

Green NGO activity and media coverage

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Abstract

PRELIMINARY AND UNCOMPLETE

This paper develops a simple theory of interaction between environmental NGO and media. It assumes that the relationship they have is similar to an advisor/decision maker as in the cheap talk industry. Consistent with empirical findings on media bias, we assume that media slant their stories toward the preferences of the public. Only that we do not consider this slant as an ideological slant, but a slant in quantities. We show that media will report more environmental news when there is both newsworthy environmental item and low news-worthy events of non-environmental types of news. We distinguish between good type NGO and bad type NGO and show that while the bad type equilibrium is a babbling equilibrium, the good type NGO might also behave as in a babbling equilibrium. This is the case whenever the good type NGO has relatively strong preferences for the environment compared to other types of news. Overall this model shows that environmental NGO impact on media's decision on environmental news is low and contingent on whether or not a newsworthy environmental event happens. Empirical investigation (method detailed in the last section) shall confirm or not this simple theoretical model.

JEL code: L31, L82, D80

Keywords: Media, environmental NGO, cheap talk

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A major source of instability in American politics is the shifting attention of the media
Baumgartner and Jones (2010)

Introduction

On the 2nd of May 2014, a couple of french NGO mowed down a field of transgenic corn in the south of France. This action lead to extensive media coverage on the principals daily newspaper (*Le Monde*, *Le Figaro*, *Libération*). On the 5th of april 2015, other NGO led the same action: they mowed down an field of NGO. Yet this time it only led to minor media coverage. This paper develops a simple theoretical model providing explanations why some NGO's action make it to the top news while other remain in the shadow. There a several effects at work here. The more powerful one comes from the combinaison of the media bounded space and the multiplicity of news-worthy events. The first one refers to the fact that newspaper or evening news are closed space. Newspaper have a certain number of pages and evening news last for a certain amount of time and they cannot go beyond. This leads media to strategically select the news they will present in their edition. Media can select from a vast amount of news. From economic news, to political news, to environmental news. This setting is very similar to an oligopsony as a large amount of news items are selected by only a few media outlets. We base the model on findings from sociological and political science findings on the links between environmental NGOs and the media. To do so we build a model where we consider a newspaper as a indivisible object with different characteristics. Those characteristics represent the types of news that the newspaper presents: political news, economic news, environmental news,... Readers receive utility from reading different types of news, their utility is increasing in the quantity of news. Moreover they place different weight on different news type. Therefore an individual might place a higher value on economic news rather than on environmental news. In the basic setting of the model, there is only one media on the market and reader are homogeneous. Moreover there is only one active NGO that can interact with the news outlet. Acting as a monopoly the media will set the highest price possible in order to extract the surplus of the readers. As in Mullainathan and Shleifer (2005) the newspaper will slant its news in order to fit the preferences of the readers. Only that in this case we do not consider slant in ideological terms but slant in quantities. That is how much a media will speak of some issues in its edition. However, production of news is costly here. We make the reasonable assumption that the production of news is cheaper when there are news-worthy events happening. This simply says that it is relatively cheap to produce political news when there is high political activity, say national elections. We capture this using a random variable that represents the state of the world for newsworthy events. A high value of that variable

means that there is a lot of news worthy event (a national election). While a low value of that random variable simply means that there is no news-worthy events going on. The media has a prior on each state of the world for each news-domain and decides of the quantities it will allow for each news type in its decision using its prior. This is where environmental NGO interact with the media. With their activities, they may signal that there a newsworthy event regarding the environment. Using Bayesian updating, the media will revise its prior on the probability that there is a news-worthy event. We model this using a simple cheap talk framework where the advisor is an NGO and the decision maker is the media outlet. Consistent with the findings on environmental NGO, we say that there are 2 types of NGO: a good-cop type (she) and a bad-cop type (he). We show that while the bad-cop type will always send the same message (babbling equilibrium), depending on the strenght of her preferences for the environment relative to other topics, the good-type will reveals the true state of the world or not. When her environmental preferences are not so distant from her preferences for other topics, the good-cop type will self-discipline herself and be truthtelling. The introduction of a lying cost, which captures the cost of forging evidences, mobilizing activists also discipline the good-cop NGO. The empirical investigation will confirm or not the basic findings from this simple model. The rest of the paper goes as follow: the next section presents related literature with an emphasis on political science and sociological findings. Then the basic model is detailed along with the basic results. The last section is devoted to the presentation of the empirical strategy that shall confirm or not the basic insight of the model.

