Pledge and Prejudice: How International Organizations Make and Remake Climate Commitments

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Motivation: a 2017 announcement by the World Bank

World Bank to end financial support for oil and gas extraction

Bank announces in Paris it 'will no longer finance upstream oil and gas' after 2019 in response to threat posed by climate change

Figure 1: The Guardian headline, 12 December 2017

But. . .

Figure 2: The Guardian headlines, 6 October 2022 (top) and 12 September 2023 (bottom)

Technically, this is not a contradiction

The 2017 announcement had a caveat:

> *"In exceptional circumstances, consideration will be given to financing upstream gas in the poorest countries where there is a clear benefit in terms of energy access for the poor and the project fits within the countries' Paris Agreement commitments."*

Did anything change after 2019?

Clearly, the World Bank did not *stop* financing upstream oil and gas projects altogether. But did it *reduce* oil and gas financing?

Findings: the World Bank is spending *more* money on *fewer* oil and gas projects. But it is also spending *more* money on *fewer* climate projects

World Bank lending: a primer

- The World Bank offers **low-interest loans and grants** for development projects
  - Focus: poverty reduction, education, health, infrastructure

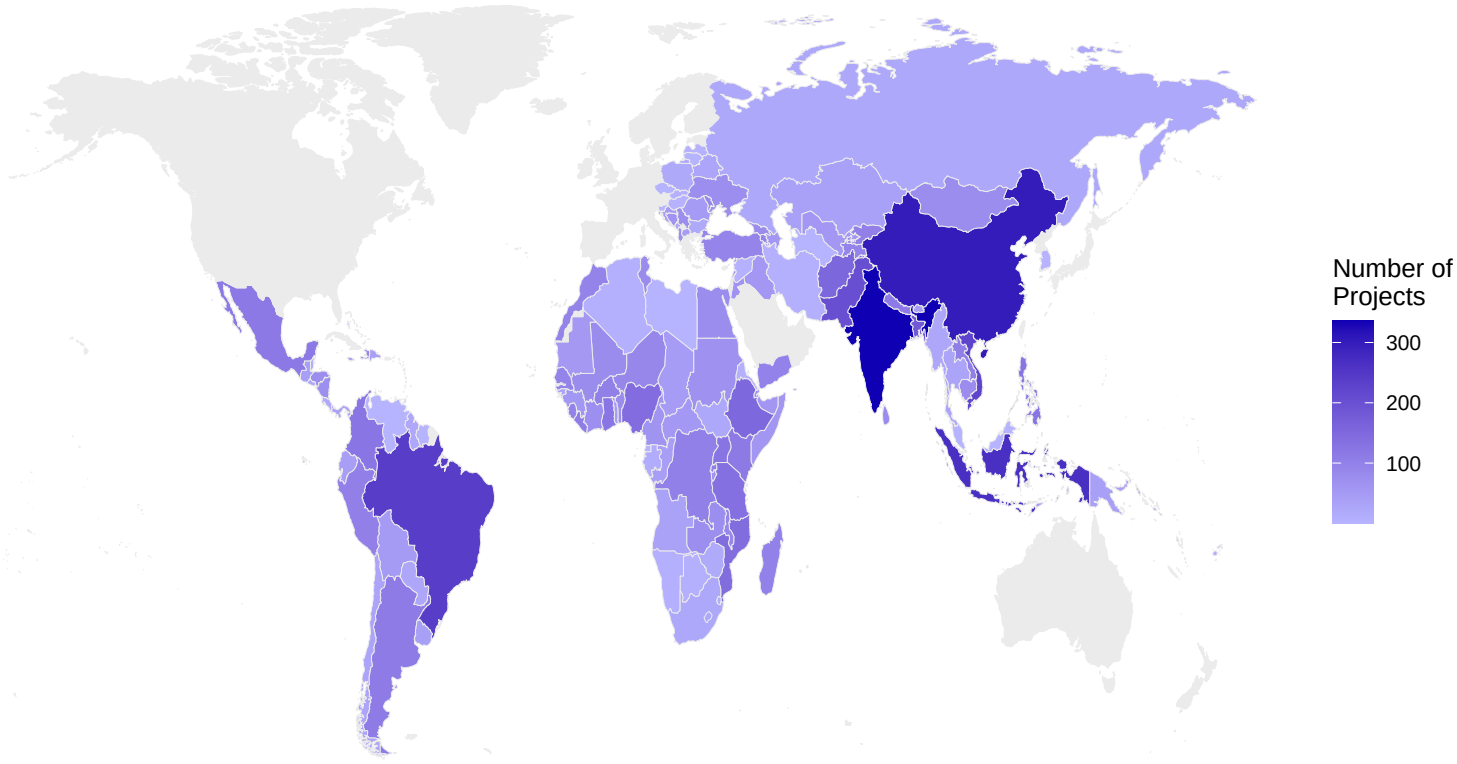

Figure 3: Number of projects approved by country, 2001-2022

Can the World Bank address climate issues?

- Compared to other IOs, the Bank has much more **financial autonomy** (Nielson and Tierney, 2003)
- World Bank staff sets priorities, influence recipient performance (Heinzel and Liese, 2021; Cormier and Manger, 2022)
- IO bureaucrats are **independent actors** with their own agendas (Barnett and Finnemore, 1999)
  - IMF staff cares about the climate (Clark and Zucker, 2023)
  - World Bank staff cares about its reputation, responds to pressure from civil society (Wade, 2009; Tallberg et al., 2015)

Expectation 1: after 2019, the World Bank will *reduce* oil and gas finance and *increase* climate finance

But there are challenges

- Climate-vulnerable countries are more influential than we might think (Genovese, 2020)
- But ultimately, the Bank serves its **largest shareholder**, the US
  - US allies, US aid recipients, UNSC members receive more loans, with fewer conditions (Fleck and Kilby, 2006; Dreher, Sturm and Vreeland, 2009, 2015)
  - Staff designs programs compatible with US preferences (Clark and Dolan, 2021)
- To remain competitive, the Bank makes fewer demands to Chinese aid recipients (Hernandez, 2017; Zeitz, 2021)

