

Positive Communication in a Catastrophic Crisis

The Mixed Effects of COVID-19 on the Tone of Governments' Media Coverage

Abstract

Crisis management strategies have taken a new significance amidst the COVID-19 crisis. In Canada, while the tone of media coverage of political leaders is usually stable over time, the pandemic has provoked variation that provides an opportunity to test the effect of leaders' crisis management strategies on the tone of media coverage. Using a unique dataset of online front-page articles from 11 Canadian media outlets, an automated textual analysis, and a regression discontinuity design, this paper estimates how Canadian Prime Minister Justin Trudeau and Quebec Premier François Legault's COVID-19 early crisis management affected the media coverage devoted to them. Results show that Legault's crisis management had a short-term positive effect on his media coverage, while Trudeau's effect is null. These findings raise questions about the link between media, decision-makers and public opinion.

Keywords

political communication, media coverage, COVID-19 crisis.

This paper proposes an experimental test using the COVID-19 pandemic as an opportunity to estimate the effect of crisis management on the tone of media coverage of political leaders. It is unique in two ways: first, it relies on an original dataset of Canadian media online front-page articles and, second, it uses text as data with a regression discontinuity design.

In Canada, the growth of the COVID-19 pandemic in March 2020 quickly prompted political leaders to establish crisis management strategies – providing comments, analyses, and forecasts on a daily basis. The peculiarity of this crisis makes it possible to observe and compare the evolution of the federal and provincial leaders' media coverage and public communication strategy. From a public opinion standpoint, Prime Minister Trudeau experienced a bump in his approval rating after the crisis began, climbing from 33% in February to 54% in April 2020 (Angus Reid Institute, 2020). Over half of Canadians (57%) indeed approved of his handling of the crisis. However, among Quebecers, approval for Trudeau's handling of the crisis remained low (32%), even though his party won a more significant share of the vote in Quebec than it did across the country in the 2019 election (Mainstreet Research 2020). Meanwhile, Quebecers' approval of Premier François Legault's handling of the crisis stood at a record-high 96% (Little, 2020). Quebec's francophone media system might, of course, partially explain such variation regarding the diverging fortunes of both leaders in polls conducted in the province.

Drawing on *Radar+*, a unique, large dataset of online front-page articles from 11 of the main Canadian media¹ that enables us to measure the tone of the media coverage – defined as the balance of positive and negative sentiments expressed through words – devoted to political leaders, this paper relies on automated text analysis and a regression discontinuity design to address the following question: How did Trudeau and Legault's COVID-19 crisis management affect the tone of media coverage devoted to both leaders?

Crisis Management Theory

There is little doubt that the COVID-19 pandemic is one of the main crises governments have had to face in recent times, at least in Western countries. Prince and Giasson (2019) define three types of crises: political, media, and catastrophic crises. In times of catastrophic crisis akin to the COVID-19 pandemic, the government generally uses traditional media to impose its interpretive framework. It chooses the message, as well as the way to convey it, in order to steer journalists' questions, media treatment, perceptions of issues, and, ultimately, public opinion (Entman, 2004). The objective of the government is thus to relay accurate information, to calm the population, and to demonstrate control over the situation. Practically speaking, a government that cannot control its message is running the risk of increasing the magnitude of the crisis. Controlled communication, contrastingly, can help mitigate its effects (Prince and Giasson, 2019: 23).

An analysis of the change in the tone of media coverage during the COVID-19 pandemic constitutes a valid indicator of the capacity of the government to manage the crisis. A stable or increasingly positive tone would, for instance, suggest successful communication. We posit that the causal mechanism at play is that Canadian political leaders' crisis management – driven by the COVID-19 crisis – impacted the tone of media coverage devoted to them. More precisely, we expect successful communication to have improved the tone of the media coverage devoted to Trudeau and Legault in the immediate aftermath of the beginning of the crisis. The paper aims to identify the effect of the crisis management strategy (x) of both leaders on the tone of their media coverage (y), using the COVID-19 crisis as an instrument.

Data & Methods

Data used in this paper comes from an automatic web-scraping tool, *Radar+*, that extracts text from 11 online front-page articles of Canadian news outlets.² We draw the data used to analyze the tone of Trudeau's coverage from the French- ($n=7,524$) and English-speaking ($n=17,050$) news content. We draw the data to analyze the tone of Legault's coverage from the Quebec-based French-speaking news content ($n=9,374$). News article sentences mentioning Trudeau or Legault are first selected and tokenized into words, i.e., words are treated as individual units of analysis. We then positively or negatively score words related to both leaders using the French and English versions of the Lexicoder Sentiment Dictionary (Duval and Pétry, 2016; Young and Soroka, 2012), which is available online. All positive words are coded +1 and all negative words are coded -1. Neutral words are coded 0.

