Dirty Air and Green Investments: The Impact of Pollution Information on Portfolio Allocations

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Contribution

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- Studies relation between pollution information and portfolio allocation
- Negative relation between availability of pollution information and allocation to brown stocks
- Results driven by younger and tech-savvy investors
- Neat identification (CAAQMS)
  Rollout of air quality monitoring stations

Contributions

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- Impact of policy to install air quality monitoring stations
- Role of information and transparency

This figure tells the story

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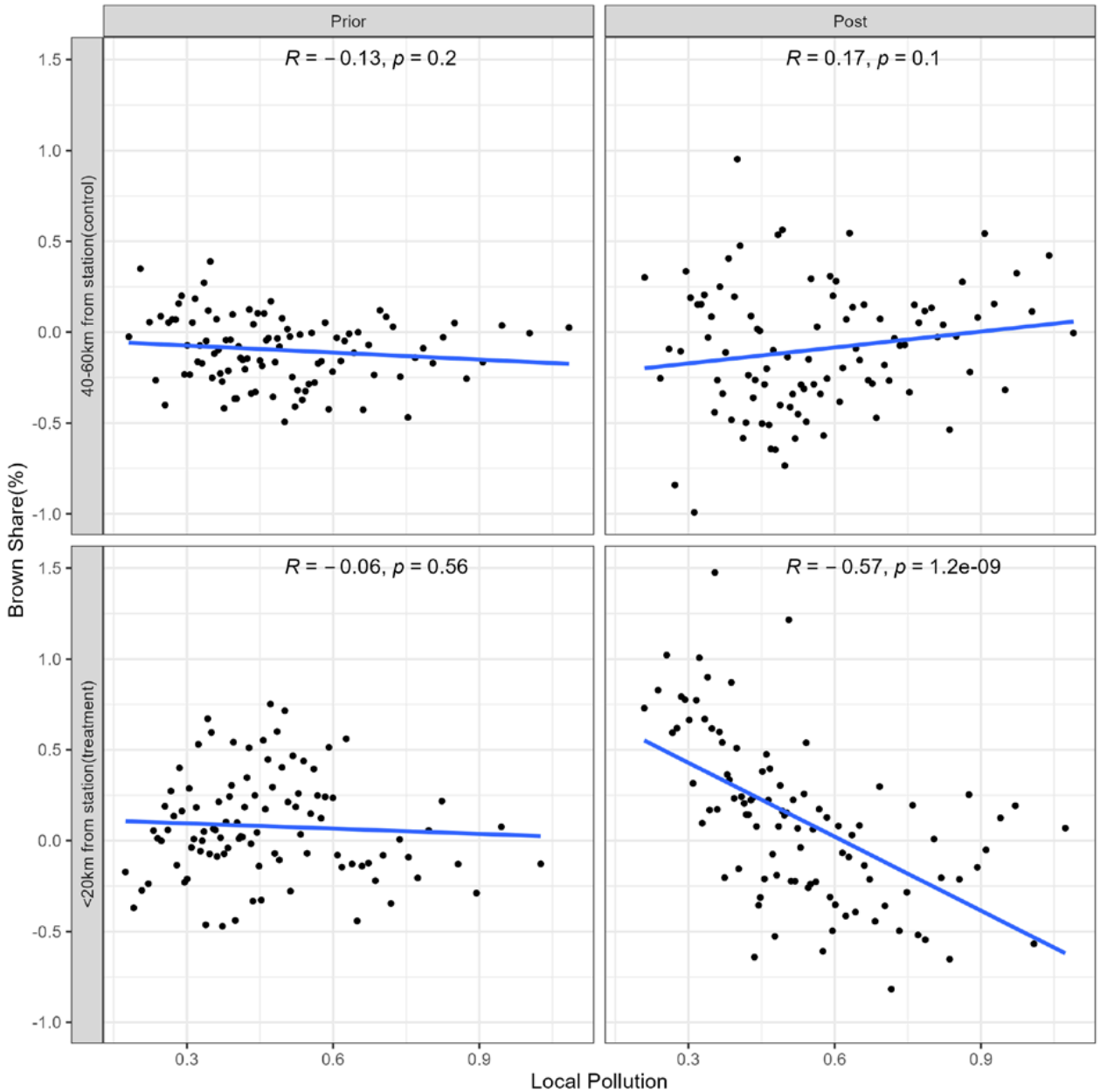

Who should care about the results?

- Investors – Retail investors but also financial institutions get a better understanding of their clients
- Companies – Need to understand the preferences of their investors
- Policymakers – How they can use the help of citizens to bring about change?

Sustainable Funds

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Exhibit 2 Quarterly Global Sustainable Fund Flows (USD Billion)

Source: Morningstar Direct. Data as of March 2024.

Exhibit 4a Global Sustainable Fund Launches Per Quarter

Source: Morningstar Direct. Data as of March 2024.

