical value.

10. The conclusion reiterates the main findings but does not offer sufficient critical reflection on the study's limitations, such as endogeneity, data constraints, or the possibility of concurrent policy interventions influencing the results of the study.

Round 2

Reviewer 2

I have reviewed the revised manuscript and the authors' responses to my initial review comments. I commend the authors for their diligent and thoughtful revisions. They have thoroughly addressed all the substantive concerns raised in the initial review. The revisions have significantly strengthened the manuscript's clarity, rigor, and scholarly contribution. The paper's practical relevance to ecological civilization construction, stable employment, and ecological economics is now more effectively presented and supported.

The authors have commendably addressed all previous concerns: They effectively reduced the overly descriptive policy focus in the Introduction while strengthening the articulation of the research's practical significance. The Literature Review now successfully integrates the latest research and provides

a systematic, critical evaluation of key literature, including significant controversial viewpoints. The justification for the DID approach on Page 9 has been clarified and supported with relevant citations. Concerns regarding data currency in Section 3.2 and the potential impact of the seventh batch of ecological civilization demonstration zones have been adequately resolved; the authors clarified the study's timeframe and convincingly explained why post-2022 data releases do not invalidate their findings, appropriately suggesting future updates for further research. Section 3.3 demonstrates improved precision through corrected terminology. The Practical Implications section is substantially enhanced, now offering concrete, specific, and research-driven suggestions rather than generic statements. Finally, the authors have meticulously revised the language throughout, eliminating colloquialisms and informal constructions (including the inappropriate use of "we" on Page 9, Line 23; Page 10, Lines 1 & 4), resulting in a consistently formal, objective, and academically rigorous style.

The authors have made excellent revisions in direct response to the reviewer comments. All major concerns have been resolved, resulting in a manuscript significantly enhanced in scholarly rigor, clarity, practical relevance, and presentation. The study makes a valuable contribution to the field. Therefore, I recommend Acceptance of the manuscript for publication in *Economics*, contingent only on the successful completion of the following minor step:

Final Formatting Check: The editorial office should perform a thorough final proofread and formatting pass to ensure strict adherence to the journal's style guide, such as the table formatting issue at the end of page 13.

Congratulations to the authors on a well-revised manuscript.

Editor

The revision has greatly enhanced the scholarly rigor, methodological clarity, and policy relevance of the paper. Before final decision, please address the following points:

1. In the Mechanism Analysis section (4.3), please briefly elaborate on why the magnitude of the production scale channel (-0.029 and -0.044) differs from the environmental cost channel (0.051 and 0.007). A short discussion on possible economic interpretation would enrich the readers' understanding.
2. In Heterogeneity Analysis (4.4), when discussing the ESG rating subgroups, consider adding a sentence linking the result to broader ESG-employment literature, highlighting whether this is consistent with or contrasts prior studies.

3. In section 4.2.5, please clarify why the change in the dependent variable (column 3 of Table 6) leads to a much smaller coefficient magnitude compared to the baseline and whether this is due to scale differences or reflects a real attenuation of effect.

4. Ensure consistent table formatting (font size, column alignment, and notation). Some tables (e.g., Tables 3, 6, and 9) have slight inconsistencies in alignment and decimal places.

5. Conduct a final proofread to remove any residual spacing issues and ensure variable names and symbols are formatted consistently.

Round 3

Reviewer 2

Acceptance. The manuscript has been revised as requested.

Editor

The authors have made substantial progress in revising the manuscript, and the overall structure and methodology are now clearer. However, several important issues remain to be addressed before the paper can be considered for acceptance:

1. The abstract and introduction could be slightly shortened to improve focus and clarity.

2. The inclusion of the “dual” variable is not sufficiently justified. Please provide a clearer theoretical rationale and add a sensitivity analysis.

3. The literature review has been expanded but still includes several generic citations. Please strengthen this section by incorporating more targeted and recent DID applications in the employment-environment context.

4. The novelty and contribution should be more clearly distinguished from existing studies.

5. The manuscript continues to show heavy reliance on language-enhancement/paraphrasing tools, which leads to awkward, non-idiomatic “tortured phrasing.” A full professional language edit is strongly required. Examples include:

- p.5, lines 4–7: “This heterogeneity provides a theoretical basis for policy makers ...”
- p.9, lines 4–6: “The rise of the dismissal rate caused by the decline ...”
- p.9, lines 9–11: “The rapid deterioration of ecosystems poses significant threats ...”

- p.32, lines 19–22: “This theoretical finding contributes to the understanding of how social supervision ...”
- The introduction also contains incomplete sentences and delays the definition of ECCDZ until p.6. Please define ECCDZ upfront to aid readability.

6. Data Transparency and Reproducibility:

- Please provide the full raw dataset together with detailed descriptive statistics in the supplementary material.
- Submit all coding scripts (DID, PSM-DID, Placebo, IV, and GMM) and representative outputs to ensure transparency and reproducibility.
- Clarify whether the same enterprises are tracked pre- and post-treatment. If not, discuss the potential impact of relocation/compositional changes and consider adding industry controls or clarifying the panel structure.

7. Ensure consistency in table formatting (decimals, alignment, fonts), particularly in Tables 3, 6, 8, and 9.

Round 4

Editor

The paper has now reached a publishable level in terms of data transparency, methodological rigor, and reproducibility. I appreciate the authors for submitting both the raw data and source code, which greatly enhances the credibility of the study. The DID estimation and robustness checks appear valid and consistent.

Before final acceptance, please address the following small adjustments to improve clarity and readability:

1. Define ECCDZ explicitly in the opening paragraph of the Introduction.
2. Provide a short theoretical explanation for the “Dual” variable and its expected sign; a brief robustness check or sensitivity note would be appreciated.
3. Slightly shorten the Abstract and the first two paragraphs of the Introduction to improve focus.
4. Conduct a final professional English editing to remove residual awkward or paraphrased-style expressions and incomplete sentences.
5. Ensure consistent table formatting (decimals and fonts) across all tables.

Round 5

Editor

The authors have fully and carefully addressed all previous comments. The paper is now clear, methodologically sound, and ready for publication.