An additional challenge: natural resource wealth

- Non-renewable natural resources can harm democratic governance, but also promote economic development
- If the World Bank cuts oil and gas financing, resource-rich countries might. . .
  - borrow from China
  - fail to develop transparent institutions
  - complain about IO hypocrisy
  - ignore future loan conditions and policy advice

Expectation 2: after 2019, the World Bank will *not reduce* oil and gas finance

Data

Data

- Unit of analysis: World Bank project
- All 9,000+ projects approved by the World Bank Executive Board, January 2001 to December 2022
  - Every project has a description (title and development objective)
- There are 11 official World Bank project sectors and several subsectors
  - I am interested in two sectors: **extractives** and **climate and renewables**

Descriptive analysis

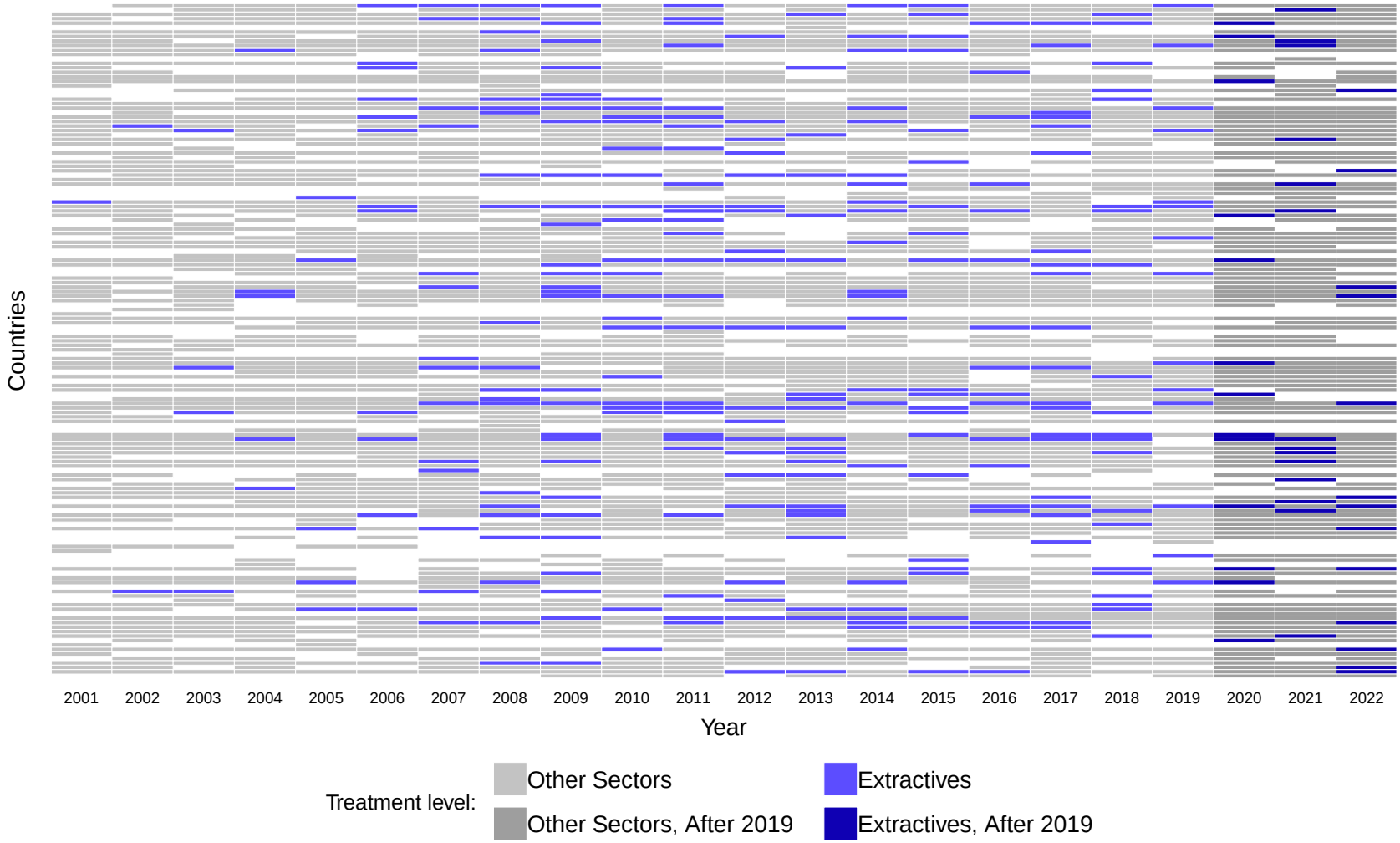

Figure 4: World Bank projects, sector: extractives, 2001–2022

Descriptive analysis

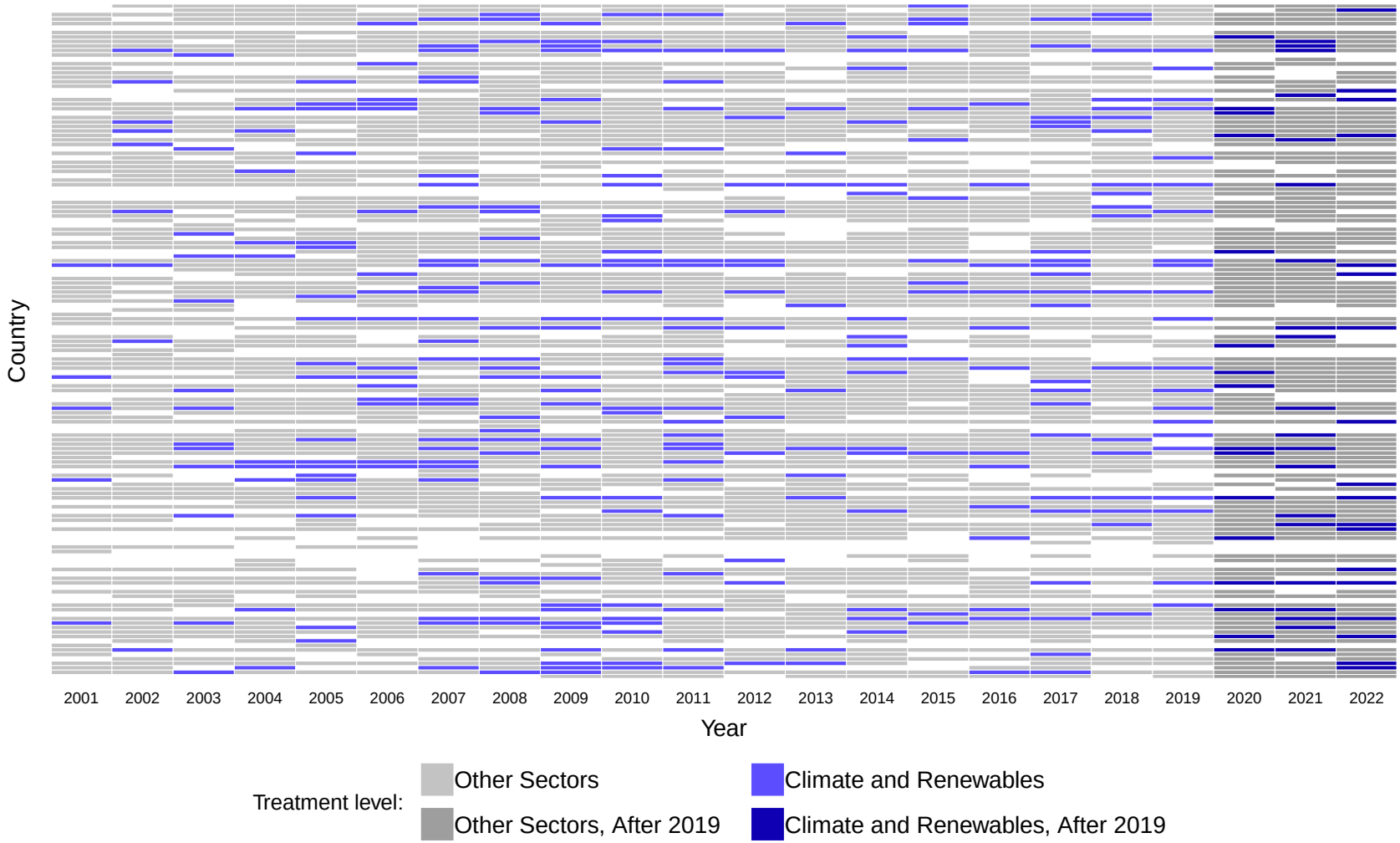

Figure 5: World Bank projects, sector: climate and renewables, 2001–2022

Descriptive analysis

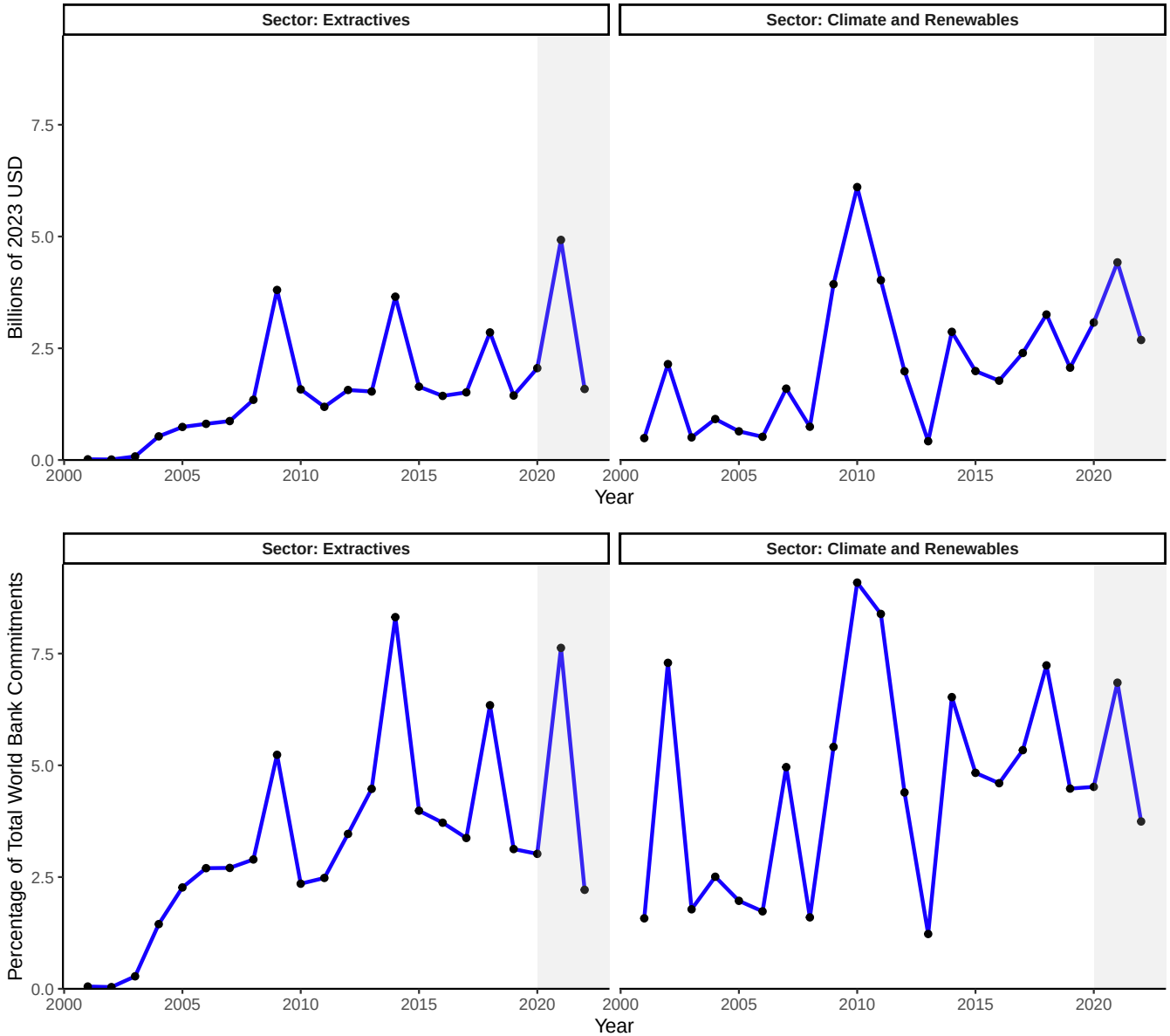

Figure 6: World Bank projects, commitment by sector, 2001–2022

Descriptive analysis

- **Challenge:** can we trust the official classification?
  - The Bank could have an incentive to underreport/misreport natural resource projects
- **Solution:** classify the project's content using a keyword-assisted topic model (Eshima, Imai and Sasaki, 2024)