Related Literature

Scholars from sociology and political science have looked for link between environmental non governmental organization (NGO) and the media from both theoretical and empirical point of view. The next paragraph summarizes their finding. Starting with some theoretical background: Koopmans (2004) theorized the relationship between a movement and medias, and the impact of these interactions. That is how the media coverage of a movement will influence the movement itself. He shows that NGO and any other type of activist need the mass media to communicate and reach a broader audience. The theory elicit some characteristics that may influence the magnitude of the impact that a media's report may have on an NGO message (prestige of the speaker, types of activities,...). Yet, this impact mught be damped as the media sphere is a bounded space with limited attention. This feature makes it difficult for activits and NGO to reach a broad audience through media coverage because of the high degree of competituib between actors as described by Hilgartner and Bosk (1988). While reviewing the literature on the interdependency between social movements and mass mediasVliegenthart

and Walgrave (2012) expand the analysis of Koopmans (2004). As they stress that although movements have a hard time to get attention, when they get covered, it is far from certain that the news takes over their frame or interpretation of the issue. Which make it even harder for NGO to have their message covered and communicated to mass audience. Using empirical investigation Vliegthart et al. (2005) explored in details the impact that news media coverage has on green NGOs. Especially they investigated the relationship between media coverage and membership figures for Dutch environmental organizations from 1991 to 2003. They confirm the theoretical finding that NGO need the media to get attention as an NGO not gaining any media-attention for its actions is likely to be regarded as unimportant by politicians as well as by the public. Over their study period, they show that environmental NGO slightly increased their visibility in the medias due to their action. Yet this coverage is very volatile, as it heavily fluctuates over time, a feature that is common for every kind of news item as shown in Boydston (2013). Nevertheless they show that environmental NGOs are more and more views as relevant actors of environmental activity, as they are more and more mentioned together with other environmental actors such as: business, other societal actors, government and political actors. They provide additional evidences of the competition that NGO face between each other for media salience. As the salience of one NGO in the media in a given year and the year before, negatively impacts the salience of others NGO in that same year. Andrews and Caren (2010) led another empirical study as they investigated how the media reported green NGO's activities on a 2 year period in a specific region in the US. To do so they first surveyed a representative sample of 187 local environmental NGO in North Carolina. They then looked for news coverage of those organizations in 11 major daily newspaper on a 2 year period after the survey was completed (2095 articles). Their analysis reveal that local newspaper are averse to groups that are confrontational, volunteered or who advocate novel issues. On the other hand, groups that are professional, who employ known advocacy tactics, who mobilize large numbers of people and work on issues that overlap with newspapers' focus on local economic growth and well-being will receive more attention. Overall they find that demonstrations are a powerful strategy for gaining media attention. Yet as McCarthy et al. (1996) show, medias only cover a tiny fraction of protest in a given period, which confirms our hypothesis of a vast pool of information from which the media select some items that make it to the printed editions.

To summarize, NGO face a tough competition process against other actors and other news type to be featured on the media. Media tend to cover NGO that use conventional advocacy techniques and that not too extreme. We will take account of these findings in our model by using a competitive process to be feature in a media and a distinction between two types of NGO.

We now switch to the presentation of the economic analysis of the media, starting with theoretical findings. Economists have focused their analysis on the bias that media may have. Several explanations emerged, one state that media bias comes from the offer side of the market that is the media itself, the journalists and the owner of the media. This view have been presented in Besley and Prat (2006) and Baron (2006). But bias may also comes from the demand side of the market, that is from the reader themselves. This is the view defended in Mullainathan and Shleifer (2005) and Gentzkow and Shapiro (2006). Empirical investigation of media bias have been conducted. Groseclose and Milyo (2005) propose a measure of media bias that was used by Gentzkow and Shapiro (2010). In the later paper the author show that media bias is driven by the demand side of the market as they show that a large proportion of variance in slant among US daily newspaper is explained by the variation of readers ideology. They go further in the analysis by analyzing the impact of newspaper owner on the slant of the media and show that the ideology of the owner has no impact on the media's slant.

