*Research Article*

# Generation Mechanism of Corporate Online Public Opinion Hotness Based on Multicase Qualitative Comparative Analysis

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Based on the actor network theory, this paper collects 20 representative corporate public opinion data through microblogs, uses the qualitative comparative analysis method to analyze these typical cases from the configuration perspective, identifies the elements and condition combination paths of corporate online public opinion hotness generation from four dimensions: enterprises, netizens, media, and government, and explores the generation mechanism of corporate network public opinion hotness. The results show three modes with high hotness of corporate network public opinion generation, which are internal and external linkage, internal leading, and external restriction. The public opinion hotness generation modes of consumers' rights and interests and managers' problems are different. Therefore, different measures should be taken to reduce the hotness of negative public opinion for different causes of corporate public opinion. Based on this, this paper puts forward some guidance suggestions, including strengthening the identification and contact with opinion leaders, strengthening the cooperation with the government and authoritative media, and strengthening the feedback response level of corporate network public opinion. This study helps to prevent and resolve public opinion crisis and provides reference for corporate public opinion governance.

## 1. Introduction

With the rapid development of the Internet and social media, corporations are facing a complex public opinion environment. Once generated, online public opinion often ferments rapidly and spreads widely, which has an important impact on the production and operation of corporations [1]. Corporate public opinion is the result of hotness events due to the focusing, divergence, amplification, and resonance of network public opinion. It is the second largest type of public opinion after social public security, with the characteristics of many participants, wide influence range, and strong timeliness. It has a far-reaching impact on enterprise production and operation activities, brand reputation, even stock market, and international influence.

Therefore, it is important to identify the key factors for the generation of corporate online public opinion hotness, explore the multifactor combinations affecting public opinion hotness, and then determine the configuration path of corporate public opinion hotness generation and clarify the generation mechanism of corporate public opinion hotness. It will help corporations reduce and avoid the negative impact of public opinion events, improve the ability of corporate public opinion governance, and effectively respond to and resolve public opinion crisis; it has important practical significance.

## 2. Literature Review and Analytical Framework

*2.1. Literature Review.* Existing studies on factors influencing the generation of online public opinion hotness are conducted from different perspectives using various research methods. Davis, Zablocki, and Nguyen scholars explore the intrinsic factors of Internet users that influence the generation of public opinion hotness according to different motivation categories. Davis and Agrawal argue that the motivations leading to the generation of public opinion hotness are interpersonal interactions, including public

opinion interaction, social influence, and interpersonal identity [2]; Zablocki et al. argue that the motives leading to the generation of public opinion hotness are interest appeals, including utilitarianism, conflicting interests, and government mishandling [3]; Nguyen and Coudounaris argue that the motives leading to the generation of public opinion hotness are emotional expressions, including emotional factors, attitudinal emotions, and participation mentality [4]. Meng et al. point out that the evolution of online public opinion is composed of a complex network system jointly formed by the subject behaviors and interactive relationships of the public, media, and government, and the subjects' decisions at different stages reveal the process of public opinion changing from quantitative to qualitative to some extent [5]. Yu et al. and others considered the role of four subjects: the public, the media, the government, and opinion leaders for the online public opinion induced by the hazardous chemical spill accident in corporations. Although the study considered the corporation itself as the key factor influencing the generation of corporate online public opinion hotness, the model was constructed more from the perspective of public management to explore the government's role in regulating the evolution of online public opinion [6]. Yan et al. used the system dynamics method to construct a model through causality diagrams and traffic stocks and proposed that the factors influencing the generation and dissemination of corporate public opinion hotness are media involvement, influence of netizens, government involvement, and corporate public opinion events themselves [7]. Using the rooting theory, Jiang et al. derived the factors influencing the generation of online public opinion hotness including subjective factors (public factors) and objective factors (political factors, corporate factors, and media factors) by open coding and spindle coding of comment data [8]. Li used clear set qualitative comparative analysis method to conduct comparative analysis of 40 unexpected events and extracted that event information, release subject, information audience, information technology, and information environment are explanatory variables for the generation of online public opinion. Based on the system dynamics and "spring" dynamics model, Lv et al. proposed that the influences affecting the generation of online public opinion in the prevention and control of major epidemics are information pressure, information support, information driving force, and information blocking force [9].

