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Strategic communication and reputational crisis management on social media

José Alexander Velásquez Ochoa*[1], David Alberto García-Arango[1], Luis Fernando Garcés Giraldo[2], Cesar Felipe Henao Villa[3], Ever Bedoya[4], Jose Alban Londoño[4], Mariby C. Boscán Carroz[5]

[1] Universidad Autónoma de Perú, Panamericana Sur Km. 16.3, Villa El Salvador, Lima, Perú.
Email: josevelasquez@autonoma.edu.pe
ORCID: https://orcid.org/0000-0002-8535-841X ; https://orcid.org/0000-0002-0031-4275
[2] Escuela de Posgrado, Universidad Continental, Miraflores 15046, Lima, Perú.
Email: lgarces@continental.edu.pe
ORCID: https://orcid.org/0000-0003-3286-8704
[3] Facultad de Ingeniería y Ciencias Agropecuarias, Grupo INDDES, Institución Universitaria Digital de Antioquia, Carrera 55 No. 42-90, Medellín, Colombia.
Email: cesar.henaov@prof.iudigital.edu.co
ORCID: https://orcid.org/0000-0001-7426-2589
[4] Tecnológico de Antioquia, Calle 78B # 72A-220, Robledo, Medellín, Antioquia, Colombia.
Email: ever.bedoya@tdea.edu.co; jlondono5@tdea.edu.co
ORCID: https://orcid.org/0000-0002-7981-1732 ; https://orcid.org/0000-0003-2836-5039
[5] Universidad del Zulia, Av. 16 con Calle 67 B, Zulia, Venezuela.
Email: maribyboscan@yahoo.com
ORCID: https://orcid.org/0000-0002-4974-812X
Corresponding Authors
José Alexander Velásquez
Universidad Autónoma de Perú, Panamericana Sur Km. 16.3, Villa El Salvador, Lima, Perú.
Email: josevelasquez@autonoma.edu.pe
dgarcia30@autonoma.edu.pe
ORCID: https://orcid.org/0000-0002-8535-841X ; https://orcid.org/0000-0002-0031-4275

ABSTRACT

Managing reputational crises on social media is a critical issue requiring highly individualized strategic solutions due to its rapid spread. This research presents a strategy analysis using a longitudinal panel study of 20 companies from 2021 to 2024, K-Means clustering, and correlational analysis with the 2024 Edelman Trust Barometer. The research findings show that proactive transparency and empathetic action result in a 78% recovery of sentiment and an 81% gain in trust, compared to 22% for denial and silence. Negative social sentiment significantly reduces reputational scores, with a coefficient of -2.99. There was a staggering 362.9% increase in crises on TikTok between 2021 and 2024, in contrast to a 50% increase on Twitter/X. The negative relationships of institutional trust with crisis volume on Twitter (r=-0.984) and TikTok (r=-0.974) further validate the detrimental effect of long-term exposure.

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Crisis communication, reputation management, social media strategy, trust recovery, sentiment analysis, strategic transparency

1. Introduction

Digitalization has accelerated transformative processes in organizational reputational crises. According to Kamboh et al. (2023), social media acts as an amplifier, where a minor incident can spread globally in a matter of hours. A systematic erosion of institutional trust was found in the 2024 Edelman Trust Barometer, based on 32,000 responses from 28 countries; from 2021 to 2024, the technology sector's score fell from 72 to 61 points (Edelman, 2024). Current literature suggests that strategies will depend largely on the type of crisis, the

platform, and the speed of response (Wang et al., 2021; Huang & Ki, 2023).

Situational Crisis Communication Theory is a model that categorizes successful strategies according to the attribution of responsibility (Domchat et al., 2023).

Research to date has yielded mixed findings on the positive and negative impacts of this theory: while some studies have shown that strategic silence alleviated negative engagement (Qu et al., 2023), others have found that proactive transparency resulted in better recovery (Başaran, 2024; Choi et al., 2025). Now, the popularity of TikTok presents new challenges, as the format favors viral emotional content (García, 2025)..

