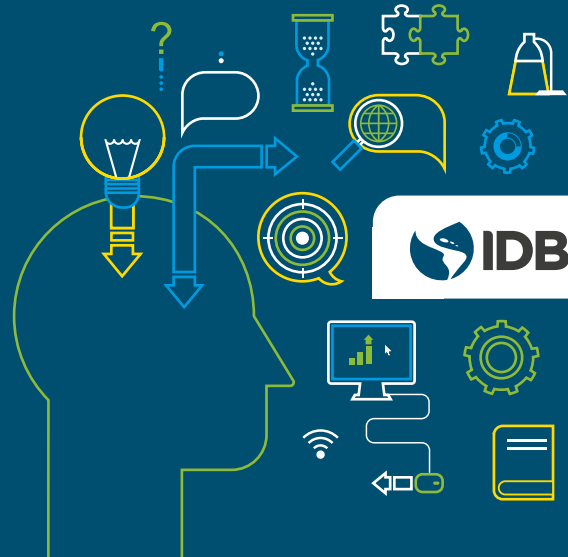


# How Do Confirmation Frames Reduce Misinformation in Fact-Checking?

N.º 126 | June 2024

Authors: Natalia Aruguete, Flavia Batista, Ernesto Calvo, Matías Güizzo Altube, Carlos Scartascini, and Tiago Ventura.



- ➔ Confirmation frames lead to higher engagement rates than refutation frames across four countries.
- ➔ Confirmation frames are also associated with reduced negative emotions and affective polarization, which is vital for policy interventions targeting health misinformation and harmful speech.
- ➔ By reducing negative emotions and fostering positive ones, confirmation frames could contribute to a more constructive and less polarized online environment.

### CONTEXT

Amid growing concern over online misinformation, there remains little research on what motivates social media users to share fact-checks, which influence discernment of misinformation and nudge users to update their beliefs. Fact-checkers can employ two distinct framing strategies: publishing confirmation frames that replace misinformation with accurate information, or publishing refutation frames that warn social media users about content tagged as misinformation. Confirmations provide users with factually accurate content they can share, while refutations allow fact-checkers to decrease the sharing of inaccurate, misleading, or false content. The effectiveness of increasing “good” content versus reducing “bad” content has not been experimentally tested.

### PROJECT

Experiments in Argentina, Brazil, Chile, and Colombia analyzed the effects of confirmation and refutation frames in edited Facebook posts on vaccines in order to understand how different framing strategies impact user engagement and emotional responses, providing insights into effective fact-checking methods to combat misinformation. The experiment varied the frames, labels, and content (types of vaccines) to assess their impact on user engagement with the posts. It additionally measured primary outcomes like the decision to engage (like, share, comment) with the fact-checks and included control variables for a comprehensive analysis.

## RESULTS

**Across Argentina, Brazil, Chile, and Colombia, confirmation frames consistently led to higher engagement than refutation frames.** For instance, in Argentina, engagement with confirmation frames was nearly double that of refutation frames. This trend was also observed in Brazil, Chile, and Colombia, with confirmation frames eliciting significantly more likes, shares, and comments. One of the reasons behind the results is that different frames generate different emotional responses. Individuals exposed to confirmation frames reported more positive emotions like joy and optimism, while those exposed to refutation frames experienced more negative emotions such as anger, disgust, and stress. These results were consistent across the four countries and emphasized the significant impact of framing on both engagement and emotional response.

### Key Concept

#### FACT-CHECKING



Fact-checking is the process of verifying the factual accuracy of questioned reporting and statements.

**These findings underscore the powerful influence of confirmation framing in increasing user engagement with fact-checks on social media.** The increased engagement with confirmation frames suggests that they are more effective in communicating factual information and reducing the spread of misinformation. Furthermore, the emotional impact of these frames indicates that they can play a crucial role in shaping public perceptions and attitudes towards critical issues like health misinformation.