How topic models work

- Each project description consists of words
- Words that frequently appear together can be grouped into **latent topics**
- Each word belongs to one latent topic with a certain probability and to another latent topic with another probability
- The model identifies θ, the prevalence of each topic in each project description

Topics of interest (and related words)

1. **Extractives** (oil, gas, petroleum. . .)
2. **Climate and renewables** (solar, wind, carbon. . .)
3. **Placebo: health** (hospital, vaccine, malaria. . .)

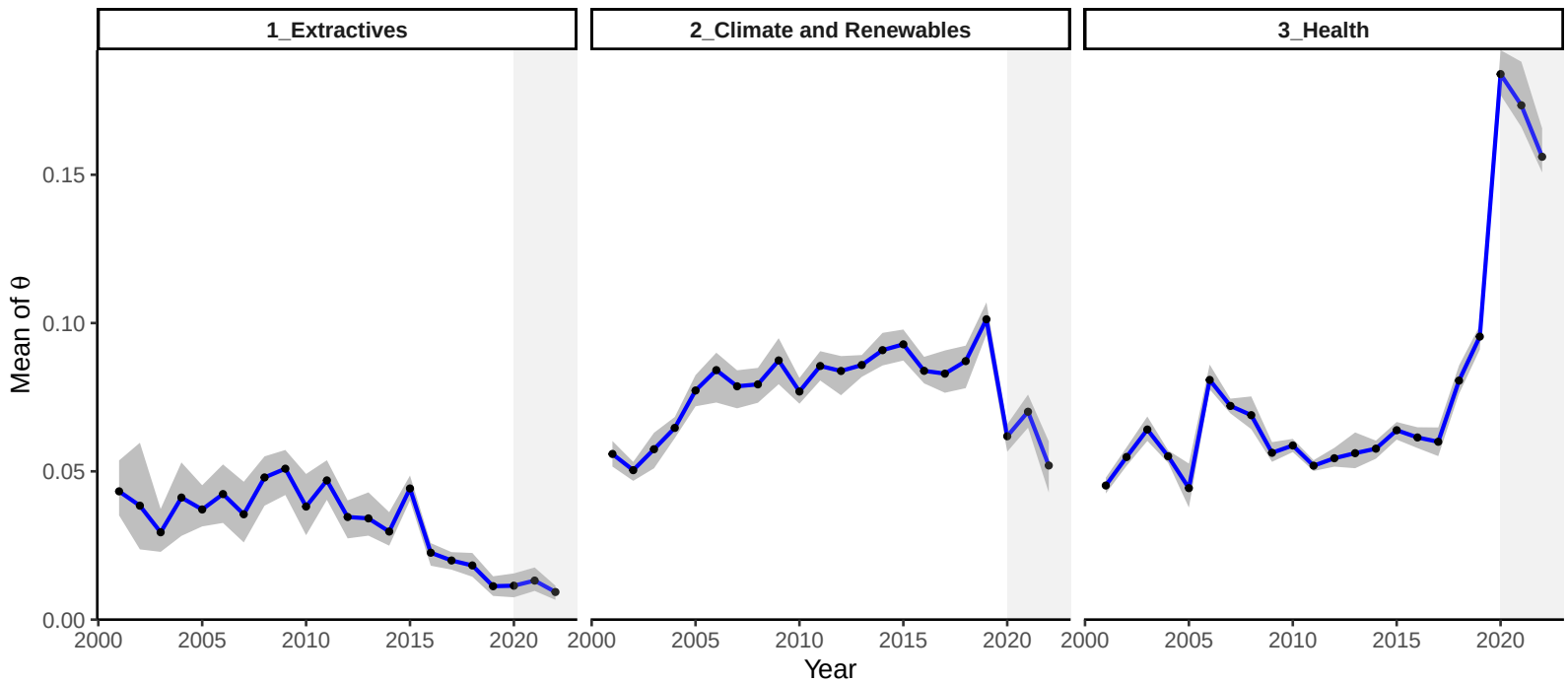

Figure 7: Topic prevalence, averaged for all projects approved each year, with 90 percent CI and post-2019 period in grey

Empirical analysis

World Bank sectors and topic proportions are strongly correlated ($\rho = 0.000$). We can trust the official classification!

Controlling for factors like governance, GDP per capita, Chinese finance, or natural disasters. . .

1. Did the **content** of projects change after 2019?
2. Did the **amount of funding** change after 2019?
3. Did the **duration** of projects change?