Our focus is different from this literature, as we are more interested in the reason why some events get featured in the news while other are left behind. Eisensee and Strömberg (2007) provide evidence of this selection process between issues in journals, as they look for news coverage of disasters in the world by US news media. They show that disasters occurring at the same time as other newsworthy events, such as the Olympics, receive much less news coverage than disasters that occur at other times. Whether or not a disaster receive coverage then influences the probability of public response to that disaster. As a disaster with greater news coverage has a greater probability of receiving a US political response. They interpret these results to mean that public reaction to disaster is largely driven by news coverage and that it is the public response that provides an incentive to politicians to send aid. In the same vein Duggan and Martinelli (2011) examine which issues a media with a finite space chooses to cover in a context of election between an incumbent and a challenger. They show that the media may influence the election by allocating more space in its edition to issue favorable to either the incumbent or the challenger

It is important to stress that we look more for the reasons that medias speak of some issues than reasons why media report news with different bias. We look more for the editorial choices in quantities of news. That is whether or not they write articles on specific issues (here the environment) and the links between their choices and actors of environmental news (NGOs). Thus our approach is closer to Eisensee and Strömberg (2007) and Duggan and Martinelli (2011).

Coming to the relationship between an NGO and the media. Since the relationship is based on information transmission we rely on the cheap talk framework developed in economics. We do this because the NGO is communicates a potentially non verifiable information (soft information), and the media (adviser) is unsure

whether or not the NGO as private agenda. Starting with Crawford and Sobel (1982), this literature deeply explore the incentives for the adviser to lie to the decision maker. Crawford and Sobel (1982) show as soon as the adviser and the decision maker have differences in their preferences, the advisor will have incentives to hide the truth and therefore have untruthful messages. Sobel (1985) introduces reputation concern in this strategic communication model. Then Bénabou and Laroque (1992) extend it in the case where the sender has a noisy private signal. We will consider the later case, that is that the NGO will be the sender while the media will be the receiver. The NGO will have a private noisy signal about the state of nature and will strategically send a message to the media. Battaglini and Bénabou (2003) examined the situation of a regulator facing multiple activist groups. Each group has its payoff depending on the decision of the regulator and an unknown state of the world. The regulator may use the differences between the activist to see if they are truthtelling or not. We now turn to the basic model that will encompass the findings from the studies presented above in a simple manner.

Model

Set up

We consider a situation where a newspaper is an indivisible good with different characteristics. Those characteristics represents news types: political news, economic news, environmental news,... There are N news types. To each news type corresponds a quantity $q_i, \forall i \in N$ in the printed edition of the newspaper. These quantities measures for the amount of news that is published in each news type. Because of space limitation in a newspaper, we impose an upperbound on the quantities a journal can print in its edition. We do so because every newspaper has a finite number of pages, television news also have this limitation as they cannot last more than a certain amount of time. This limited space in the core of the paper has it will trigger a competition for space between news type. We denote the limit of quantities a newspaper can print \bar{q} , for the sake of simplicity we set $\bar{q} = 1$. The media will thus have to strategically allocates its stories across news type in order to maximise its profit. However, quantities are not costless. We suppose that the cost of producing news stories decreases when there is newsworthy events (political scandal, ...). We capture this in the random variable v_i . The value of v_i reflect the state of world of newsworthy event in news type i . That is a high value of v_i means that a newsworthy event is happening (climate conference, elections, ...) and thus it is cheap to produce news for the media on that news type. On the contrary when v_i is low, it means that there no newsworthy event for newstype i and thus it is expensive (require more search, intensive journalistic labor) to produce news in news type i . For simplicity

we assume that v_i is a binary variable that can either take value 0 or \bar{v}_i . Having that in mind we assume the following cost function:

$$c(q_i) = \frac{q_i^2}{2\mathbb{E}[v_i]}$$

Where $\mathbb{E}[v_i]$ is the expected value of the state of the world in issue type i . Revenu of the media comes uniquely from sales of the newspaper.

A representative reader decides whether or not to buy the paper. If he buys it, the reader receives the following utility: $\sum_{i=1}^N u(\theta_i q_i) - p$. Where the first component is the raw utility he gets from reading the journal and the second component is the price he pays for it. If he does not buy it, he gets its outside option. For simplicity we normalize the outside option to 0. We consider linear function for the utilities, thus we can rewrite the gross utility of the reader as follow: $\sum_{i=1}^N u(\theta_i q_i) = \sum_{i=1}^N \theta_i q_i$. In this form the utility of the reader is just a weighted sum of the quantities in each news domains where the weights are given by $\theta_i, \forall i \in N$. Knowing this, medias will adjust their quantities in order to be able to set the higher price possible. Consider first the simplest case where there is only one media on the market, it fixes price p and quantities $q_i, \forall i \in N$ in order to maximise its profit. The profit of the media can be written as follow: $p - \sum_{i=1}^N \frac{q_i^2}{2\mathbb{E}[v_i]}$ if the reader buy the newspaper and $-\sum_{i=1}^N \frac{q_i^2}{2\mathbb{E}[v_i]}$ if the reader does not buy the journal. To enjoy positive profits the media has to fix a price above its cost but not so high so that the reader will buy it. It will therefore fix a price so has to capture all the reader's surplus, thus $p = \sum_{i=1}^N u(\theta_i q_i)$, and it will adjust its quantities so has to maximise the reader's willingness to pay