The above studies provide good references for this paper, but in general, there are few studies oriented to the mechanism of corporate public opinion hotness generation, and there are few results on the factors influencing corporate online public opinion hotness generation through multicase qualitative comparative analysis, while this paper aims to use this method to analyze the group-state relationship of the interaction between multiple influencing factors in corporate online public opinion enthusiasm generation. Based on this, this paper identifies the core factors and conditional combination paths in the generation of corporate online public opinion hotness by selecting 20 typical corporate public opinion events for fuzzy set qualitative comparative analysis and explores the mechanism of corporate online public opinion hotness generation.

*2.2. Analytical Framework.* In the mid-1980s, Caron and Bruno Latour proposed the actor network theory (ANT). The "actors" in the "actor network" can be human or nonhuman beings or forces, and the relationship between each actor is indeterminate, each actor is a node, and the nodes are connected by pathways to weave a seamless web.

Since there is a high degree of adaptability between actor network theory and the study of hotness generation mechanism of corporate online public opinion events, this paper applies actor network theory to the study of hotness generation mechanism of corporate online public opinion. Through summarizing the existing literature, we can get that the actors influencing the generation of corporate online public opinion events include netizens, media, government, and corporations themselves, and these actors play the role of public opinion dissemination by translating, modifying, or even distorting the views of other actors, which eventually forms the actor network of corporate online public opinion generation [10], as shown in Figure 1.

## 3. Methods and Analysis

*3.1. Research Methodology.* Qualitative Comparative Analysis (QCA) was proposed by Charles C. Ragin in 1987 as both a research method and the essence of an analytical technique and the role of research methods in guiding analytical techniques [11]. QCA combines qualitative methods with quantitative one. It is based on Boolean algebra and set operations and is oriented to multiple cases, proposing that cases are collections of causal conditions [12] and therefore do univariate causal analysis and conditional combination analysis. Due to the sensitivity of QCA analysis in causal complexity analysis, it is more advantageous than regression analysis for small and medium samples [13]. Corporate online public opinion is characterized as "multicause induced", and public opinion is generated by multiple factors including corporations themselves, media, government, and Internet users. In addition, the dichotomous variables or continuous variables can be used to represent the factors influencing the generation of corporate online public opinion and the results, so the fuzzy set qualitative comparative analysis method is very suitable for this study.

*3.2. Case Selection.* This paper takes the "2020 Corporate Public Opinion Incident Inventory Report" released in March 2021 in the opinion intelligence database of "Sina Public Opinion," a big data service platform for government and corporations, as the main source of incident cases, and also combines the search results of Sina Weibo and Baidu search, etc. According to the standard principles of QCA research method, the selected cases should have comparability, typicality, diversity, difference, and comprehensiveness among them. Therefore, 20 cases of corporate online public opinion crisis events in the 2020 Corporate Public Opinion Event Inventory Report were selected as typical cases for the study, as shown in Table 1.
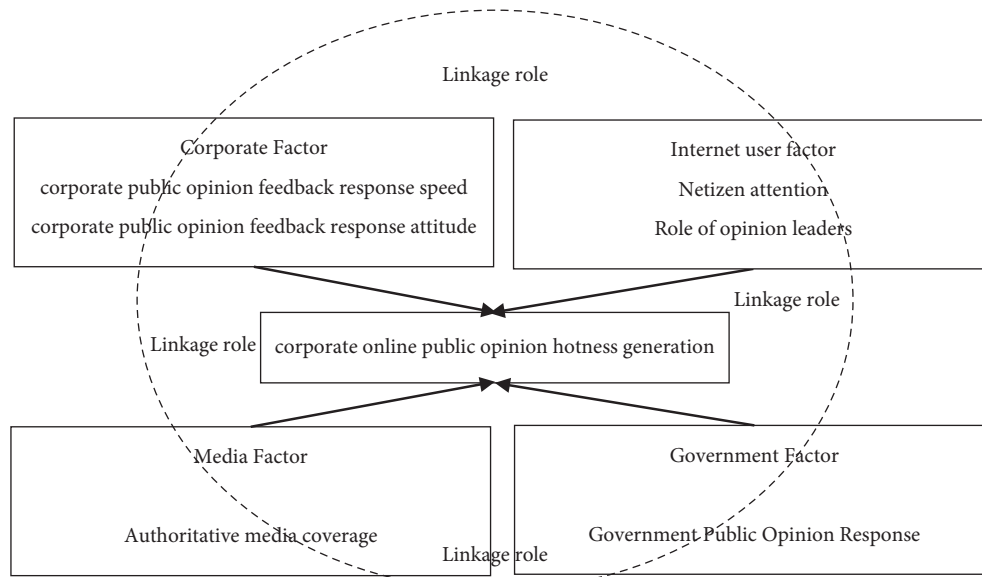
Figure 1: Actor network of corporate online opinion hotness generation.