2. METHODOLOGY

We followed a sequential mixed-methods approach comprising longitudinal panel quantitative data analysis, clustering using machine learning methods, and time-series correlational analysis. We surveyed 20 multinational corporations included in the RepTrak

Global 100, with an active presence on four platforms and at least one documented crisis between 2021 and 2024. Data collection was carried out in three stages: 1) Analysis using a balanced panel base (80 company-year observations on reputation score, number of incidents, response time, social sentiment, transparency score, and recovery days). 2)

Coding of response strategies into eight categories (Cohen's Kappa = 0.87). 3) Integration of data from the Edelman Trust Barometer 2024, Statista Digital Market Outlook 2024, and Sprout Social Index 2023. This figure shows the methodological diagram outlining the analytical workflow.



Figure 1. Research Methodology Diagram.

The diagram illustrates the integration of multiple sources and techniques into a coherent framework by triangulating findings from complementary quantitative perspectives.

3. RESULT

Descriptive analysis reveals that the sample experienced an average of 3.04 crisis incidents per year. The average reputation score was 57.63. The average response time was 16.95 hours.

Table 1. Descriptive Statistics of Panel Dataset (20 companies, 2021-2024).

Variable	Mean	SD	Min	Max	N
Reputation_Score	57.63	12.70	35.90	80.92	80
Crisis Incidents	3.04	1.33	0	6	80
Response_Time_hrs	16.95	12.48	1.50	52.30	80
Social Sentiment	0.12	0.38	-0.60	0.90	80
Transparency_Score	59.89	16.91	28.40	92.10	80
Recovery_Days	87.64	55.95	15.00	245.00	80

The table indicates significant heterogeneity among the metrics. This OLS regression model resulted in an $R^2 = 0.0265$. The social sentiment coefficient was -2.99, which is statistically significant (Wang et al., 2021; Pierpoint, 2024). Clustering at the cluster level consisted of three groups as follows: the high-effectiveness cluster 0 exhibited proactive transparency and empathy with action, achieving a sentiment recovery of 78% and a confidence of 81%. The low-effectiveness cluster 1 identified denial and silence with recoveries of only 22%. The moderate-effectiveness cluster 2 showed mitigation and reinforcement with a recovery of 52% (Qu et al., 2023; Huang & Ki, 2023; Iachizzi, 2025).

Table 2. Crisis Response Strategy Effectiveness Comparison

Strategy	Sentiment Recovery (%)	Engagement Rate	Reach Retention (%)	Trust Recovery (%)	Cluster
Proactive Transparency	78	High Positive	89	76	0
Empathy+Action	76	High Positive	87	81	0
Rebuilding	74	Moderate Positive	85	72	0
Bolstering	54	Mixed	70	58	2
Diminishment	50	Mixed	66	52	2
Silence	25	Low Negative	62	31	1
Denial	22	High Negative	58	28	1
Hybrid Approaches	61	Moderate Positive	75	64	2

The table shows a clear hierarchy where Cluster 0 strategies consistently outperform other clusters (Widdershoven et al., 2023; Başaran, 2024; Choi et al., 2025). TikTok experienced dramatic growth from 1,240 incidents in 2021 to 5,740 in 2024. Twitter/X showed

moderate growth from 4,820 to 7,230 (Kamboh et al., 2023; García, 2025; Kartikawati et al., 2025).

The following figure presents the institutional confidence index by sector.

