

# The Impact of Government Emotion-based Response Strategies on Citizens' Satisfaction.

Ruoyun Wang<sup>a</sup>, Corey Kewei Xu<sup>b\*</sup>, Liang Ma<sup>c</sup>

<sup>a</sup>Thrust of Innovation, Policy and Entrepreneurship, The Hong Kong University of Science and Technology(Guangzhou), Guangzhou, China, rwang585@connect.hkust-gz.edu.cn, 0009-0002-6553-7864

<sup>b</sup>Thrust of Innovation, Policy and Entrepreneurship, The Hong Kong University of Science and Technology(Guangzhou), Guangzhou, China, coreyxu@hkust-gz.edu.cn, 0000-0002-3244-9297

<sup>c</sup>School of Government, Peking University, Beijing, China, liangma@pku.edu.cn, 0000-0002-8779-5891.

Submitted: 31 January 2025, Revised: 26 March 2025, Accepted: 21 April 2025, Published: 19 May 2025

**Abstract:** Government responsiveness is a critical component in citizen-government interactions, shaping public trust and the effectiveness of e-governance initiatives. However, resource constraints often lead to strategic responses aimed at managing citizens' emotions and avoiding conflicts, rather than resolving all issues. Despite this, few studies have examined government response strategies and their impact on citizen satisfaction. This study examines the impact of emotion-based responses on citizen satisfaction within the context of China's e-governance initiatives. Utilizing data from the Chinese People's Daily "Message Board for Leaders" platform, we introduce the Emotion-based Responsiveness Framework in Government Communication, which quantifies government responses along four dimensions: positivity, empathy, reassurance, and personalization. We first use text analysis to identify linguistic patterns and emotional cues in government replies. Then, we apply few-shot learning via the ChatGPT API to infer dimension scores across the dataset. Lastly, we test whether government's emotion-based responses will affect citizen's overall satisfaction. The result shows that the emotion-based response will positively affect citizens' satisfaction. The study contributes to e-governance literature by providing empirical evidence on the effectiveness of emotional communication strategies in digital government-citizen interactions. These insights have important implications for theory development in public administration and offer practical guidance for improving government communication strategies in the digital age, especially in situations where complete problem resolution may not be feasible.

**Keywords:** Government responsiveness, Emotion-based response, Citizen satisfaction

**Poster, DOI:** <https://doi.org/10.59490/dgo.2025.933>

## 1. Introduction

Government-citizen interactions have undergone a digital transformation, enabling more frequent and scalable engagement through online platforms (Wong & Welch, 2004). However, responsiveness in the digital era requires more than timely replies; it demands empathetic, emotionally intelligent communication (Bons' on et al., 2012; Mergel, 2013b). This is especially essential when governments face limited capacity to fully resolve complex issues raised by citizens (Mergel, 2013a). In such contexts, emotional strategies in communication may serve as substitutes to manage expectations and build trust.

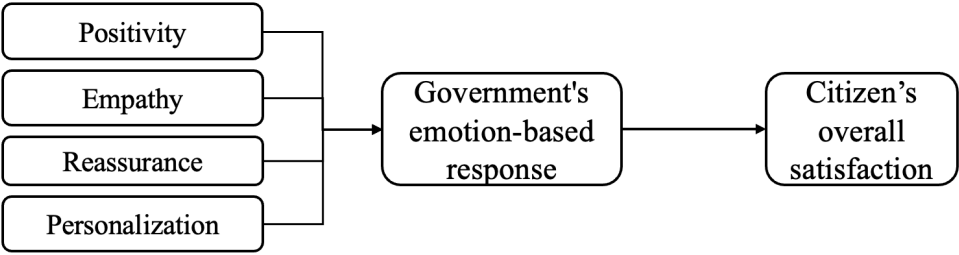
Scholars and practitioners alike recognize that digital governance is no longer solely concerned with service efficiency or technical transparency. Instead, it involves managing complex expectations, demonstrating empathy, and conveying respect and care through online responses on digital platforms. As governments face