To make sure that media with large numbers of articles do not have too much impact on the overall tone as opposed to others with small numbers of articles, we weighted words' values. Weighting is performed by multiplying words by the logged number of words by media by day to avoid the overrepresentation of large media in our analysis. For instance, a word like "good," whose value is +1, takes a higher value after being weighted if it comes from a media with less articles than the average media in a given day.

We estimate the effect of leaders' crisis management strategy on the tone of the media coverage devoted to them with a regression discontinuity design (RDD). We use RDD to measure the causal effect of a treatment – governments' crisis management – on an outcome – the tone of governments' media coverage.

We define March 13 as the *cutoff*, because it corresponds to Justin Trudeau’s first daily conference and François Legault’s announcement of the closure of schools in Quebec. This moment is assumed to correspond to the onset of both crisis management strategies. This cutoff is meant to separate the observations in two groups, *treatment* and *control*. We include observations before and on the March 13 cutoff in the control group. We include observations after the cutoff in the treatment group. Therefore, we assume that, in the control group, the news content is not affected by crisis management, while it is in the treatment group. The selected period of analysis (*bandwidth*) – 14 days – allows for an equal distribution of confounders, i.e., all other short-term factors that might impact the tone, on both sides of the cutoff. We can thus assume comparability of confounding factors across time so that the observed discontinuity at the cutoff can only be attributed to the treatment.³ This creates an "as-if random" assignment of treatment and control conditions in the vicinities of the cutoff, making it possible to estimate the effect of the treatment as a *local average treatment effect* (Hausman and Rapson, 2018). A local average treatment effect is the causal effect of the treatment – the beginning of crisis management – on the units that received the *treatment* as opposed to units in the *control* group. This implies that we have no control over the data-generating process – in this case, news content. Finally, we use time as a running variable, i.e., the variable that distributes the treatment and control conditions.

There are two clarifications worth making. First, it fulfills the exclusion restriction, which means that the effect of the March 13 cutoff – the instrument – on the dependent variable – the tone of media coverage – can only plausibly go through the treatment – the beginning of crisis management. Indeed, while the crisis surely had an impact on a broad range of outcome variables, its effect on the tone of media coverage *devoted to the leaders* is necessarily due to their reactions to the crisis. Second, the running variable is discrete, i.e., we treat days as blocs without distinguishing for hours, minutes, etc. Therefore, we use standard linear regressions – one for the treatment group and another one for the control group – in order to estimate the causal effect. Because the slopes in the regression models are different from each other, we add an interaction term of the treatment with the running variable. The interaction term computes the difference between both regression lines when they intersect on March 13 (see Figure 2).

Results

[Figure 1]

Figure 1: Evolution of the tone of media coverage toward Justin Trudeau and François Legault

Source: Radar+, from December 5, 2019, to April 16, 2020.

Note: $n = 56,609$ words for Legault (French), 127,988 words for Trudeau (English) and 56,211 words for Trudeau (French).

The beginning of the COVID-19 crisis in Canada, in early March 2020, resulted in the return of more favourable coverage for Trudeau in English-speaking media, which reached record highs in early April (see Figure 1). Indeed, Trudeau maintained a slightly positive tone after March 13, in comparison with a negative tone before the crisis. Trudeau’s framing of the message during the early phase of the pandemic used positive words like ‘help,’ ‘support,’ and ‘aid’ – which might be

related to the economic relief actions taken by his government (see Figure 3 in the Appendix). In the French-speaking media, coverage of Trudeau changed little after the beginning of the crisis. Before March 13, the coverage of Trudeau was mainly negative. It only decreased after March 13.

For Legault, coverage in the French-speaking media remained unstable after March 13. However, in the first days of his crisis management, the premier benefited from a notable positive increase in tone. Then, following an initial decline at the beginning of April, Legault experienced a second depreciation in mid-April.⁴

As such, the estimate of the causal effect of Trudeau's crisis management strategy on the tone of his media coverage is inconclusive in both English- and French-speaking media. Indeed, the changes in slopes at the March 13 cutoff are small and statistically insignificant.

When it comes to Legault, however, an apparent positive effect of the treatment is found.⁵ This result, combined with the longitudinal trend, suggests that the tone of Legault's media coverage improved in a significant manner following the beginning of his crisis management and of his daily press conferences. This estimate surely matches the mood of public opinion in the first days of Legault's handling of the crisis. Indeed, while the tendency was slightly negative in the weeks prior to March 13, it moved upward afterward. Therefore, it seems like the Quebec premier's reassuring communication strategy, widely emphasized by Quebec media, had a positive causal effect on the tone of media coverage devoted to him (see Figure 2 and Table 1).