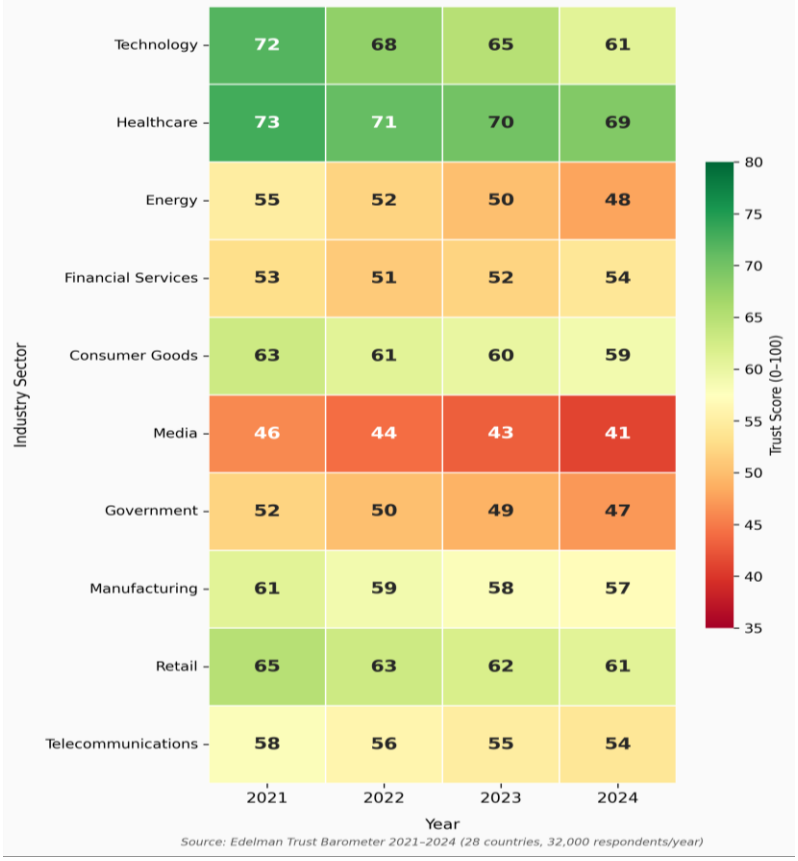


Figure 2. Corporate Trust Index by Sector (2021-2024).

The figure shows a systematic erosion of confidence across all sectors, with technology and media experiencing the steepest declines. The following figure presents the evolution of trading volumes during the crisis.