mounting service requests and constrained administrative capacity, emotional strategies emerge as a cost-effective and symbolically powerful means to enhance public perception and manage dissatisfaction—especially when full resolution is not feasible. Recent studies have highlighted the emotional and relational dimensions of public service delivery, showing that tone, empathy, and perceived sincerity significantly affect citizen attitudes (Guy & Lee, 2015; Mergel, 2013b). However, this line of inquiry remains underdeveloped in the digital context. In particular, there is limited empirical research that systematically measures emotional responsiveness and evaluates its impact on citizen satisfaction. Therefore, this study addresses a key research question: to what extent do emotion-based government responses influence citizen satisfaction?

This study addresses existing gaps by developing a multi-dimensional framework to quantify emotion-based responsiveness and examining its effects on citizen satisfaction in a non-Western context. It moves beyond binary resolution metrics to assess how governments use emotional language as a communicative strategy in digital service delivery.

## 2. Theoretical Framework and Research Hypothesis

To better understand government responsiveness in government-citizen online interaction, this study proposes the Emotion-based Responsiveness Framework in Government Communication (as shown in Fig. 1) to analyze the emotional and personalized aspects of government responses in digital communication platforms. In this model, it examines government’s emotion-based response by evaluating the extent to which it demonstrates positivity, empathy, reassurance and personalization, and subsequently analyzes how these dimensions influence citizens’ overall satisfaction.



**Fig. 1** – The Emotion-based Responsiveness Framework in Government Communication

Drawing from theories of emotional intelligence (Vigoda-Gadot & Meisler, 2010), we argue that emotion-based responsive communication can enhance perceived procedural fairness and reduce dissatisfaction. These emotional dimensions serve as signals of respect, engagement, and concern, all of which are associated with higher citizen trust and satisfaction in public administration literature. Based on the theoretical discussion, we propose the following hypotheses:

- **H1:** The degree of emotion-based responsiveness in government responses is positively associated with citizens’ satisfaction.

## 3. Methodology

The data comes from the Chinese People’s Daily *Message Board for Leaders*, a national platform for digital citizen-government interaction. Our dataset includes over 900,000 entries from 2019 to 2022, of which 333,892 include both government responses and citizen satisfaction ratings. For preliminary testing, we randomly select 3,000 pieces for investigation.

For data analysis, we begin by manually coding a stratified sample of several thousand responses to establish ground truth labels across the four emotional dimensions: positivity, empathy, reassurance, and personalization. Each dimension is coded as binary variable. This annotated dataset serves as the foundation for training few-shot learning prompts using the ChatGPT API. Carefully crafted examples guide the large language model (LLM) in predicting emotion scores for the remaining unlabeled responses. The performance of the ChatGPT model is assessed using standard classification metrics (as shown in Tab. 1). These metrics indicate a high

level of performance, with the precision score highlighting the model's ability to correctly identify positive instances, and the recall score reflecting its effectiveness in capturing all relevant instances. The F1 score, a harmonic mean of precision and recall, further confirms the model's balanced performance.

**Tab. 1** – Performance metrics for classification models

	Accuracy	Precision	Recall	F1 Score
Reassurance	0.910	0.923	0.910	0.916
Positivity	0.888	0.906	0.888	0.890
Empathy	0.829	0.829	0.829	0.828
Personalization	0.854	0.954	0.854	0.886

Besides, we incorporate contextual and structural controls, including city-level socioeconomic indicators, message type, length of response and response time. Tab. 2 shows the details of the measurements and summary statistics of the variables.

