



# Government attention on environmental protection and firms' carbon reduction actions: Evidence from text analysis of manufacturing enterprises

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## Introduction

- According to China Emission Accounts and Datasets, China as the largest developing countries emitted 9794.75 Mt of carbon dioxide in 2019, with manufacturing sector accounting for 35.78% of the total at 3504.82 Mt.
- Firms: main drivers behind climate change; main participants carbon trading market; main beneficiaries of improvement in externalities in environmental costs
- It is questionable whether firms would be proactive in their social responsibility and carbon reduction. A growing number of studies place their perspective on external institutional factors, while ignoring this key element of government's attention on environmental protection (GAEP).

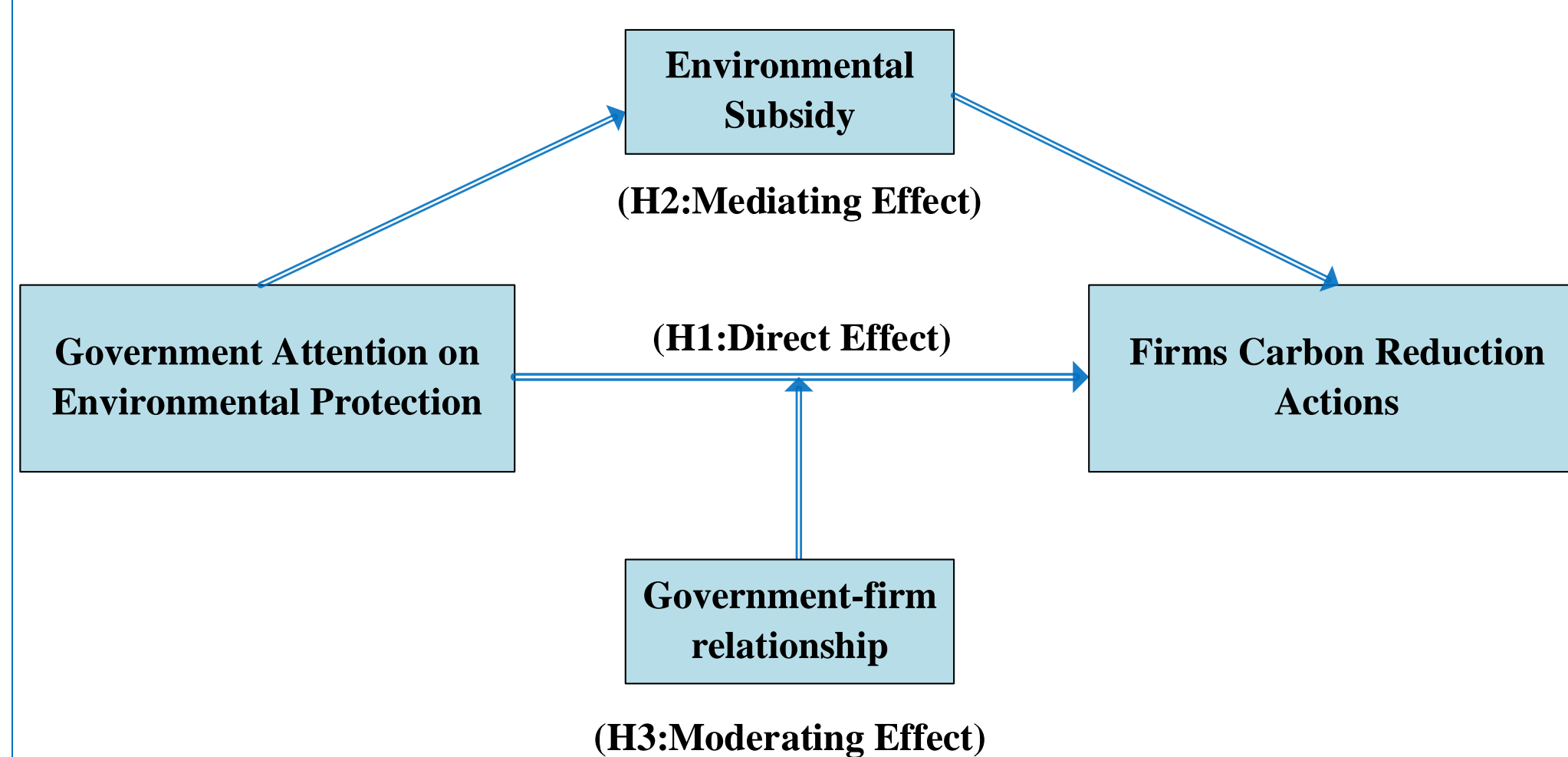
## Methods

- Data: 10-year (2012-2021) panel data from manufacturing Chinese listed companies that issued CSR reports.
- Explained variable: firms carbon reduction actions (FCRA)  
Five aspects related to FCRA in CSR reports.
- Explanatory variable: GAEP  
Three indicators in government work report: "environmental protection", "environmental pollution" and "energy".  
22 key words were extracted.
- Mediating variable: SUB  
Government environmental subsidies.
- Moderating variable: GFR  
Government-firm relationship.
- Control variables: Firm-level & Macro-level

## Questions

- Does and how does GAEP affect firms' carbon reduction actions?
- Under what conditions is it more likely to do so?

## Hypotheses



## Results

GAEP significantly contributes to the increase in FCRA.

GAEP will motivate firms to make a green transition and take more carbon reduction actions by increasing SUB.

The positive contribution of GAEP to FCRA is reinforced by GFR.

GAEP has a positive and significant incentive effect on FCRA in the eastern and central regions.

Compared with non-SOEs, GAEP plays a more significant role in promoting the FCRA of SOEs.

## Conclusions

This paper suggest that GAEP can promote firms to reduce carbon emission more actively, particularly for SOEs and firms in the eastern and central regions. The government should pay more attention to environmental protection, and can further enhance the positive contribution of GAEP to firms' carbon reduction actions by increasing environmental subsidies to firms. Firms should actively seek to cooperate with the government so as to obtain more resources, thereby enhancing their competi-tiveness and reducing cost pressures.

## References

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