Table 1: Typical cases of corporate online public opinion events.

| Number | Classification | Name of corporate network opinion event |
| --- | --- | --- |
| 1 | | Anhui Haozhou Dongfeng Honda illegal collection of warranty deposit |
| 2 | | Feng Chao express cabinet overtime charge |
| 3 | | Akiyaki overdraws on-demand celebration of more than a year being ruled illegal |
| 4 | | Meituan cancels Alipay payment channel |
| 5 | Consumer rights | ELEME takeout for more "will you give me 5 more minutes?" Response to rollover |
| 6 | | Nanchang burger king uses expired bread to make burgers |
| 7 | | Three squirrels potato chips were detected as carcinogens |
| 8 | | A store in Xiaolongkan made and sold two tons of gutter oil in two years |
| 9 | | An Yixuan was burned by ordering McDonald's takeout |
| 10 | | Carcinogenic nail polish exceeds standard |
| 11 | | Beijing SKP mall bans takeaway workers |
| 12 | | Coconut tree requires candidates to mortgage their property for life |
| 13 | | Tencent senior engineer was fired for being on duty less than 8 hours a day |
| 14 | | China express uses dummies as security screeners |
| 15 | Business management/manager issues | Dangdang male employee fired for absenteeism after sex change |
| 16 | | Li Guoqing "grabbed" the official seal of Dangdang |
| 17 | | The 83rd anniversary of the July 7th incident fashion bazaar inappropriate language |
| 18 | | CEC's former chairman scaled the wall to steal trade secrets |
| 19 | | Xincheng holdings chairman Wang Zhenhua delivers verdict in girl molestation case |
| 20 | | Xiaomi vice president Chang Cheng's Weibo comments accused of vulgarity |

3.3. Variable Design. Referring to the convention of QCA research method, the number of explanatory variables in the multicase qualitative comparative analysis of medium samples should preferably be between 4 and 7 [14]. Too many explanatory variables will lead to the generation of a total combination of conditions that far exceeds the sample size and cannot reflect the true status [15]. Therefore, this study constructs a research model of the factors influencing the generation of corporate online public opinion hotness with six indicators in four dimensions, as shown in Table 2.

3.3.1. Resulting Variables. This paper selects corporate online public opinion hotness generation as the outcome variable, and the data comes from the "2020 Corporate Public Opinion Event Inventory Report," the peak of online communication hotness index, released in March 2021 in the public opinion think tank of Sina Public Opinion Tong, a big data service platform for government and corporate public opinion. The report composes the hot events of online public opinion of some famous corporations (or products and brands of famous corporations) from January 1 to December 31, 2020, and generates detailed analysis data to provide a reference basis for corporate public opinion crisis response. Based on the accessibility and authority of the data, 20 cases of corporate public opinion crisis events in the "2020 Corporate Public Opinion Events Inventory Report" are selected in the paper, and the peak of their online

TABLE 2: Variable design.