**Tab. 2** – Measurement of variables and descriptive statistics

Variable	Measurement	N	Mean	SD	Min	Max
<b>Dependent Variable</b>						
Satisfaction with government response	Citizens' evaluation of response (Range: 0–5)	3,000	3.887	1.591	0.700	5.000
<b>Independent Variable</b>						
Emotion-based response	Total score of 'positivity', 'empathy', 'reassurance' and 'personalization'.	3,000	3.664	1.216	0.000	5.000
Positivity	Neutral or negative = 0, Positive = 1	3,000	0.762	0.426	0.000	1.000
Empathy	No empathy = 0, Empathy = 1	3,000	0.328	0.469	0.000	1.000
Reassurance	No reassurance = 0, Reassurance = 1	3,000	0.908	0.289	0.000	1.000
Personalization	No personalization = 0, Personalization = 1	3,000	0.833	0.373	0.000	1.000
<b>Control Variable</b>						
GDP per capita	GDP per capita (Logged)	3,000	4.251	0.389	3.612	5.255
Population	Total population (Logged)	3,000	3.856	0.667	1.539	4.851
Urbanization	Urban population / total population	3,000	0.642	0.109	0.357	0.893
Length of response	Total number of response words (Logged)	3,000	5.372	0.757	3.045	7.766
Response time	Response time – message time (Logged)	3,000	2.881	0.910	0.000	5.927
Message type	Consultation = 1, Suggestion = 2, Appreciation = 3, Complaint = 4, Assistance-seeking = 5	3,000	3.569	1.498	1.000	5.000

To estimate the effect of emotion-based responses on satisfaction, this study employs fixed-effects linear regression models accounting for temporal and regional heterogeneity.

## 4. Results and Key Findings

Tab. 3 shows that emotion-based responses have a statistically significant and positive effect on citizen satisfaction across both models. In Model (1), without control variables, the coefficient for emotion-based response is 0.055 ( $p < 0.05$ ). When control variables are added in Model (2), the coefficient increases to 0.080 ( $p < 0.01$ ), indicating a stronger and more robust association. This result suggests that citizens are more satisfied when government replies convey emotional qualities such as positivity, empathy, reassurance, and personalization.

These findings provide empirical support for the hypothesis that emotion-based responsiveness contributes meaningfully to citizen satisfaction. The positive and robust effect across models highlights the relevance of emotional cues in shaping perceptions of government responsiveness. This reinforces the theoretical claim that emotional strategies can serve as important tools in maintaining citizen trust and managing expectations in digital governance.

**Tab. 3** – Effect of Emotion-based Response on Citizen Satisfaction

VARIABLES	(1)	(2)
	Without controls	With controls
Emotion-based response	0.055** (0.025)	0.080*** (0.025)
GDP per capita		0.899 (1.563)
Population		-14.597 (11.809)
Urbanization		-8.283 (11.176)
Length of response		-0.027 (0.041)
Response time		-0.081** (0.031)
Message type		-0.116*** (0.019)
Constant	3.678*** (0.091)	62.174 (46.040)
Observations	2,938	2,938
R-squared	0.346	0.360
City FE	YES	YES
Year FE	YES	YES

Note: Robust standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

## 5. Implications

This study makes several important theoretical contributions. First, it introduces emotional responsiveness as a multi-dimensional construct in digital government communication and situates it within the broader literature on citizen satisfaction and public service delivery. While traditional e-governance research emphasizes transparency, efficiency, and responsiveness in terms of timeliness or completeness of resolution, our work expands the theoretical boundaries by incorporating emotional quality as an essential explanatory factor. Second, by proposing and validating the Emotion-based Responsiveness Framework in Government Communication, the study offers a systematic and replicable approach to measure emotional cues in government-citizen digital interactions. This enriches existing public administration theory by linking emotional intelligence to e-governance and showing that emotions are not ancillary but integral to citizen evaluations of public services.

From a practical perspective, the findings offer actionable strategies for governments seeking to enhance service quality and citizen satisfaction in the digital age. Public administrators can be trained in emotionally intelligent communication practices, including empathetic language, personalized content, and tone management. These elements can be embedded in standard operating procedures for frontline digital communication. Second, the application of LLM demonstrates the feasibility of scaling emotional analysis across large datasets. Governments can leverage such tools not only for monitoring response quality but also for real-time feedback loops and automated training systems. Moreover, emotion-based responsiveness metrics could be integrated into government performance evaluation frameworks to complement traditional measures like resolution rates and timeliness. Finally, for digital platform designers, the results suggest the value of embedding emotional logic into AI-powered response systems. Emotionally adaptive bots and response templates can significantly improve user experience and perception of fairness, especially in contexts where human capacity is limited and not all issues can be fully resolved.