## POLICY IMPLICATIONS

**The increased engagement with confirmation frames found in the study suggests that using these frames more frequently could expand the reach of fact-checks and reduce the prevalence of misinformation.** This approach could be particularly effective in critical areas like health-related misinformation. Additionally, as the effects of confirmation and refutation frames are independent of demographic, partisan, and health-related factors, those frames can be applied in communicating with a variety of audiences. Choosing editorial strategies wisely could thus contribute to a more informed public discourse.

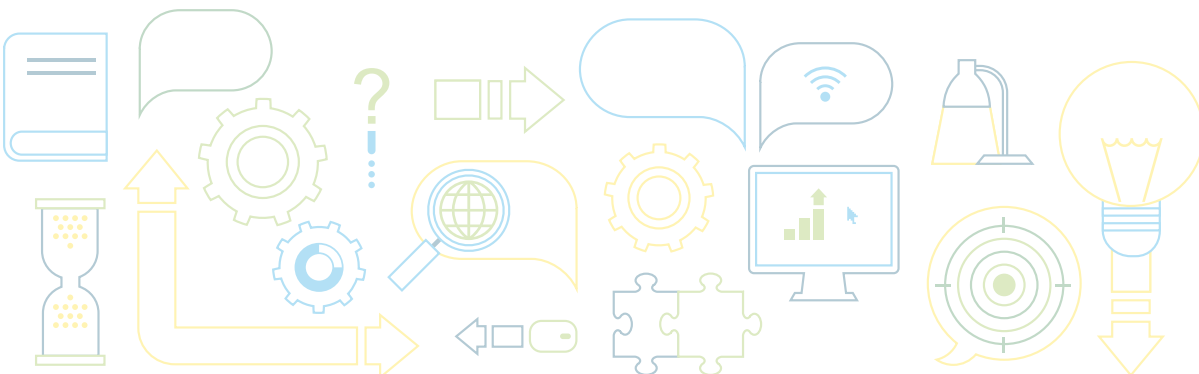
The emotional responses elicited by different frames also have policy implications. The confirmation frames' ability to generate positive emotional reactions could be leveraged to counteract the affective polarization often associated with misinformation. By reducing negative emotions and fostering positive ones, confirmation frames could contribute to a more constructive and less polarized online environment. **These findings provide valuable guidance for fact-checkers and policymakers in designing effective strategies to combat misinformation and promote public understanding.**