| Variable classification | Variable name | Indicator description | Data source |
|---|---|---|---|
| Result variables | Corporate online opinion hotness generation | The peak of corporate online public opinion dissemination hotness index in the 2020 corporate public opinion event inventory report. | Sina public opinion report 2020 Corporate Public Opinion Events Inventory Report |
| Explanatory variables | Corporate public opinion feedback response speed | The number of days between the exposure time of an online public opinion event and the response time of an corporation is used to determine whether the response speed of an corporation is timely; i.e., the smaller the number of days between responses, the better. The interval of 0 days, i.e., responding on the same day, is 5 points; the interval of 1-2 days is 4 points; the interval of 3-4 days is 3 points; the interval of 5-6 days is 2 points; the interval of 7 days is 1 point; the interval of more than 7 days or the corporation does not respond is 0 points. | Data collection and keyword extraction using python crawler technology |
| | Corporate public opinion feedback response attitude | A score of 5 is given if the company and the party respond positively and clearly to public concerns and the response statement includes an apology, etc.; a score of 3 is given if the company or the party only positively and clearly states the facts and does not include an apology statement, or only gives an apology without positively and clearly stating the facts; a score of 0 is given if the company and the party neither officially respond to the incident itself or state the facts vaguely, nor take the form of an apology. The higher the judging score, the better. | Homemade according to Weibo data after the author's observation and search |
| | Netizen attention | Readings of the Weibo topic "super talk" of corporate online public opinion events (unit: billion). | Homemade according to Weibo data after the author's observation and search |
| | Role of opinion leaders | Whether or not the big V in the field of corporate online opinion events is involved in the discussion is assigned a value using a dichotomous variable. The value of 1 is assigned if the big V participates in the discussion; 0 is assigned if the big V does not participate in the discussion. | Homemade according to Weibo data author's observation |
| | Authoritative media coverage | Central news units * were involved in event coverage and assigned values using a dichotomous variable: 1 if the central news unit was involved in the coverage, and 0 if the central news unit was not involved in the coverage. | Homemade according to Weibo data after the author's observation and search |
| | Government public opinion response | Whether the government responds to corporate online opinion events is assigned a value using a dichotomous variable: 1 if the government responds to online public opinion events, and 0 if the government does not respond to online public opinion events. | Homemade according to Weibo data after the author's observation and search |

*Note: 18 central news units: People's Daily, Xinhua News Agency, China Central Radio and Television Corporation, Seeking News Magazine, PLA Daily, GuangMing Daily, Economic Daily, China Daily, Science and Technology Daily, People's Political Consultative Conference Daily, China Discipline Inspection and Supervision Daily, Study Times, Workers' Daily, China Youth Daily, China Women's Daily, Farmers' Daily, Legal Daily, China News Service.

communication hotness indexes can all objectively reflect the degree of hotness generation of each corporation's public opinion events.

### 3.3.2. Conditional Variables

*(1) Response Speed of Public Opinion Feedback.* In the Internet era, information is transmitted very fast, and if an corporation fails to respond in a timely manner in the face of public opinion on the Internet, it will only receive more suspicion or denial from netizens in the time after the public opinion is exposed, leaving the impression of "not paying attention" to the netizens and reducing the public's trust in the corporation. Therefore, improving information efficiency can effectively reduce future risks [16]. The number of days between the exposure time of an online public opinion event and the response time of a corporation can be used to judge whether a corporation's feedback response is timely, i.e., the size of the interval days is used to indicate the speed of a corporation's feedback response to an online public opinion event. Through monitoring and observation of Weibo data, the exposure time

of public opinion events and the response time of each corporation's official Weibo or corporation party to the public opinion events are collected and compared and analyzed. At the same time, the evaluation is conducted by scoring the response speed for feedback, with a score of 5 for an interval of 0 days, i.e., responding on the same day; 4 for an interval of 1-2 days; 3 for an interval of 3-4 days; 2 for an interval of 5-6 days; 1 for an interval of 7 days; and 0 for an interval of more than 7 days or no response from the corporation. Therefore, the score can truly reflect the feedback response speed of corporations to online public opinion events, and the higher the score, the faster the feedback response speed of public opinion.

