

# Modelling the Complex Dynamics of Public Opinion Propagation in Micro-Blogging

Jidi Zhao<sup>1</sup>, Jianguo Jia<sup>2</sup>, Linlin Wang<sup>3</sup>

## ABSTRACT

The purpose of this paper is to attempt to analyze the propagation of public opinion in micro-blogging. We proposed a Micro-blogging read-post model based on a well-known diffusion model and presented its system of equations. We carried out a global qualitative analysis of the model with latent and constant recruitment, then studied the existence and stability of the public opinion vanishing and prevailing equilibrium points. An empirical study of the model was conducted using data automatically collected from a typical case on Sina Weibo, a micro-blogging platform with the largest number of registered users and active users in China. Simulation results showed that our model can fit data in reality and thus verified the feasibility and reliability of the model. Further studies of the model illustrated the impact different management strategies have on the propagation of public opinion. Implications of effective control measures from the government's point of view were then discussed.

## Keywords

Complex Dynamics, Micro-blogging, Public Opinion, Propagation Rules

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<sup>1</sup> School of Public Management, East China Normal University, Shanghai, China

<sup>2</sup> Tongji Development Institute, Tongji University, Shanghai, China

<sup>3</sup> School of Public Management, East China Normal University, Shanghai, China