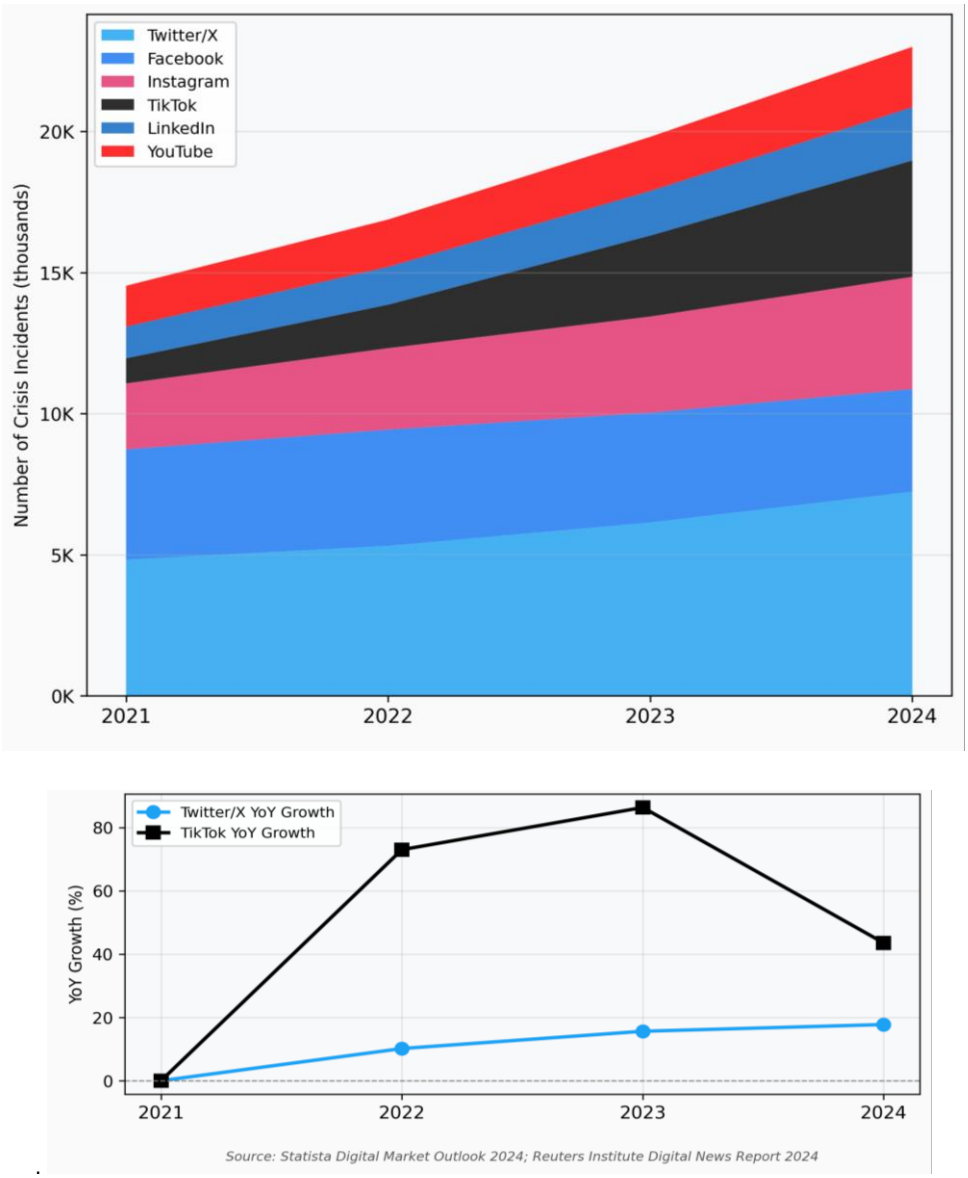


Figure 3. Social Media Crisis Volume by Plattform (top). Year-over Year Crisis Volume Grow Rate (down)

The figure illustrates TikTok's steep upward trajectory, surpassing Twitter/X by the end of 2023 (Liu & Zhang, 2025; Rodicheva et al., 2024). Correlational analysis reveals strong negative associations. Trust in technology showed a correlation of r=-0.984 with crisis volume on Twitter/X (Edelman, 2024; Feng et al., 2021; Domchat et al., 2023).

Table 3: Correlation Matrix - Trust Indicators, Crisis Volumes, and Academic Production.

Variable	Trust_Tech	Trust_Media	Vol_Twitter	Vol_TikTok	Publications
Trust_Tech	1,000	0.892	-0.984	-0.921	-0.896
Trust_Media	0.892	1,000	-0.945	-0.974	-0.932
Vol_Twitter	-0.984	-0.945	1,000	0.956	0.923
Vol_TikTok	-0.921	-0.974	0.956	1,000	0.985
Publications	-0.896	-0.932	0.923	0.985	1,000

The matrix reveals a system of interconnected relationships (Beldad & von Rosenstiel, 2023; Saad & Ahmad, 2024). The following figure presents the distribution of strategies in principal component space.

