Pre-Analysis Plan: The Political Consequences of Setting and Missing Targets

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July 5, 2024

Abstract

We will conduct a survey experiment to measure the effect of information about the Indian government's policies towards reducing air pollution on respondents' opinions of the government's work. One treatment arm includes information about the Indian government's policy to reduce air pollution. A second treatment arm informs respondents that the program has thus far not been effective in meeting air pollution targets set forth in the policy. A control arm will provide no information about the government's policies or progress on reducing air pollution. We will measure the effect of information treatment on respondents' opinions of the government's work to reduce air pollution.

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1 Introduction

We will conduct a survey experiment to measure the effect of information about the Indian government's air pollution reduction policies on respondents' opinions of the government's work. In 2019, the Government of India launched the National Clean Air Programme (NCAP), which aims to improve air quality in India's most polluted cities. The policy has set targets for each city to achieve a 40% reduction, relative to 2017 levels, in particulate matter air pollution by 2026.

The survey will be conducted via phone across 19 Indian cities covered by NCAP. We will inform randomly selected respondents about the policy and the air pollution reduction targets. Among the randomly selected respondents who are told about NCAP's goals, we randomly select a subset of individuals who are also told that the policy has not been effective in reducing air pollution relative to cities not covered by NCAP. We will measure the effect of these two pieces of information on respondents' satisfaction with, and opinions about, the central government's actions and commitment to reducing air pollution.

2 Survey Experiment

The phone survey will be carried out in three languages (Hindi, Tamil, and Bengali) across 19 Indian cities that are all covered by NCAP. Respondents will be randomly assigned to one of three arms: NCAP information, No effect information, and No information.

1. **NCAP information.** For participants randomized into the NCAP informa-

tion treatment, we will first ask participants if they have heard about NCAP, and then we will provide them with the following information:

> "Breathing polluted air contributes to heart and lung disease and can even lead to death. Because air pollution is bad for health, the National Clean Air Programme (NCAP) was started by the central government in January 2019 to reduce air pollution. The goal of the program is to reduce air pollution by 40% from 2017 levels by 2026. 131 cities are covered by the program. Your city is covered by the program. Cities have come up with their own plans for reducing air pollution, including things like expanding air quality monitoring, switching to electric buses, and reducing industrial emissions. The central government set aside more than 9,000 crore for this program since 2019."

These participants will then be asked for their prediction of the effect this policy will have on air pollution.

2. **No effect information.** In addition to the information and questions detailed in the "NCAP information" treatment, participants in this arm will also be informed that NCAP has not had an effect on air pollution with the following text:

> "Since the policy started, there has been no effect on air pollution. The cities covered by NCAP have not seen any decline in air pollution compared to the cities not covered by NCAP."

3. **No information.** Respondents who were not part of the information treatments described above will be provided with information about NCAP *after* data on the outcome variables and other information has been collected. They will then be asked for their prediction of the effect the program will have on air pollution.

2.1 Primary Outcome Variables

After the randomized information provision described above, we will collect data on our three main outcome variables by asking the following questions:

1. **Opinion About Government Actions:** Now I want to learn your opinion about the Indian national government's policies and actions to reduce air pollution. What do you think of what the government is doing to reduce air pollution? Do you think they are doing too much, they are taking all the required actions, or they are not taking enough actions?

2. **Perception of Government Dedication:** How dedicated do you think the Indian national government is to reducing air pollution. In other words, what financial and political costs is the government willing to pay to achieve the objective of reducing air pollution. Are they dedicated, slightly dedicated, or not dedicated?

3. **Satisfaction with Government Policies:** How satisfied are you with the Indian national government's policies and actions on air pollution? Are you satisfied, slightly satisfied, or not satisfied?

We will rescale responses to each question into standard deviations from the control group (no information) mean.

2.2 Additional Data Collection

In addition to our primary outcome variables, we will collect additional information on respondents' demographic characteristics, economic status, and opinions.

Prior to the information treatment, we will ask participants about which city they live in as well as their age, gender, and education level. We will then ask them about their opinions of the cleanliness of the drinking water, air, and public spaces, in their neighborhoods.

After the information treatment, we will ask respondents whether they voted in the recent national election, what the most important issue was for them while voting, and if air pollution affected who they decided to vote for. At the end of the survey, we will also collect data on the ownership of five common assets to create an asset index.

3 Regression specification

3.1 Main specification

We will use the following regression to estimate the effect of the information provision on our main outcome variables:

$$Response_i = \alpha + \beta_1 \times NCAPInfo_i + \beta_2 \times NoEffectInfo_i + StateFE_i + \varepsilon_i \quad (1)$$

where the coefficients β_1 and β_2 are the parameters of interest. β_1 is measuring the effect of "NCAP information" on people's opinions, while $NoEffectInfo_i$ is measuring the effect of "No effect information," that is, the effect of NCAP information as well as being told that NCAP has had no effect on air pollution. $StateFE_i$ is a vector of fixed effects for the seven states in which respondents live.

3.2 Measuring Heterogeneity in Effects

In addition to measuring the main effect of the information intervention, we will also measure the heterogeneity of the effect using the following specification:

$$\begin{aligned} Response_i = \alpha + \beta_1 \times NCAPInfo_i + \beta_2 \times NoEffectInfo_i + \\ \beta_3 \times NCAPInfo_i \times Heterogeneity_i + \beta_4 \times NoEffectInfo_i \times Heterogeneity_i + \\ \beta_5 \times Heterogeneity_i + StateFE_i + \varepsilon_i \end{aligned} \quad (2)$$

where $Heterogeneity_i$ refers to the following dimensions of heterogeneity:

- The respondent's years of education,
- If the respondent voted in the last election,

- What the respondent thinks of the cleanliness of the air in her neighborhood, and
- The respondent's expectation about the effect of NCAP.