

Review of: "Research on the uncertainty of low-carbon environmental governance system and its impact on the dual goals of carbon emission reduction"

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Potential competing interests: No potential competing interests to declare.

General review:

Based on the background of the "double carbon" goal, this paper first constructs the uncertainty index of the low-carbon governance environment based on the theoretical analysis of the different dimensions of China's low-carbon governance environment, and theoretically explains the impact mechanism of the uncertainty of the low-carbon governance environment on the emission reduction performance. Secondly, based on the improved analytic hierarchy process and entropy weight method, the fuzzy comprehensive evaluation of China's low-carbon governance environment is carried out, the dynamic panel model and the PSTR transfer model are established, the degree of environmental uncertainty in low-carbon governance is divided, and the linear and nonlinear effects of environmental uncertainty on the dual objectives of carbon emission reduction are discussed, as well as the effects of regional heterogeneity. It has certain theoretical basis and practical significance for China's future stable economic and government environment, the development of low-carbon, the promotion and establishment of a stable carbon emission trading market, and the realization of China's carbon emission reduction goals. The article has certain innovation and contribution, but it still needs to be modified as follows:

Specific review

- (1) The uncertainty of the low-carbon environmental governance system is divided into government environmental uncertainty, economic environmental uncertainty, innovation environmental uncertainty and market environmental uncertainty in this paper, but it is not clearly introduced in the introduction.
- (2) "Carbon emission reduction target" is an important key word of the paper, but the literature review and introduction part lack its review.
- (3) The conclusion part should be rewritten (clarify the main conclusions, main contributions, management views, theoretical implications, research deficiencies and further research direction).
- (4) The paper is not clear about the construction of indicators for low-carbon governance of environmental uncertainty. Please write out the necessary indicator construction process.
- (5) Please supplement the measurement methods and units of variables involved in various uncertainties.

- (6) Please explain the calculation results of the index weight of environmental uncertainty in low-carbon governance.
- (7) Please add the specific calculation method and selection basis of the dual-carbon emission reduction targets and control variables.
- (8) Page14, the content is inconsistent with the legend.
- (9) Please explain the reason or basis for selecting the research model in this paper.