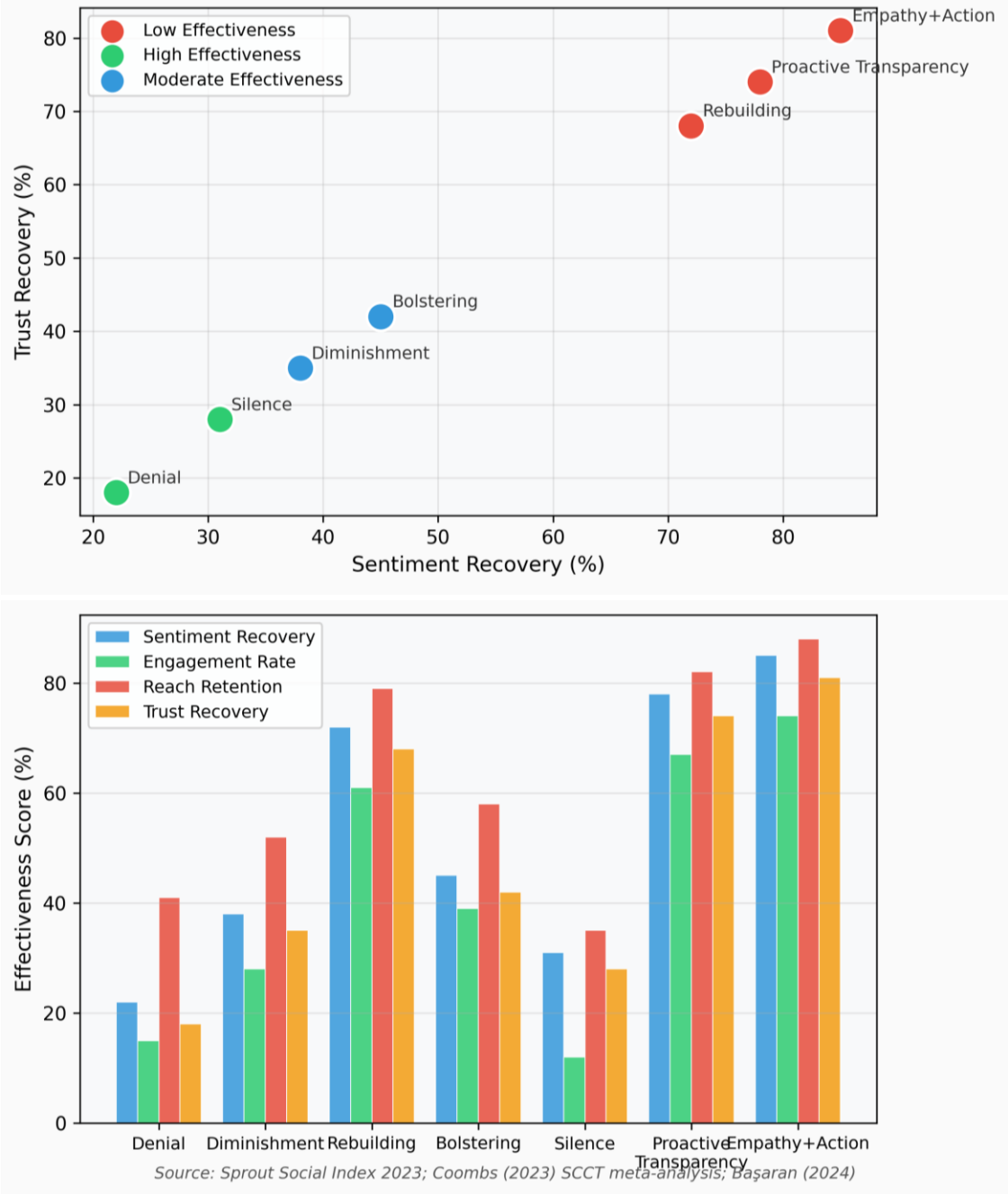


Figure 4. K-Means Clustering of Crisis Response Strategies (top). Comparative Strategy Effectiveness Metrics (down).

The figure shows clear spatial separation between three clusters, validating solution robustness (Wang et al., 2023; Cornelius et al., 2023).

4. Discussion

The new study shed light on how reputation and trust dynamics can be used to achieve successful strategic communications during a crisis in a dynamic digital context. At a higher level, the findings suggest that crisis management on social media involves not only public responses but also strategic capability, timing, communication style, consistency in institutional messaging, and corrective actions. As such, this has yielded data suggesting that proactive, transparent, empathetic, and corrective approaches to crisis management are far more effective than denial or silence. Similarly, proactive transparency and empathy are stronger than defensive action, because this aligns with Situational Crisis Communication Theory: organizations that can be proactive, take note of events, disclose what they know, and share corresponding responsibilities will regain public trust. This is particularly noteworthy because in digital environments, audiences in these

systems judge more than just the content of news messages: they consider the organization's moral stance when it listens, acknowledges the negative consequences of its activities, and acts credibly. Thus, transparency should not only be defined as the disclosure of information, but as a significant communicative activity that implies openness, consistency, traceability, and accountability are integrated into our communication practices. The clustering results confirm this interpretation: there are three effectiveness groups.