Results: project content

Predictors of project sector

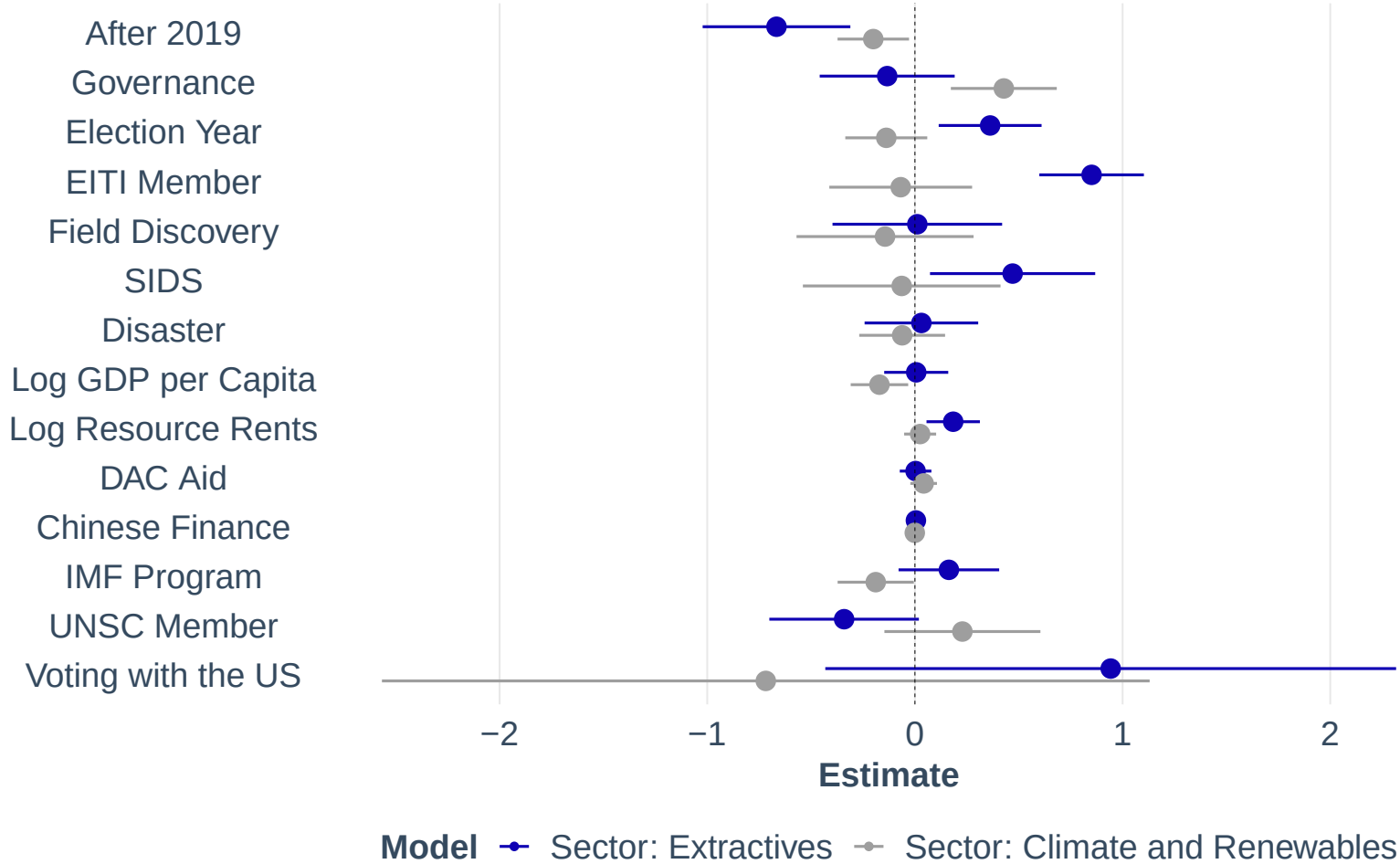

Figure 8: Results of logistic regressions, with 95 percent CI. Coefficients are log odds. Extractive projects decreased by 49 percent after 2019, whereas climate projects decreased by 18 percent

Predictors of topic proportions

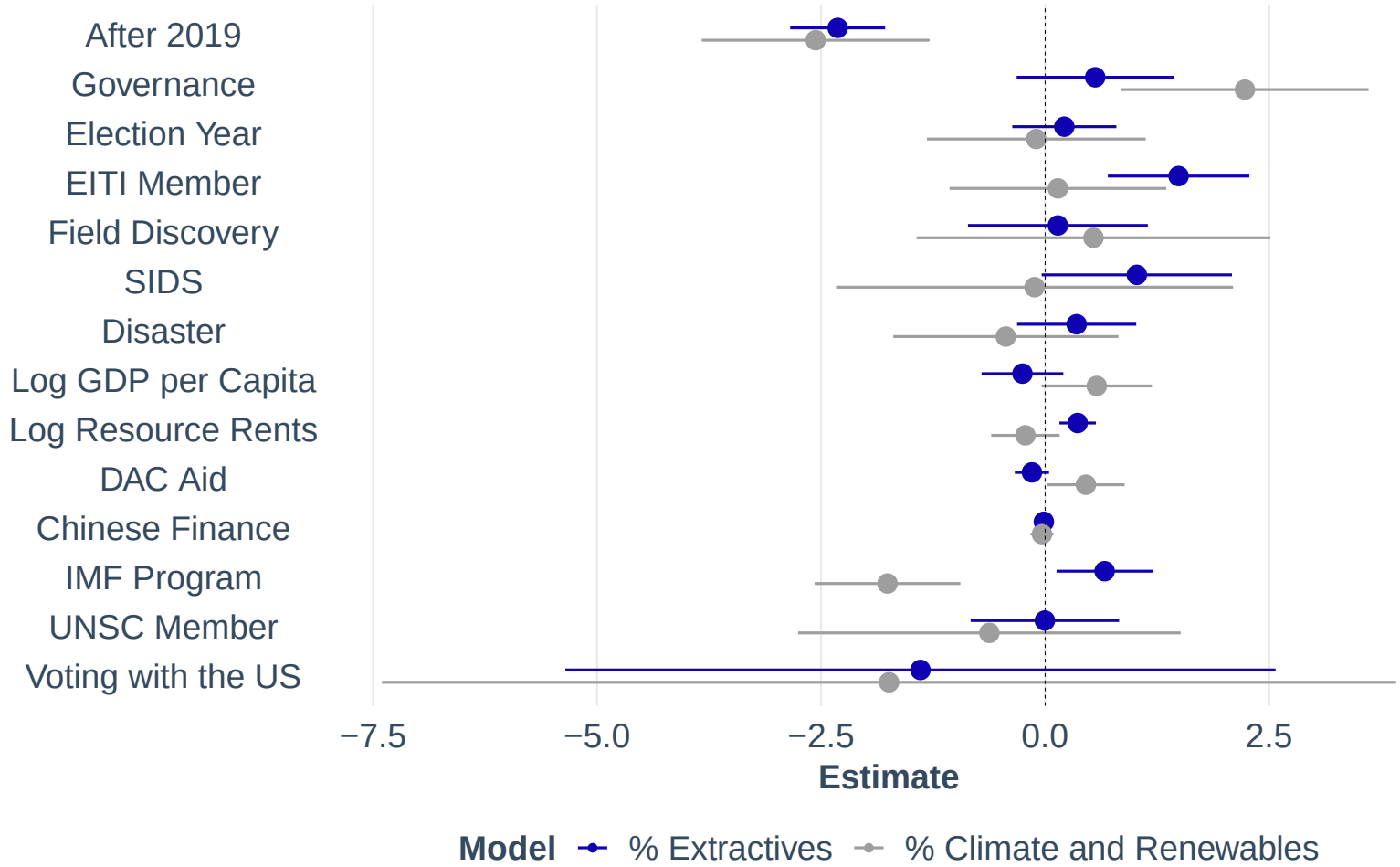

Figure 9: Results of linear regressions, with 95 percent CI. Projects used 2.32 percent fewer extractive words and 2.56 fewer words related to climate and renewables after 2019