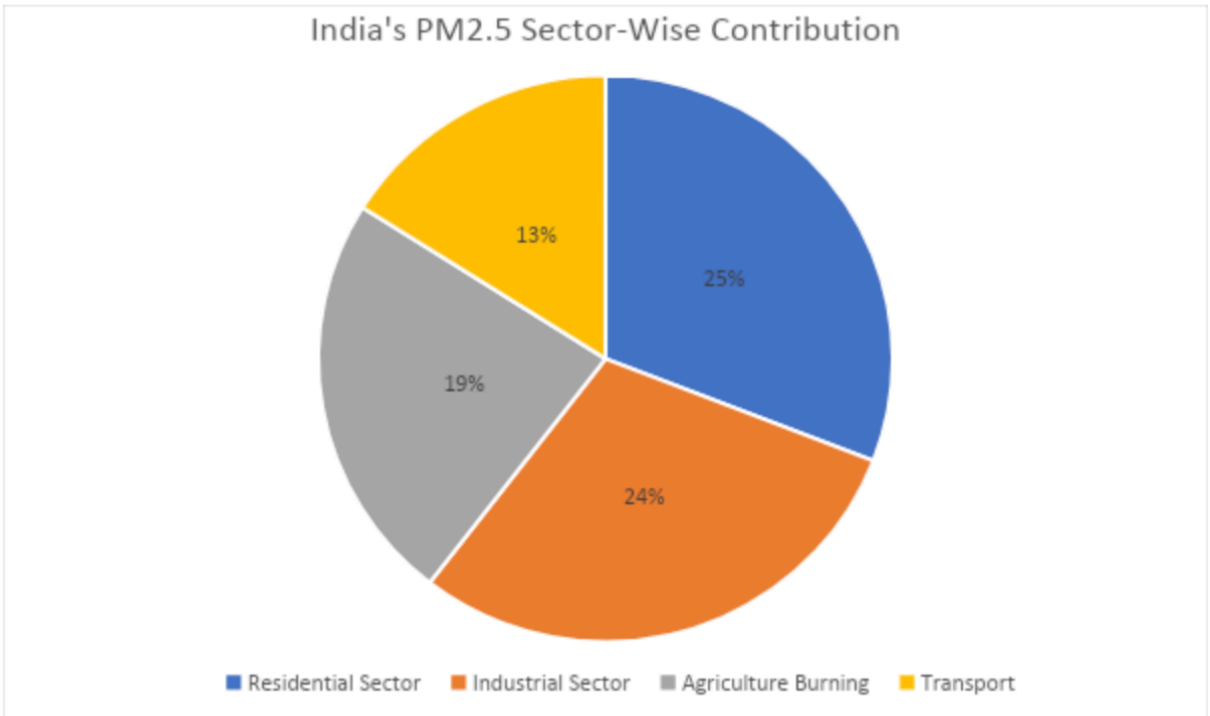
Why not motivate by using pollution statics in India and not just ESG?

Comments – Premise of Paper

To what extent are “brown” firms responsible?

Summary: Where Does India’s Air Pollution Come from?

Below we summarize the major sources of India’s air pollution discussed above. Note the fourth source is transport.



https://smartairfilters.com/en/blog/where-does-indias-air-pollution-come-from/

Comments

Green versus brown stocks categorized at the industry- rather than firm-level. How about using Trucost's global firm-level carbon emissions and disclosure data, which also covers Indian firms?

Trucost covers about 1200 Indian firms:

Emissions: Sum of annual Scope 1 and Scope 2 carbon emissions (metric tons of CO2) at the end of the year.

Disclosure: A dummy variable that indicates whether the firm discloses Scope 1 carbon emissions.

Comments

Do companies care about this change in allocation?

Is ownership by small, tech savvy retail investors significant enough for companies to pay attention?

Is ownership by female investors significant?

I suspect it is older investors and institutional investors that own a large percentage of the market cap.

Comments

- Do changes in portfolio allocations persist over time, or do they tend to revert after the initial shock?

- Investigating this aspect could offer insights into whether pollution salience has a lasting impact or if it is only a temporary reaction to new information. Figure 5 suggests a one time drop and then stays steady.

- What about returns of brown versus green stocks? Does the increase in demand for green and decrease for brown result in price changes?

Comments

- Can you use “alerts” on holidays/weekends for identification?
- What happened during Covid? Pollution was down but level of retail trading was up.
- What is the size in INR of portfolio holdings of each group of investors?
- Proportion of brown has been going down over the years, what are the implications?

Comments

- Does level of education matter?
- Does income/net worth matter?
- 500,000 downloads doesn't seem like much (based on India's population and use of apps)
- Does the change in allocation have any impact on the firm's behavior?

Comments

- Results for the elderly are a little puzzling – they are impacted more by pollution and they have more funds to invest.
- Has the classification of brown/green changed over time?
- How is the pollution level broadcast? Is it only via the app that is downloaded?

Future Work (New Paper)

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Examine the effects of pollution information on the behavior of brown firms. Specifically, do firms located near air quality monitoring stations respond to increased environmental scrutiny by altering their practices?

Potential changes could include reducing emissions, adopting cleaner technologies, or improving compliance with environmental regulations.