[Figure 2]

Figure 2: RDD models of the effect of leaders' COVID-19 crisis management on the tone of media coverage

Source: Radar+, from March 7 to March 20, 2020.

Note: n = 9,374 words for Legault (French), 7,524 words for Trudeau (French) and 17,050 words for Trudeau (English).

Discussion

From a methodological perspective, we have shown that big-data text analysis provides new avenues and possibilities for measuring media coverage, including more complex measures of tone. An RDD design with textual data can also provide a new estimate of the causal effect of crisis management on the tone of media coverage. Moreover, the unique *Radar+* dataset can be a powerful tool to analyze top stories in major media.

Theoretically, this paper's major takeaway is that short-term crisis management effects are distinct from medium- and long-term effects. When Trudeau initiated his crisis management strategy, media coverage remained mostly static both in English- and French-speaking media. However, in the following days and weeks, his average tone increased steadily in English-speaking media: it remained much higher in times of crisis than it had been previously. In French-speaking media, however, we do not observe a similar medium-term tendency. For Legault, the beginning of his COVID-19 crisis management turned a downward trend into a positive one. In the short run, this significant change means Legault's crisis management had an apparent positive effect on his media

coverage. In the longer run, such coverage widely fluctuated. Also, these findings highlight the fact that language-based differences remain essential in understanding media effects.

Moreover, the judgment of public opinion on the handling of the COVID-19 crisis does not always match the observed tone of media coverage. While Legault's media coverage became more positive in the short run as his polling numbers skyrocketed, it remained highly unstable on average in the following weeks. Still, in the short run, Legault acted swiftly to close schools and his actions were almost unanimously approved by Quebecers, which seems to have led to more positive media coverage in the week following March 13. On the other hand, Trudeau's crisis management was often labelled as slow and indecisive. The delay his government took to close Canada's borders was criticized in various media articles, enough though some of his financial actions were better received.

Other than governments, crisis type can also affect media coverage. While three significant crises hit Trudeau's government in early 2020 – the crash of the Ukraine International Airlines plane in Iran in January, the Indigenous rail blockades in February, and the ongoing COVID-19 crisis – the first two saw general negative media coverage while the last one did not negatively affect the tone of media coverage. It is possible that catastrophic crises, contrary to media and political crises, lead to crisis management strategies that portray the government in a more positive light, which seems to confirm Prince and Giasson's (2019) expectations relative to catastrophic crises. This demonstrates the importance of governments to be proactive in controlling the message in times of crises, since crisis management can positively affect the tone of their media coverage.

Our findings pose important democratic questions about the role of media in crisis communication. Indeed, it seems like governments can shape media coverage to a certain extent in times of catastrophic crises: it seems, from our data, that media coverage is less critical of governments than in other kinds of crises. Public opinion at the beginning of the COVID-19 pandemic was also more positive towards government, leading to a chicken-and-egg question about the directionality of the decision-maker–media–public opinion nexus. Does positive media coverage of catastrophic crises impact public opinion, or is it the other way around? It is also unclear whether governments control their media coverage in catastrophic crises or whether media willingly decide to portray governments in a more positive light than they perhaps would in other kinds of crises.

Appendix A

[Table 1]

[Table 2]

[Table 3]

[Table 4]

[Figure 3]

Figure 3: Top 10 positive, neutral and negative words in texts associated with Justin Trudeau and the COVID-19 crisis from English-language media

Source: Radar+, from March 13 to April 16, 2020.

Note: $n = 45,816$ words.

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Endnotes

¹ *Radio-Canada, TVA Nouvelles, Le Journal de Montréal, Le Devoir, La Presse, CTV News, Montreal Gazette, Global News, The Globe and Mail, National Post and The Star*. These media were selected because they are among the most consulted online in Canada.

² For more information on Radar+: <https://www.clessn.com/radar/index.html>.

³ The effect of the treatment could lag and even increase over time. This might create a potential bias for the design if the effect of the treatment is not constant in the 7-day period after the cutoff. Nonetheless, such 'time-varying treatment effects' are usual in RDDs that cover a large time period (Hausman and Rapson 2018). Our design, therefore, enables a stable causal estimation within a limited time period.

⁴ Each of the selected media outlets used a high proportion of neutral words: over 90% even after removing stopwords for Justin Trudeau. François Legault also had largely neutral coverage from the French-speaking media. Moreover, positive and negative words were spread relatively evenly across the media, with a few minor exceptions, such as the National Post's more negative treatment of Trudeau (see Tables 2, 3, and 4 in the Appendix).

⁵ This positive effect is robust across the set of bandwidths ranging from two to seven days in the pre- and post-treatment zones.