Change in *climate and renewables* relative to *extractives*

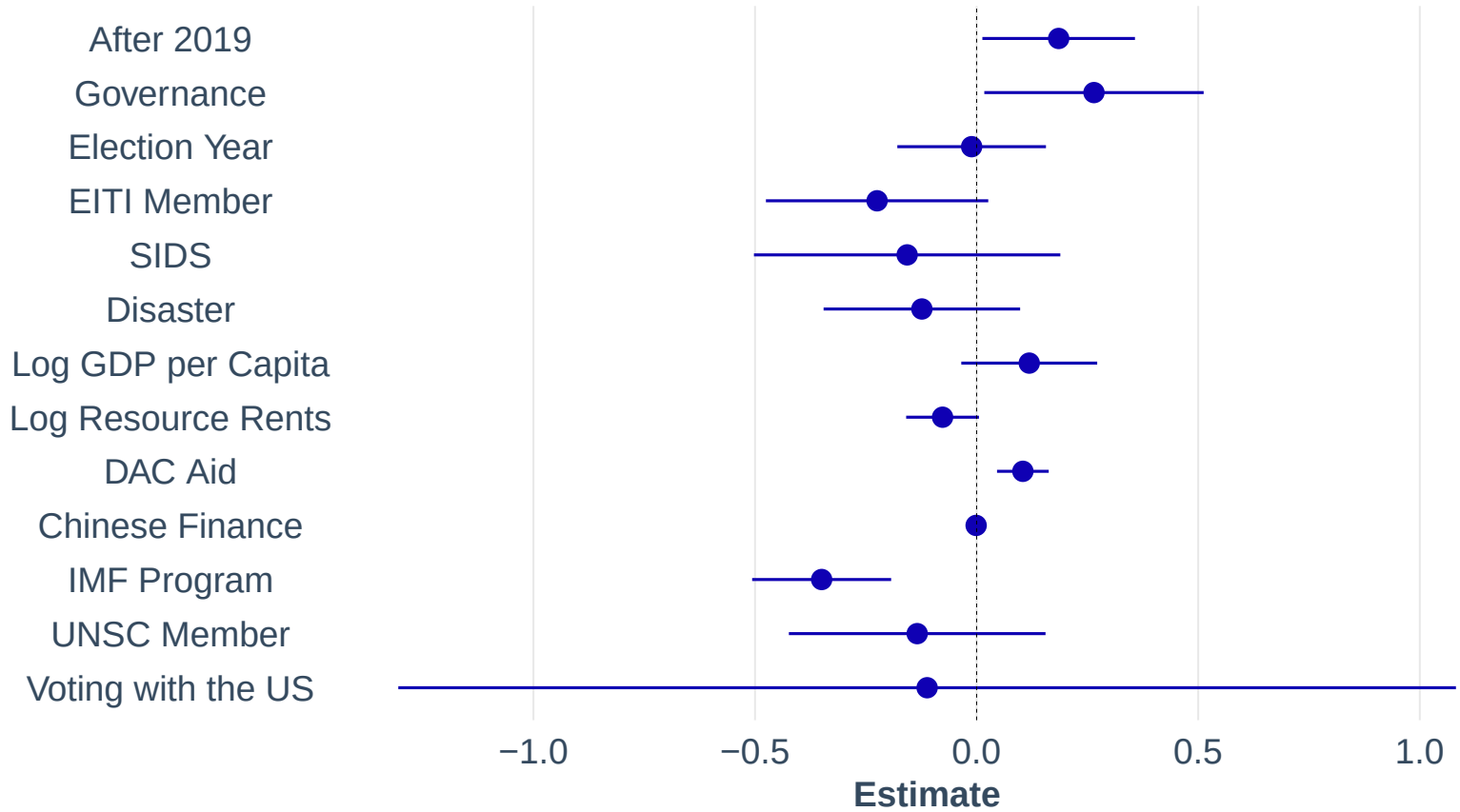

Figure 10: Results of seemingly unrelated regressions, with 95 percent CI. Outcome: log(climate/extractives)

Results: amount of funding

Predictors of amount of funding (in USD)