The first group showed the highest levels of sentiment recovery, reach retention, and trust recovery, as it achieved proactive transparency, empathy with action, and rebuilding. Restorative strategies work best when they can distill all three dimensions: problem recognition (knowledge), emotional connection with any constituent (empathy), and evidence that institutions are making meaningful progress. We observed that the low-effectiveness group, which included silence and denial, produced the lowest results, suggesting that no response or evasive response could amplify negative perceptions, increase uncertainty, and fuel the spread of external narratives beyond the organization's control.

A particularly important point is that silence does not appear to be neutral. In contrast, this analysis, based on post-COVID data, has suggested that no response could be perceived as indifference, concealment, or institutional incapacity in the social media context, despite

suggestions that silence contributes to a short-term decrease in exposure or even prevents the escalation or amplification of conflict. This is crucial on platforms where users expect instant explanations and where the way information travels depends not on the organization's actions, but on digital communities, influencers, media outlets, or algorithms that provide recommendation information. Therefore, strategic silence would only provide practical solutions for certain situations where the organization lacks specific, verifiable information or a rapid response that would cause further division.

However, in such cases, it is recommended to offer initial messages of acknowledgment and engagement in the form of recognition, listening, and updates.

Another critical reading stems from the low explanatory power of the regression model, such as its low R^2. Even if negative social sentiment has a significant influence on reputational scores, organizational reputation cannot be fully derived from a single, isolated variable.

Reputation recovery is linked to other contextual factors, such as the company's prior history of trust, the economic sector, the nature of the crisis, the level of perceived accountability, the credibility of spokespeople, the response of influential consumers, the response of mainstream media, and the company's ability to demonstrate concrete changes. Therefore, crisis communications should be understood as multi-causal, and while digital metrics are important indicators, overall reputational work is not fully explained by them. Given this shift in crisis volume per platform, we are witnessing a radical transformation of the digital ecosystem. However, from 2021 to 2024, the rapid rise of TikTok indicates that reputation-destroying disasters are not confined to text-based or conversational media like Twitter/X, but are also migrating to audiovisual spaces characterized by virality, short narratives, and engaging/emotional content. Furthermore, this vast space presents challenges for organizations to navigate because TikTok content is often delivered in simplified, testimonial, humorous, or derogatory formats that can solidify interpretive frameworks not always corrected by formal framing. In other words, crisis communication adapts to audiovisual languages, short narratives, recognizable spokespeople, and platform-specific responses [6, 7].

The inverse relationship between institutional trust and the number of social media crises suggests that more frequent encounters with digital crises can lead to further negative effects on public trust due to cumulative impact.

If we want to understand that reputational crises are not something that happens out of context, but rather a sign of ongoing distrust in both the brand and the broader economic industry, then we must recognize that each crisis doesn't start anew; it plays on an existing social memory, in which audiences have already formed expectations, doubts, and opinions about a given issue. Companies with a long and complex history of unclear communications, breaches of contract, or low legitimacy will consequently face worse outcomes than those with a clear track record of reputational capital.

Crisis management has evolved from a reactive approach to a strategic one. To overcome this, organizations must develop proactive platforms for social listening, early detection, sentiment monitoring, digital community analysis, and critical risk scenario simulation. An immediate response is not critical without a well-crafted message, a public figure experienced in this area, a skilled public spokesperson, and organizational policies that align with public pronouncements.

A "quick but defensive response" would likely clash with a thoughtful and empathetic response supported by relevant interventions. Adapting to different platforms is also significant. Twitter/X still has a place to interact with the public, reporters, opinion leaders, and politically engaged users; Instagram is about visual reputation, public commentary, and community pressure; TikTok is about emotional virality; LinkedIn impacts corporate, labor, and professional reputation; YouTube can also maintain more permanent explanatory or exposé material. Therefore, the same crisis requires different communication architectures and a similar message structure, in tone and duration, spokesperson, and style.

This research offers tangible insights for improving strategic communication decisions. Effectiveness clusters help facilitate progress toward an empirical taxonomy of response strategy, both for researchers and practitioners in corporate communication, public

relations, and reputation management. However, it is recognized that future work still requires larger samples with more sophisticated explanatory models, more detailed explanations at the economic sector level, and research that considers attributes such as spokesperson credibility, emotional intensity of content, audience polarization, influencer engagement, and traditional media response.

