

# Do Voluntary Climate Disclosures Pay Off? Evidence from U.S. Subsidies

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## Abstract

This study aims to examine the relationship between voluntary climate disclosure and government subsidies using a sample of U.S.-listed firms. Government subsidies are funded by taxpayers' money. Firms that receive subsidies thus have taxpayers as stakeholders and face their scrutiny. While previous studies have shown that firms receiving government subsidies disclose more financial and operational information, this project explores whether the government values non-financial information, such as climate-related disclosure, in the same way when awarding subsidies. Further, it examines whether this association varies across industries, state-led climate strategies, and climate concerns. Overall, the results will help explain the role of government subsidies in encouraging firms to disclose climate-related information, assess whether firms disclose such information to obtain government subsidies, and provide avenues to make subsidy awards more transparent.

**Keywords:** Voluntary Climate Disclosure; Government Subsidies; Corporate Transparency; U.S. Firms

## 1 Introduction

Climate change has become one of the most concerning global challenges, with human activities already estimated to have caused around 1.0°C of warming above pre-industrial levels and global temperatures likely to reach 1.5°C by mid-century (IPCC, 2018). In response, increasing climate risk has encouraged governments, policymakers, investors, and corporations to reassess corporate transparency on climate-related risks and emissions. For example, regulators need carbon information to assess whether firms are reducing their emissions as required by the Kyoto Protocol<sup>1</sup>. The urgency is further pronounced by the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD, 2023) of the

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<sup>1</sup>The reduction of greenhouse gases envisioned in the Kyoto Protocol received increased attention at the 2015 World Conference on Climate held in Paris in November.

Financial Stability Board (FSB) and, later, the Corporate Sustainability Reporting Directive (CSRD, 2023), which introduced new regulatory requirements in Europe, as well as similar developments in the U.S.

The prevailing voluntary climate disclosure literature shows that it has emerged as a key mechanism for firms to communicate their environmental commitment, strategies to assess and evaluate their exposure to climate-related risks, and how they can turn these risks into opportunities (Al-Tuwaijri et al., 2004; Barg et al., 2024; Bolton & Kacperczyk, 2021; De Villiers & Van Staden, 2006; Jung et al., 2018; Ma et al., 2024; Mahmoudian et al., 2023; Matsumura et al., 2014; Plumlee et al., 2015). Since firms receiving government subsidies face severe scrutiny from stakeholders and the media, this voluntary climate disclosure channel may further confirm transparency in their subsidy receipt. Thus, in this paper, we examine whether the voluntary disclosure of climate-related information helps firms secure government fiscal benefits, such as subsidies.

## 2 Research Question

To examine the association between voluntary climate-related disclosure and firms' access to government subsidies, we draw on signalling and legitimacy theories. It expects to answer three questions: (1) Whether firms that voluntarily disclose climate-related information receive higher subsidies than non-disclosing firms; (2) Whether the association is stronger in states with explicit environmental or sustainability criteria in their subsidy programs; and (3) Whether the effect is more pronounced for firms in environmentally sensitive sectors such as energy and utilities. These questions will be answered through a large-sample, multi-year analysis of U.S. publicly listed firms.

## 3 Methodology

This study will employ a quantitative, archival research design, utilizing data from secondary sources to examine whether voluntary climate-related disclosure influences a firm's receipt of government tax subsidies. The analysis focuses on U.S.-based publicly listed firms over the period 2010–2024. Firm-specific government subsidy data are collected from the Good Jobs First (GJF) Subsidy Tracker dataset. Climate-related disclosure information is obtained from the Carbon Disclosure Project (CDP) dataset via Refinitiv. Firm-level control variables are sourced from the Compustat Capital IQ database. The baseline regression model is specified as follows:

$$Subsidy_{i,t} = \alpha + \beta Disclosure_{i,t} + \gamma Controls_{i,t} + \mu_i + \lambda_t + \varepsilon_{i,t} \quad (1)$$

where  $Subsidy_{i,t}$  is the government subsidy received by firm  $i$  in year  $t$ , and  $Disclosure_{i,t}$

represents voluntary climate-related disclosure measured by firm  $i$ 's participation in the CDP questionnaire in year  $t$ .  $Controls_{i,t}$  denotes a vector of firm-specific control variables.  $\mu_i$  and  $\lambda_t$  represent industry and year fixed effects, respectively, and  $\varepsilon_{i,t}$  is the error term.

To further examine the effect, state-level subsidy policy changes are incorporated. Specifically, a staggered difference-in-differences (DiD) model is employed as follows:

$$Subsidy_{i,s,t} = \alpha + \beta(Disclosure_{i,s,t} \times Policy_{s,t}) + \gamma Controls_{i,s,t} + \mu_i + \lambda_t + \delta_s + \varepsilon_{i,s,t} \quad (2)$$

where  $Policy_{s,t}$  captures the introduction of a new law or the expansion of a subsidy policy in state  $s$  in year  $t$ , and  $\delta_s$  represents the state fixed effect.

## 4 Conclusion

This project aims to examine whether voluntary climate-related disclosure influences firms' access to government subsidies. As governments increasingly incorporate environmental considerations into economic policy, understanding how non-financial corporate transparency affects public resource allocation becomes particularly important. Using a large sample of U.S. publicly listed firms over the period 2010–2024, this study investigates the relationship between voluntary climate disclosure and government subsidy receipt.

By combining subsidy data from the Good Jobs First Subsidy Tracker with climate disclosure information from the Carbon Disclosure Project (CDP) and firm-level data from Compustat, the study employs panel regression and staggered difference-in-differences approaches to assess whether firms that voluntarily disclose climate-related information are more likely to receive government fiscal support. The analysis also considers whether this relationship varies across industries and state-level policy environments.

Overall, the findings are expected to contribute to the literature on voluntary disclosure and public policy by providing evidence on whether climate transparency is associated with tangible financial benefits from government programs. The results may also offer insights for policymakers seeking to design subsidy programs that encourage corporate transparency and environmental responsibility.

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