### Key Concept

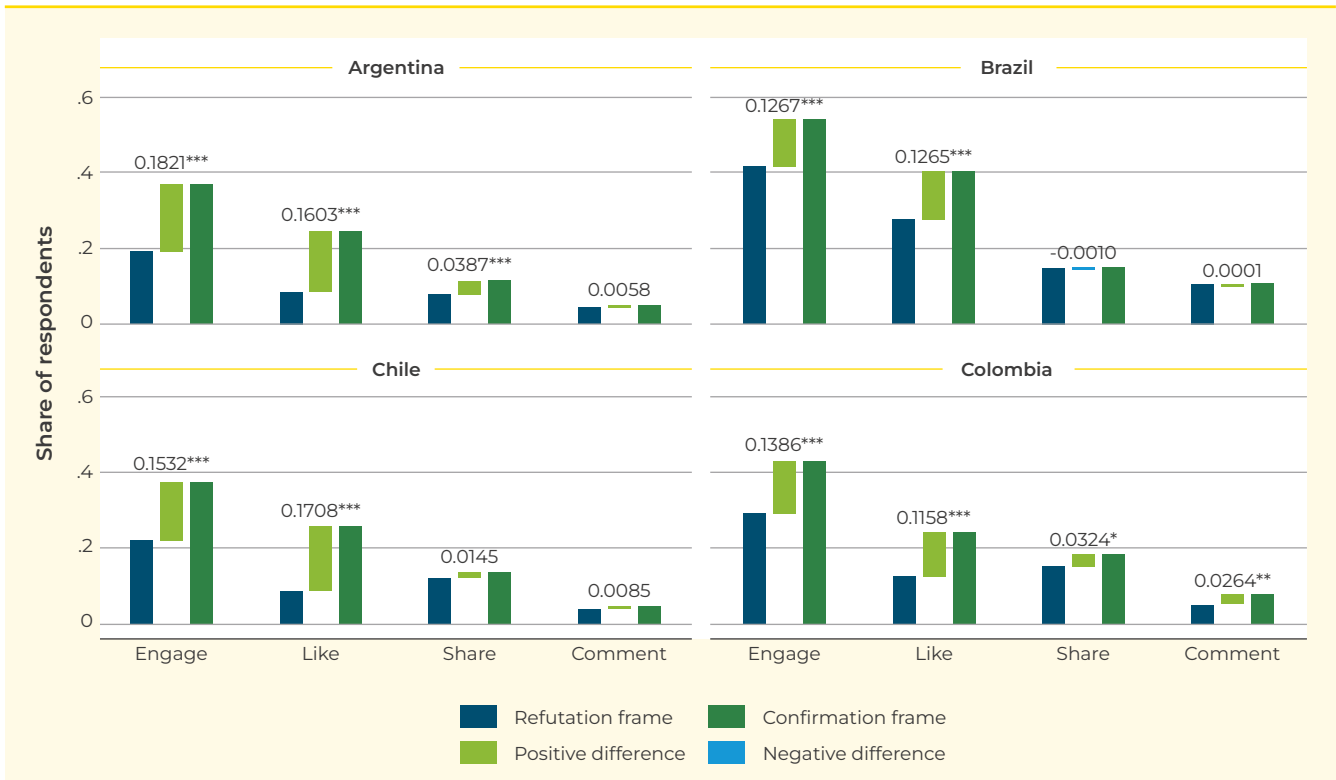
#### MISINFORMATION



Misinformation is incorrect or misleading information.



**FIGURE 1. Positive and Negative Frames and Engagement**

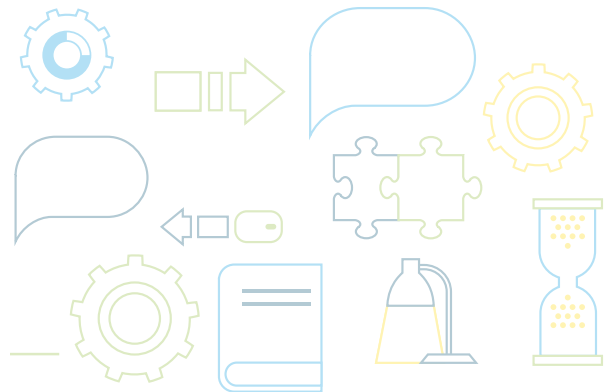


Note: This figure displays the four-country regression results for “engagement,” “like,” “share,” and “comment.” A trio of bars represents each dependent variable: the first red bar shows the result for the refutation frame, while the third green bar presents the result for the confirmation frame. The middle bar shows the difference between the refutation and confirmation frames. A light green indicates a positive difference (confirmation frames eliciting more engagement than refutation), and a light red indicates a negative difference. \*\*\* p < \$ 0.01, \*\* p < \$ 0.05, \* p < \$ 0.1.

**Key Concept**

**FRAMES**

In behavioral economics, a “frame” is the way information is presented to individuals, influencing their perceptions, choices, and decisions.