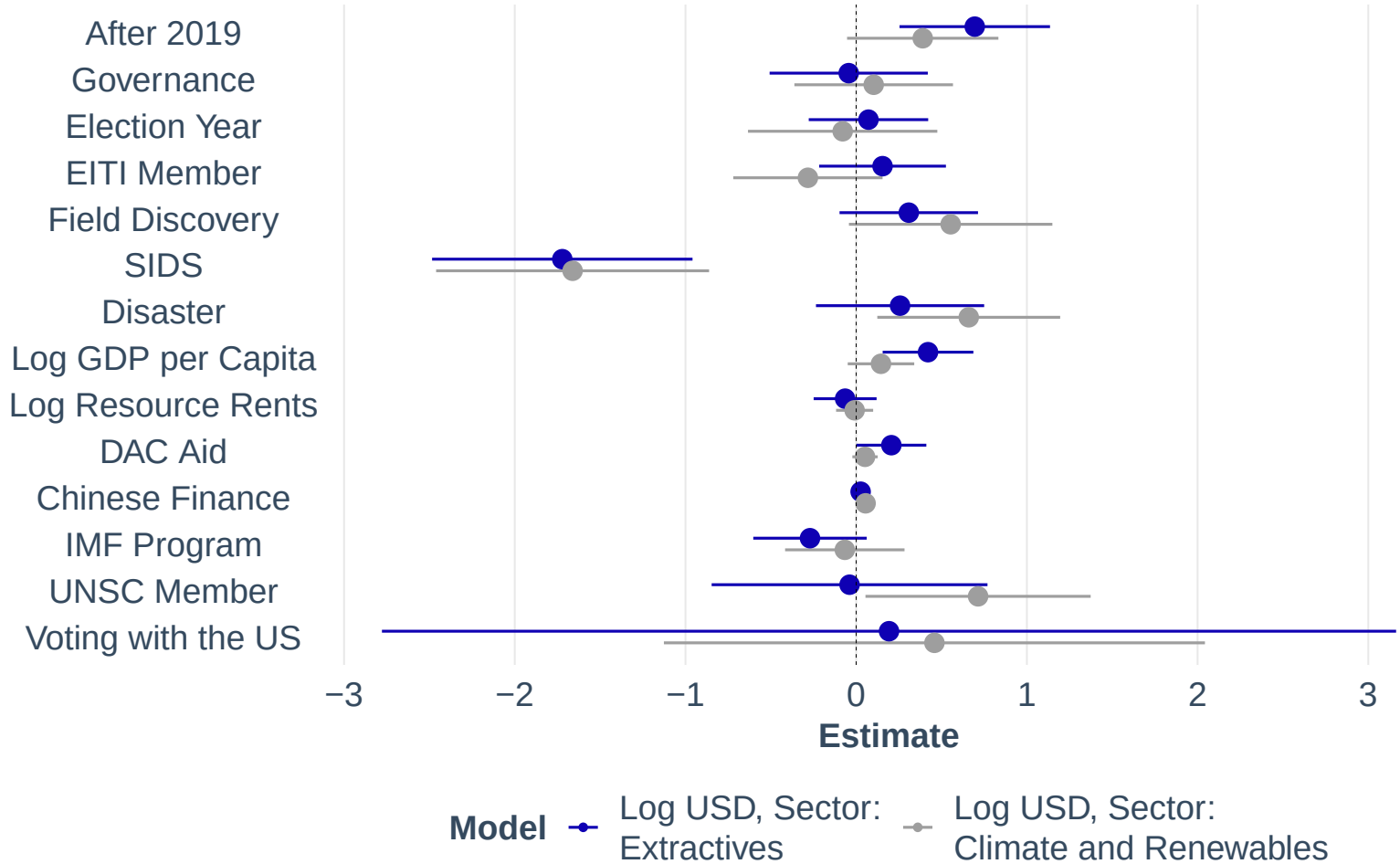

Figure 11: Results of linear regressions, with 95 percent CI. Outcome: billions of 2023 USD, logged

Predictors of amount of funding (in %)

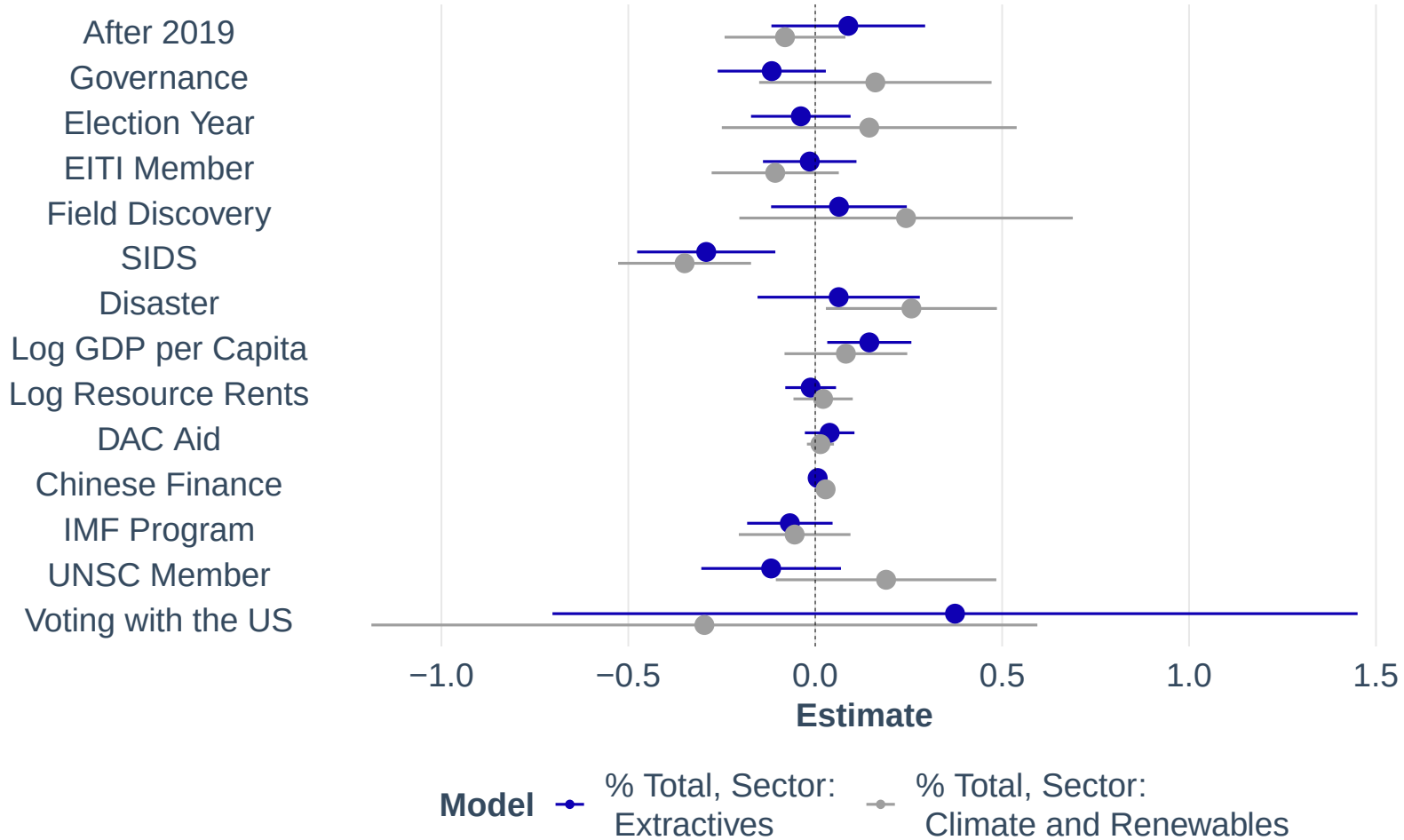

Figure 12: Results of linear regressions, with 95 percent CI. Outcome: percent of total World Bank commitments