for reading the media. The media's problem is therefore: $Max \sum_{i=1}^N \theta_i q_i - \sum_{i=1}^N \frac{q_i^2}{2\mathbb{E}[v_i]}$

$$s/t \sum_{i=1}^N q_i \leq 1$$

The lagrangian of the problem is:

$$\mathcal{L}(\{q_i\}_{i=1}^N, \lambda) = \sum_{i=1}^N \theta_i q_i - \sum_{i=1}^N \frac{q_i^2}{2\mathbb{E}[v_i]} + \lambda(1 - \sum_{i=1}^N q_i) + \sum_{i=1}^N \beta_i q_i$$

Where β_i represents the non-negative constraint on quantity $i, \forall i \in N$

First order condition yield:

$$\frac{\partial \mathcal{L}}{\partial q_i} = 0 \Leftrightarrow q_i = \mathbb{E}[v_i][\theta_i - \lambda + \beta_i]$$

$$\lambda \frac{\partial \mathcal{L}}{\partial \lambda} = 0 \Leftrightarrow \sum_{i=1}^N q_i = 1$$

$$\beta_i \frac{\partial \mathcal{L}}{\partial \beta_i} = 0 \Leftrightarrow \beta_i q_i = 0, \forall i \in N$$

Issues with $\theta_i > \lambda$ will have a positive quantity and thus $\beta_i = 0$, otherwise there will be no news in the printed

edition and thus the non-negativity constraint for those news type will be satisfied.

We can define a subset $N' \subset N$ of where the condition $\theta_i > \lambda$ is verified for all $i \in N'$. Using the condition that all q_i must not exceed 1 we get the following expression for λ :

$$\lambda = \frac{\sum_{N'} (\mathbb{E}[v_i] \theta_i) - 1}{\sum_{N'} \mathbb{E}[v_i]}$$

This holds only if $\sum_{i=1}^N q_i = \sum_{N'} q_i = 1$. We assume this condition is satisfied because of the following argument: if it would not be satisfied, then the newspaper could edit more stories so that the reader would be willing to pay a higher price in order to read the paper. Thus, at the optimum the condition has to be satisfied.

Thus we have two kinds of news types: those with high salience for the reader ($\theta_i \geq \lambda$) and those with low salience for the reader ($\theta_i \leq \lambda$). The media will only print stories in issues with high valence while stories with low valence will remain unpublished. Using the expression we found for λ , we get the following expression for $q_i, \forall i \in N'$:

$$q_i = \mathbb{E}[v_i] \left(\theta_i - \frac{\sum_{N'} (\mathbb{E}[v_j] \theta_j) - 1}{\sum_{N'} \mathbb{E}[v_j]} \right)$$

This final expression of q_i that highlights the competition between issues. One can check that q_i is a decreasing function of the availability of information on other types of news ($\mathbb{E}[v_j]$). Also a decreasing function of the taste of reader for other types of news (θ_j). One can also show that the negative effects of the availability of information of other types of news and the readers' taste for them on q_i are complements. Thus if there is a newsworthy event in an issue j , it would be cheaper for the media to produce news and therefore it will print more stories on that issue j at the expense of others issues. Same thing happens if reader's taste for an issue change, the media will fit the preferences of the readers and therefore write more stories on issues the readers like the most. The impact of more newsworthy events in news type i on q_i is positive.

NGO activities

In this model we consider NGO as information provider. That is that they may provide information to the media, which he may use to revise its editorial choice. We model this relationship using the cheap talk framework developed in economics since Crawford and Sobel (1982). The environmental movement is characterized by the diversity of organizations that belong to this movement, Brulle (2008). We take account of this diversity by considering that there are 2 types of NGOs, a good type one and a bad type one. Thoses types refers to the distinction between types of green NGOs done in Lyon (2010), that is good cop and bad cop. One type will be

an extreme environmentalist while the other one will be a moderate one. There is a probability μ that the NGO is a good cop and a prob $1 - \mu$ that the NGO is bad cop. The distinction is similar to the one between good advisers and bad advisers in the cheap talk literature.