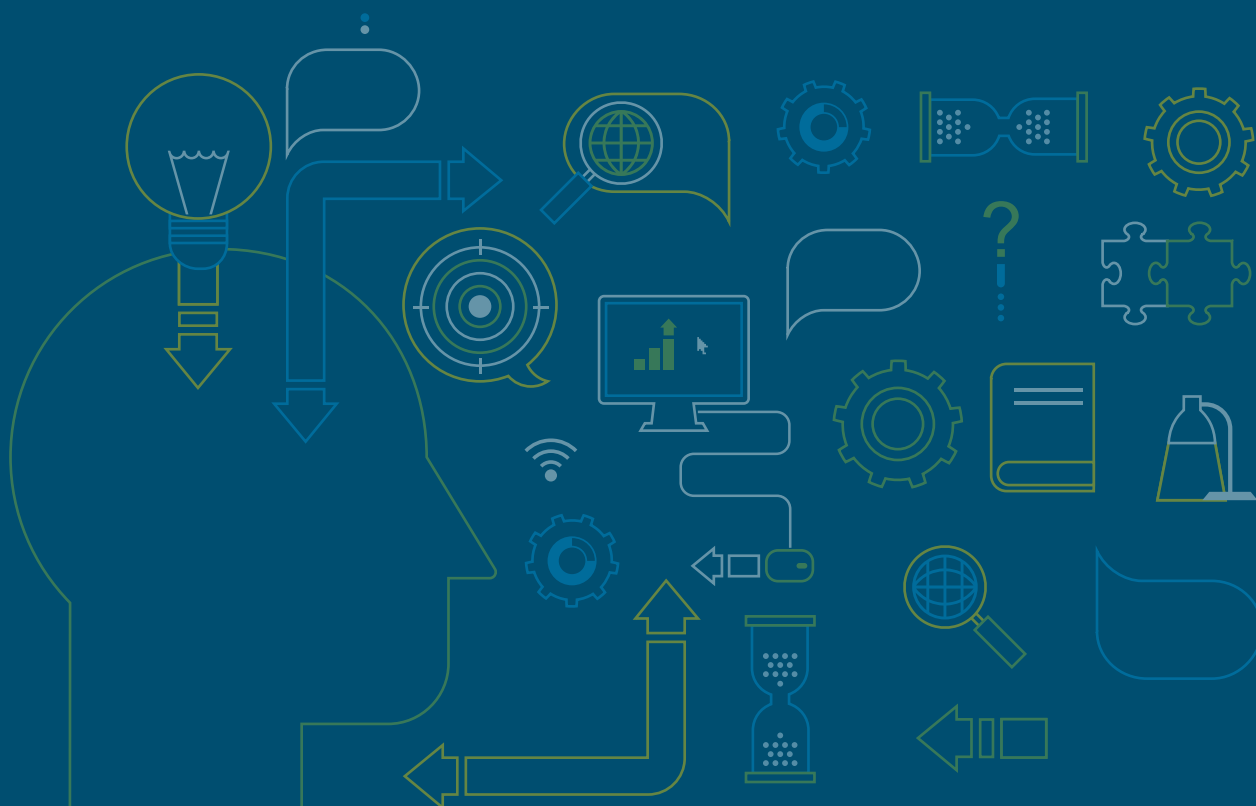


**FULL STUDY**

**Aruguete, Natalia, Flavia Batista, Ernesto Calvo, Matías Guizzo Altube, Carlos Scartascini, and Tiago Ventura. 2023. “Reducing Misinformation: The Role of Confirmation Frames in Fact-Checking Interventions.” IDB Working Paper No. 1363. Washington, DC: Inter-American Development Bank.**

## Department of Research and Chief Economist

The Department of Research and Chief Economist generates new ideas to enrich the knowledge base that supports the policy agenda of the Inter-American Development Bank (IDB) and its member countries for achieving sustainable and equitable development in the region. To maximize the impact of its research, the Research Department carries out activities that serve as inputs to other IDB departments, governments, the academic community and public opinion in the region.



Copyright © 2024 This work is subject to a Creative Commons license CC BY 3.0 IGO (<https://creativecommons.org/licenses/by/3.0/igo/legalcode>). The terms and conditions indicated in the URL link must be met and the respective recognition must be granted to the IDB.

Further to section 8 of the above license, any mediation relating to disputes arising under such license shall be conducted in accordance with the WIPO Mediation Rules. Any dispute related to the use of the works of the IDB that cannot be settled amicably shall be submitted to arbitration pursuant to the United Nations Commission on International Trade Law (UNCITRAL) rules. The use of the IDB's name for any purpose other than for attribution, and the use of IDB's logo shall be subject to a separate written license agreement between the IDB and the user and is not authorized as part of this license.

Note that the URL link includes terms and conditions that are an integral part of this license.

The opinions expressed in this work are those of the authors and do not necessarily reflect the views of the Inter-American Development Bank, its Board of Directors, or the countries they represent.