## 6. Next Steps

Building on the preliminary findings, the next stage of the study will involve several key extensions. First, we will further improve the predictive accuracy of ChatGPT by refining prompt design, optimizing few-shot examples, and exploring advanced scoring mechanisms to better capture subtle emotional cues. Second, we will expand the analysis to cover the entire dataset of government responses to ensure greater generalizability and statistical power. Third, we will incorporate resolution degree as a moderating variable to assess whether emotion-based responses remain effective in the absence of full problem resolution. This will allow us to test

---

whether emotion-based communication can compensate for limited administrative action. Finally, we will replicate the emotion-based classification using Deepseek's API to validate the consistency of the results as a robustness check. These next steps aim to strengthen the empirical foundation of the study and provide more nuanced insights into the dynamics of strategic responsiveness in digital governance.

## Funding

This research is supported by the Guangdong Planning Office of Philosophy and Social Science, 2024 Guangdong Regular Program of 14th Five-Year Plan on Philosophy and Social Sciences (No.GD24YGL37); Guangzhou Municipal Science and Technology Bureau (GZ-STB), 2024 Guangzhou Basic and Applied Basic Research Scheme (No. 2024A04J01836); Guangzhou Higher Education Teaching Quality and Teaching Reform Engineering Project (2024YBJG093); and Guangdong Higher Education Society Sino-Foreign Cooperative Education Research Branch "14th Five-Year Plan" 2023 Annual Youth Research Project (GAHE23CRS011).

## Contributor Statement

Ruoyun Wang: Methodology; Formal analysis; Methodology; Software; Visualization; Writing – original draft. Corey Kewei Xu: Conceptualization; Data Curation; Software; Funding acquisition; Writing - Review & Editing. Liang Ma: Conceptualization; Writing - Review & Editing.

## Use of AI

During the preparation of this work, the authors used ChatGPT to improve the writing. After using this tool, the authors reviewed, edited, made the content their own and validated the outcome as needed, and take full responsibility for the content of the publication.

## Conflict Of Interest (COI)

There is no conflict of interest.

## References

- Bons'ón, E., Torres, L., Royo, S., & Flores, F. (2012). Local e-government 2.0: Social media and corporate transparency in municipalities. *Government Information Quarterly*, 29(2), 123–132. DOI: <https://doi.org/10.1016/j.giq.2011.10.001>.
- Guy, M. E., & Lee, M. A. (2015). How emotional intelligence mediates emotional labor in public service jobs. *Review of Public Personnel Administration*, 35(3), 261–277. DOI: <https://doi.org/10.1177/0734371X13514095>.
- Mergel, I. (2013a). A framework for interpreting social media interactions in the public sector. *Government Information Quarterly*, 30(4), 327–334. DOI: <https://doi.org/10.1016/j.giq.2013.05.015>.
- Mergel, I. (2013b). Social media adoption and resulting tactics in the u.s. federal government. *Government Information Quarterly*, 30(2), 123–130. DOI: <https://doi.org/10.1016/j.giq.2012.12.004>.
- Vigoda-Gadot, E., & Meisler, G. (2010). Emotions in management and the management of emotions: The impact of emotional intelligence and organizational politics on public sector employees. *Public Administration Review*, 70(1), 72–86. DOI: <https://doi.org/10.1111/j.1540-6210.2009.02112.x>.
- Wong, W., & Welch, E. (2004). Does e-government promote accountability? a comparative analysis of website openness and government accountability. *Governance*, 17(2), 275–297. DOI: <https://doi.org/10.1111/j.1468-0491.2004.00246.x>.