A good cop NGO has rather similar preferences than the representative individual, that is that he puts relative weight on each quantity of news in the newspaper. To make thing simple, we assume that the good cop has exactly the same preferences than the representative reader, that is:

$$U_g(\{q_i\}_{i=1}^N) = \sum_{i=1}^N \theta_i q_i$$

On the contrary the bad cop NGO, will only put weight on the environment. That is, he doesn't care about other types of news, the only thing he cares is reading news about the environment. Thus his utility function is:

$$U_b(\{q_i\}_{i=1}^N) = \theta_{e_b} q_e^1$$

Thus this type of NGO will always prefers more news about the environment while the good one will tradeoff more news for the environment for less news in others sectors. We assume that the bad cop type puts the same weight on the environment as the good cop type, that is: $\theta_{e_g} = \theta_{e_b}$.

We now come to the communication stage of the game. Consider that an NGO has acces to a noisy signal about the state of nature for news for environmental problems v_e . The signal is positively correlated yet noisy, meaning that: $\mathbb{P}[s = 1|v_e = \bar{v}] = \mathbb{P}[s = 0|v_e = 0] = \gamma > \frac{1}{2}$. Such environmental problem might be a non environmental-friendly activities of some firms, the discovery of news effect of some pollutants,...Once they acquire their signal, the NGO can send a binary message to the media $m \in (0, \bar{v})$. Given the message, the media will update its priors on the state of nature in the environment case. And adapt its editorial strategy. In order to express the strategies of the NGOs, we have to analyse depending on the signal they get, the message that maximises their payoff. It is easy to see that the bad cop type will always send $m = 1$, because all he cares about is reading news about the environment. Thus he will never send a message that says that there no news. Thus his dominant strategy is $m = \bar{v}, \forall s$, which is a babbling equilibrium.

Coming to the good cop NGO type, obviously, she will always tell the truth when she receives signal $\gamma = \bar{v}$. But what will be its message when the signal is $s = 0$? Will she commit to say the truth and thus read less environmental news or will she lie and send message $m = \bar{v}$? We show that her message will depends on the strenght of her other preferences compared to her environmental preferences. That is the good type faces a cost fo lying, which is reading less news that are non related to the environment. This struggle between more environmental news and less non-environmental news determine whether or not the good cop will be truthtelling or not. We get this result by simply comparing her payoff when $(m = \bar{v}|s = 0)$ and $(m = 0|s = 0)$. We first

¹Where the subscript e stands for environment

have to compute the expected value of v_e that the media will use in its editorial decision when the message he receives is $m = 0$ and when $m = \bar{v}$. The case when the media receives message $m = 0$ is straightforward. Because the $m = 0$ fully reveals the type of NGO, that is goog-cop type. The reason is that such a message will never come from a bad-cop type as we explained above that his dominant strategy is $m = \bar{v}$. Thus the media assigns probability $1 - \gamma$ to the state $v = \bar{v}$, because $1 - \gamma$ is the probability that the signal the NGO got is misleading. Therefore $\mathbb{E}[v_e|m = 0] = (1 - \gamma)\bar{v}$.

The case when $m = \bar{v}$ is trickier because now the message does not reveal the identity of the NGO. Using Baye's rule, the media update its prior on the distribution of v_e .

$$\mathbb{P}[v = \bar{v}|m = \bar{v}] = \frac{\alpha(\mu\gamma + (1 - \mu))}{\alpha(\mu\gamma + (1 - \mu)) + (1 - \alpha)(\mu(1 - \gamma) + (1 - \mu))}$$

Where α is the prior of the media that $\mathbb{P}[v_e = \bar{v}]$. If we set $\alpha = 1/2$ then $\mathbb{P}[v = \bar{v}|m = \bar{v}] = \frac{\mu\gamma + 1 - \mu}{2 - \mu}$. Using the expression for the quantities we found in the previous section we have:

$$q_e(m = 0) = (1 - \gamma)\bar{v}\left(\theta_e - \frac{\sum_i \mathbb{E}[v_i]\theta_i - 1}{\sum_i \mathbb{E}[v_i]}\right) \text{ and } q_e(m = \bar{v}) = \frac{\mu\gamma + 1 - \mu}{2 - \mu}\bar{v}\left(\theta_e - \frac{\sum_i \mathbb{E}[v_i]\theta_i - 1}{\sum_i \mathbb{E}[v_i]}\right).$$

Denote $\Delta q_e = q_e(m = \bar{v}) - q_e(m = 0)$ the difference between the quantities of environmental news that is induced by sending message $m = \bar{v}$ over $m = 0$. Because of limited space in the media, we know that $|\Delta q_e| = |\sum_{i \neq e} \Delta q_i|$.

