

## Voting Power and the Supply of News Media: Quasi-Experimental Evidence from India

*Julia Cagé (Science Po Paris), Guilhem Cassan (UNamur) and Francesca Jensenius (University of Oslo)*



### The issue

Political information conveyed through both traditional and new media outlets is known to have a major impact on electoral outcomes, distributional patterns, and the relative salience of political issues (Iyengar1994, Gentzkowetal2011, Cage2017) Therefore, it is crucial to understand the supply of news media in democratic contexts and in particular, the extent to which media actors respond to political (as opposed to purely economic) incentives. Indeed, it is common knowledge that at least some media actors try to influence political outcomes but there is little evidence about how systematic this tendency is. Are these only a few outliers who are not representative of the entire media market, or to the contrary, is this tendency widespread? Only systematic statistical analysis can answer this question.

In this paper, we investigate how media owners react to changes in the political importance of vote choices -- voting power -- in different areas. Whereas "one person, one vote" is often considered the guiding principle of democracies, there is in fact great variation across the democratic world in the extent to which votes matter at all (e.g., less in the context of electoral fraud), the extent to which they translate directly into seats or affect elections in a more indirect manner (such as through electoral colleges), and the weight given to one vote compared to another (e.g., votes in densely populated areas counting for less). As the voting power of an area increases, influencing the political behavior of the electorate also becomes increasingly important for actors seeking political influence. As a result, controlling the quantity and bias of the news media that voters are exposed to becomes a serious challenge. One may therefore expect changes in the voting power of an area to be associated with an increase in the supply of news media, if influencing voters is an objective of media owners.

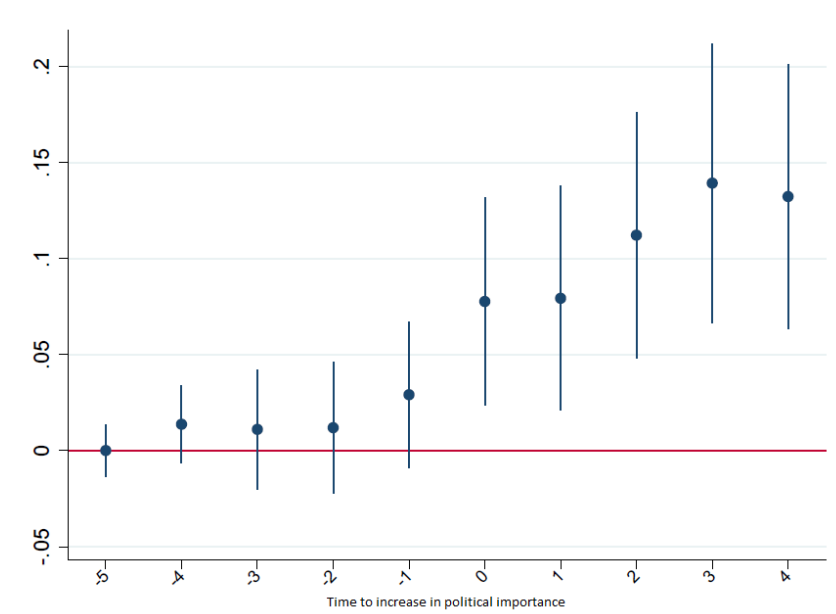
## Methodology

To tackle this question, we analyse how the Indian newspaper market reacted to changes in the voting power of different areas, by investigating changes in the number of newspapers, the circulation of these newspapers (both on average and aggregated), as well as the identify and nature of the owners. We construct a new dataset on Indian newspaper ownership, content and circulation at the year-city-newspaper level, using administrative and advertising data. Our dataset includes information for a total of 175,000 newspapers over 15 years (2002-2016). Producing these data is our first contribution.

This data allows us to causally identify the relationship between relative voting power (malapportionment) and the supply of news media. Our empirical strategy is to exploit an exogenous change in the electoral importance of cities across India. In the early 2000s, the boundaries of Indian electoral districts were redrawn, after having remained untouched for more than 30 years. Although constituencies originally had a similarly sized population, differential population growth had made them seriously malapportioned over time. The 2008 redistricting evened out these differences, thereby dramatically increasing or reducing the electoral importance of many areas. We use this exogenous variation in the voting power in different cities to identify the extent to which media owners enter (exit) the market of more (less) important cities, or whether they increase (decrease) the number of newspapers they publish in these cities.

## Results

Our finding, illustrated in Figure 1, is that the circulation of newspaper per capita increases in cities whose voting power increases after delimitation by 0.14 compared to those whose voting power does not increase, which is a large economic effect: this increase corresponds to 20% of the mean. This happens only after the political importance of cities increase (points 0 to 4 on the x axis) and not before (points -5 to -1), implying that this change is indeed due to the change in political importance, rather than a specific trend on which these cities might be. Confidence intervals indicates that those findings are statistically significant. This evolution can be decomposed into an increase of the circulation of existing newspapers and entry of new newspapers. Preliminary evidence suggests that in the short run, it is the circulation of existing newspapers that is driving the effect, while in the medium run, the entry of novel newspapers plays an important role.



**Figure 1:** Increase in the political importance and subsequent increase in media circulation. Point estimates and 95% confidence intervals.

Therefore, our research shows that media owners react to changes in the evolution of the voting power of media markets. That is, electoral influence is an important determinant of the supply of news media.

## Policy implications

This calls for an increased scrutiny of the evolution of the media market, and in particular, of its concentration. Indeed, our paper shows that attempts to influence political outcomes by media owners, far from being due to only a few actors, are widespread enough to be detectable via statistical methods. If media owners were politically neutral, the concentration of media would only be a problem of pricing. However, with politically motivated media owners, media concentration entails a risk for citizen to be exposed to only a few sources of information. If these sources are politically biased, then the media concentration could lead to widespread manipulation of citizens.

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