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# What is the Relationship between Management Systems and Corporate Greenhouse Gas Emissions?

Rory Sullivan and Andy Gouldson (University of Leeds)

Baran Doda, David Grover and Caterina Gennaioli (LSE)

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# Why Adopt Management Systems and Processes?

- Governments, investors, NGOs, and consumers frequently call for corporations to adopt climate change policies, to monitor their greenhouse gas emissions, to adopt emission reduction measures and to report on actions taken and outcomes achieved.
- The argument underpinning these calls is that the adoption of effective management systems and processes should lead to reductions in corporate energy use and/or greenhouse gas emissions.
- However, there have been few quantitative tests of this hypothesis.



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# Research Overview 1

- We analysed 433 companies that had reported on their carbon management practices and their carbon performance in the 2009 and 2010 CDP questionnaires.
- **Research Question:** Is there an observable relationship between the application of carbon management practices in the world's largest corporations and the carbon emissions these practices are intended to reduce?



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## Research Overview 2

- Carbon management practices were divided into 23 categories (policies, targets, data assurance, risk identification processes, reporting, etc.).
- For each carbon management practice we assessed (a) whether the specific management practice was present or absent, and (b) the quality of implementation.
- Carbon performance was analysed in terms of direct and indirect emissions (Scope 1 and Scope 2 emissions) per unit of turnover.



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## Headline Findings

- We found no statistically significant evidence that any of the 23 carbon management practices had influenced corporate carbon emissions.
- We obtained similar findings when we refined the analysis (e.g. only including companies with better than average quality of emissions measurement, excluding companies in the financial sector, only including heavy industry, analysing absolute emissions rather than emissions relative to output, grouping the carbon management practices in different ways ).



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## Some Qualifications

- The analysis was conducted on a relatively small proportion of the corporations that report to CDP.
- The analysis covered a relatively limited time period.
- The analysis only considered Scope 1 and Scope 2 emissions, not Scope 3.
- There are many issues with data quality (scope, emission calculation methods, uncertainty management, etc).



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## Possible Explanations for the Findings

- That corporate carbon data and carbon management practices have not been reported in a standardised way.
- That there is a delay between the application of corporate carbon management practices and their impact on carbon emissions.
- That carbon management practices are not sufficiently impact-oriented.
- **Our research findings challenge the assumption that the adoption of carbon management practices and processes will inevitably lead to better carbon performance outcomes.**



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# **Conclusions**

- **Companies need to strengthen the quality and comparability of their carbon reporting.**
- **Companies need to explicitly discuss how the adoption of corporate management practices influences corporate greenhouse gas emissions.**
- **Companies need to shift their focus from relative to absolute emissions performance.**





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# References

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