That is the additionnal space that is allocated to environmental news is at the expense of other types of news.

It is this loss of quantities of other news type that will prevent or not the good-cop NGO to lie. We illustrate this in the case when there are only two types of news, and then expand it to the case when there are N types of news. Say that there is only 2 news dimension: environment and the rest. We have $U_g(m = \bar{v}|s = 0) - U(m = 0|s = 0) = \theta_r \Delta q_r + \tilde{\theta}_{e_g} \Delta q_e$

Where $\Delta q_e = q_e(m = \bar{v}|s = 0) - q_e(m = 0|s = 0)$ and $\Delta q_r = q_r(m = \bar{v}|s = 0) - q_r(m = 0|s = 0)$

The NGO will have an incitation to lie whenever $\theta_{e_g} \geq \theta_r$. That is as soon as it likes environmental news more than other types of news. When there are N stories the NGO will lie when: $\theta_{e_g} \Delta q_e \geq \sum_{j \neq e} \theta_j \Delta q_j$. Thus the good-

cop NGO face strong incentives to lie because as soon as her preferences for the environment is different enough from her other preferences, then she will be better off by disorting her report and announce $m = \bar{v}$ instead of $m = 0$. Notice that this result holds because we suppose that lying is costless for the NGO. Introducing a cost of lying will of course dampens the incentive of the NGO, and she will be more likely to reveal the truth. This cost reflect the difficulty of the NGO to conceal and forge information. That is to provide quality news, with different piece of evidences. The greater the cost of forging false information, the more the good-cop NGO will be truthtelling.

To summarize, environmental NGO only have a minor impact of the quantity of environmental information due

to the combinaison of 2 features: the bounded space of the media and the fact that there are a lot of other types of news that the media can put in its edition. However, the real judges are the readers. If readers do not want to read environmental news, then no matter what the NGO do, the media will not print any green news. Yet, this result holds only in this very basic setting when readers are homogeneous and there only one media outlet. We shall see in extensions how this result behave when we relax those two assumptions.

Empirical strategy

This section details the empirical strategy to collect data on NGO activities and their impact on the medias. The study will be focused on france. The first step is to collect data on active NGO in France, do so we rely on official statement from the *journal officiel*, organizations which receives more than 153000€in giving must declare themselves to the authority, which is then published on the *journal officiel*. Therefore we get the names of the biggest environmental organizations that are active in France. We need to get data on these NGO activities on a given period. We rely on automated web crawling on their website, we especially look for the activities they post. Each of these post on their website correspond to an activity. Having a measure of their activities we now want to see if they attract media attention, and if they have an impact on the quantity of environmental news. To do so, we must have first the media activity on environmental news. We use google news searches with keywords associated to environmental news to have the data we look for (example of keywords: environment, nature, pollution, biodiversity,...). To refine the data, we use google news searches but using the names of the NGO that we have in the dataset. We proceed the same way using *INA* database to obtain data on appearance of NGO on television. We then have a broad dataset on which we can infer whether NGO activities have an impact on the quantity of environmental news. To do so we will regress the number of appearance of NGO in the media on their activities. We will control for political activity using the *agendas-france* database on french political activity. We can also control for their impact on google search request using *google trend* database. Once this is done, we will refine the analysis and use text analysis to asses whether media are bias toward NGO or not. We will use the same definition of media bias as Groseclose and Milyo (2005). We will isolate the set of phrases that are commonly used by NGO and see whether or not the media use them too. If they do, we would have proof that NGO influence the medias' environmental editing strategy.

Conclusion

The theoretical model we constructed explicitly show the difficulty for environmental NGO to be featured in the media. This feature comes from the fact that readers want to read not just environmental news, but also other types of news. And that all these news compete for getting into the media, which has a limited space. In this setting, an NGO is likely to be featured in the media if it provide extreme news (high v_e) and when other types of news do not have a newsworthy events (low v_r), This effect is stronger, the stronger are the preferences of the reader for environmental news. The empirical investigation will support or not the theory.

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