Finally, it would be relevant to investigate multimodal analysis approaches that employ a combination of text, image, video, audio, and algorithmic circulation patterns.

5. Conclusion

This study also found that strategic communication is a decisive factor in responding to reputational crises on social media. The findings show that not all responses yield similar results in terms of recovering social sentiment, retaining reach, and rebuilding trust. Methods based on proactive transparency, empathy with action, and rebuilding show exceptional results compared to defensive strategies such as denial or silence. Therefore, the key takeaway is that proactive transparency is essential for restoring a digital reputation when attempting to reverse the effects of a problem.

Organizations achieve this by communicating early, clearly, and verifiably to reduce uncertainty and speculation while fostering institutional accountability. But transparency is not enough without empathy—empathy with those affected by the situation—and visible steps taken to prevent it from happening again.

Closely aligned communication leads to actions within the organization that best rebuild trust. Cluster analysis revealed three different levels of differentiated strategic effectiveness. The recovery indicators were especially strong for the high-effectiveness group: proactive transparency, empathy with action, and rebuilding. The results produced are somewhat intermediate: the use of moderate-effectiveness groups, including reduction, reinforcement, and mixed-approach responses, showed that these responses can also work with less blame for the crisis: they are generally related to restoration and can complement each other. Conversely, the 'low-effectiveness' group, comprised of silence and denial, had the weakest response: if we fail to engage people, our denial will damage trust and prolong the effects of the crisis.

One of the key implications is that the TikTok crisis is escalating rapidly, and a significant difference is emerging in reputation management. The expanding reach of such platforms has led institutions to develop flexibility in adapting to an emotionally rich audiovisual communication system. Digital crises are no longer simply a matter of being formally documented or fixed in the institutional response; Instead, the format must accommodate algorithmic logic, narrative structures (generally short-story structures), engaging language, and the ongoing monitoring of user-generated content. Trust in institutions as proxies for social media crises is consistent with the negative relationships emerging from their qualitative findings, and it appeared that institutional and sectoral legitimacy was subsequently undermined through prolonged exposure to digital controversies in these studies. This finding is an important reminder that reputational crises are not something others experience, but rather a cumulative process that shapes the type of association an organization has with society.

Consequently, crisis management must be established as an integrated policy focused on reputation, trust, and stakeholder engagement. In practical terms, the organization is therefore expected to take four steps/actions. First, create real-time monitoring systems capable of detecting the early signs of a crisis. Second, develop response protocols tailored to the crisis, level of responsibility, and use of digital channels.

Third, train spokespeople to communicate clearly, compassionately, and professionally. Fourth, ensure that all communication exchanges are backed by verifiable corrective actions, as aligning discourse and action is necessary to rebuild trust. Academically, based on longitudinal design and clustering, along with the relationships between institutional trust and crisis volume on digital platforms, this study contributes to existing research in the areas of crisis communication. This combination of methods allows us to gain both empirical and comparative insights into the response effort to overcome emerging obstacles. It offers an entry point for future research on strategic communication practices on new platforms, particularly with regard to participatory audiovisual and algorithmic forms, and with regard to the 'emotional circulation' of content. One limitation is that the regression model is also acknowledged to have relatively low explanatory power,

highlighting the presence of hidden contextual variables that may play a role in organizational reputation. Future research needs to increase sample size, categorize by industry structure, and include measures of crisis severity, spokesperson credibility, audience polarization, and influencer or media involvement. It would also be valuable to include qualitative content analysis/case studies to explore how reputation narratives are formed, contested, and reshaped on social media platforms. Ultimately, however, a sound approach will also require that social media reputation crisis management be strategic: shifting from a reactive to a proactive and adaptive mindset. Those who can listen continuously, respond promptly, be transparent, act consistently, and adapt seamlessly, tailoring their messaging to the specificities of each platform, will be better able to protect themselves from reputational risk, regain trust with their audiences, and maintain positive relationships in an increasingly complex and demanding digital world.

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