Results: project duration

Predictors of duration (in years)

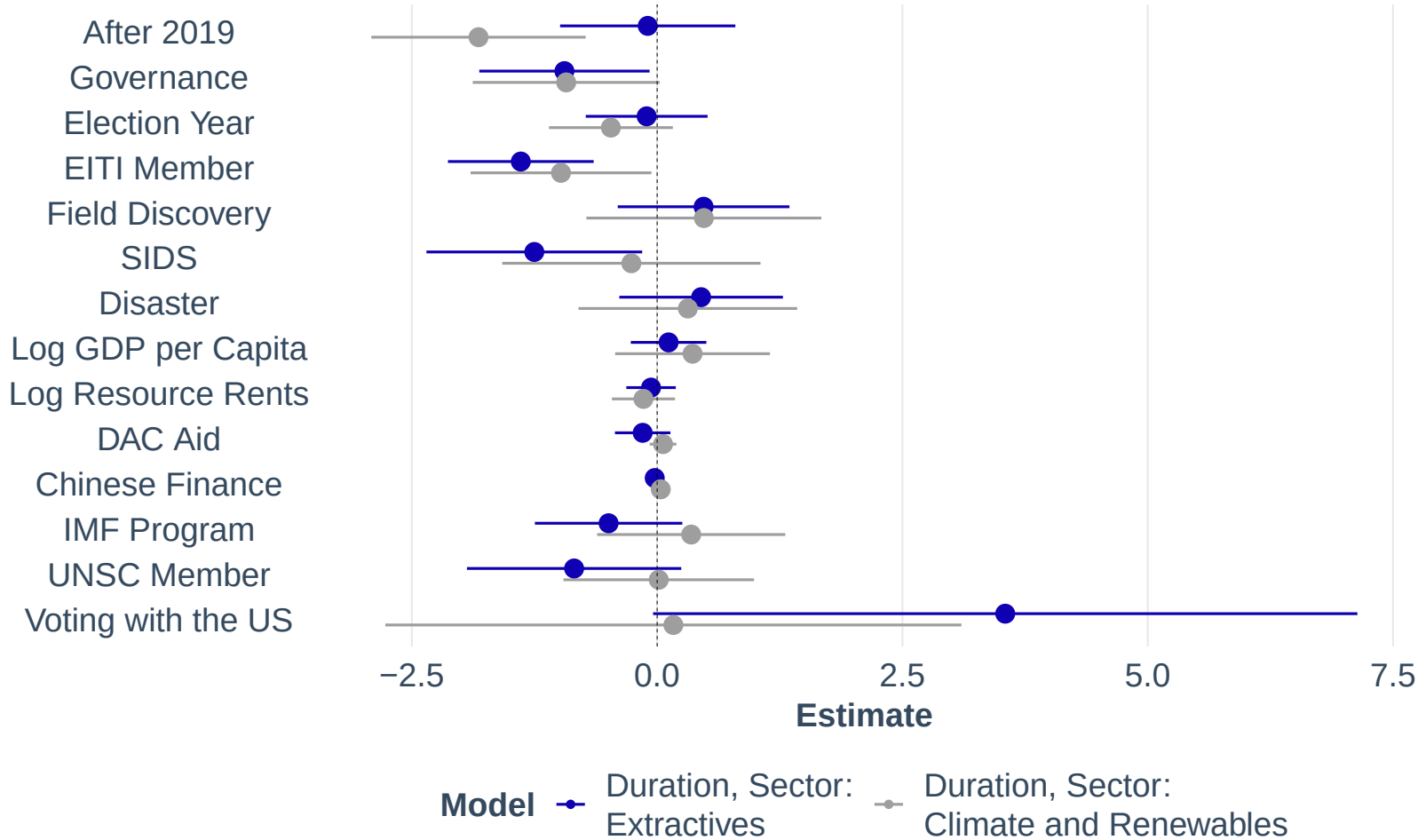

Figure 13: Results of linear regressions, with 95 percent CI. Outcome: project duration, in years

In sum

- The World Bank is funding *fewer* extractive *and* climate projects
  - Instead, more projects in the health sector
- But each project mobilizes more $$
- No change in the budget composition — the Bank is not divesting from oil/gas or investing more in climate/renewables
- Extractive projects are just as long as before, but climate projects are shorter

Questions and comments? iasmin@colostate.edu

Appendix

Keyword assisted topic models

- Problem with traditional topic models: danger of post-hoc theorizing
  - Researchers interpret and label uncovered topics after model fitting
- Advantage of keyword assisted topic models: researchers can incorporate prior substantive knowledge
  - Specifically, they can specify keywords to label the topic of interest ahead of estimation
  - Less post-hoc description, more theory-driven inference
  - More interpretable topics, better classification performance, less sensitive to discretionary choices made by researchers (e.g. starting values of the estimation algorithm)
  - Implementation: `R` package `keyATM`

Keywords used to generate the main topics

- **Extractives:** oil, gas, petroleum, eiti, coal, charcoal, gasoline, extractive, extractives, diesel, fuel, hydrocarbon, lpg, mining, mine, mineral, minerals
- **Climate and Renewables:** renewable, renewables, solar, wind, hydropower, hydroelectric, photovoltaics, biomass, geothermal, climate, ghg, hcfc, hydrochlorofluorocarbons, methane, carbon, sequestration, atmosphere, greenhouse, unfccc
- **Environment:** nature, forest, reforestation, biodiversity, marine, redd, wildlife, environment, environ- mental, gef
- **Health:** health, healthy, healthcare, hiv, hospital, hospitals, influenza, malaria, vaccine, vaccination, maternal, flu, hivaids, covid-19, polio