*(2) Public Opinion Feedback Response Attitude.* While responding to online public opinion events quickly and timely, corporations should also pay attention to the attitude of feedback response. Many corporations do not prepare for public opinion crises in advance or do not share the same fate as their stakeholders and are forced to respond to public opinion due to business pressure [17]. Therefore, most of the response statements tend to be perfunctory and evasive. However, the public does not agree with the ambiguous response, and it may even worsen the public's inherent impression of the company. If a corporation responds with a bad attitude, it will be counterproductive to the next public opinion environment; if a corporation responds with a sincere attitude, it will reduce a lot of resistance for the next public opinion crisis response. Therefore, after using Python crawler technology to collect Weibo data of 20 cases of corporations' online public opinion events, we match the phrases indicating sincere response attitude through the keyword extraction function. At the same time, the corporations' responses to online public opinion events were judged by scoring their attitudes; if the corporations or the parties concerned responded positively and clearly to public opinion concerns, and the response statements included apologies, etc., 5 points were given; if the corporations or the parties concerned only positively and clearly stated the facts without apology statements, or only gave apologies without positively and clearly stating the facts, 3 points were given; if the corporations and the parties concerned neither responded officially to the incident itself or elaborate the facts vaguely, nor take the way of apology, then 0 points will be given. The higher the score, the more sincere the response attitude of public opinion feedback.

*(3) Internet Users' Attention.* Firstly, netizens' attention has greatly increased the popularity of corporate online public opinion events, and netizens realize the dissemination and supervision of public opinion events through the Internet. Secondly, with the rapid development of new media nowadays, netizens can continuously pay attention to the development degree and direction of public opinion events, and netizens' attention prompts different views and suggestions of netizens to exchange and integrate with each other, which promotes the development of public opinion events. Once again, the attention of netizens accelerates the resolution of public opinion events. Due to the massive increase in the attention of netizens, public opinion events are brought to the attention of society, forcing the relevant departments of corporations or the parties concerned to take measures that help the resolution of public opinion events. Based on this, the data of netizens' attention is based on the reading volume of tens of millions of netizens on Weibo about the topics of corporate online public opinion events, and the data of netizens' attention in this paper comes from the observation and scientific calculation and analysis of the reading volume of "super talk" of 20 cases of corporate online public opinion events.

*(4) Opinion Leader Role.* Opinion leaders are generally people who know more information, have rich sources of information, often share information on social networks, and are read and discussed by the general public, thus influencing others. In the two-level information dissemination process, opinion leaders play the role of intermediaries, through which information is delivered to the general audience. In today's strong user-based social media, "opinion leaders" play an important role in the media practice of spreading opinions and influence [18]. On the Weibo social network platform, most of the opinion leaders are media people, scholars, writers, and businessmen. When they express their personal opinions on different types of corporate online public opinion events, the opinion leaders in the corresponding fields echo with netizens, and their views often influence a large number of followers and the direction of public opinion and even cause a new round of public opinion storm, thus leading to the phenomenon of group polarization. This shows the importance and appeal of opinion leaders in the generation of public opinion hotness. Based on this, this paper observes and retrieves whether opinion leaders are involved in the discussion of 20 cases of corporate online opinion events and assigns values using dichotomous variables. The value of 1 is assigned if the big V is involved in the discussion, and 0 is assigned if the big V is not involved in the discussion.

*(5) Authoritative Media Coverage.* Authoritative media reports refer to the reports of central news units involved in corporate online public opinion events, for example, China.com, People.com, Sina.com, Xinhua.com, China.com, QQ.com, etc. First of all, in the face of today's information asymmetry and curiosity of the general public, rumors can be exploited and spread rapidly in a short time to mislead the public's perception. Authoritative media have the advantages of authority and professionalism, which can curb the generation and spread of rumors, correct information bias, and restore the truth in a timely manner [19]. Secondly, authoritative media, as the "voice of the Party and the state," is trusted by the general public, so the Weibo of authoritative media have a relatively large amount of attention. When authoritative media release the latest and truly visual reports on corporate online public opinion events, they will attract more netizens' attention. In this paper, we observe and retrieve whether authoritative media are involved in reporting 20 cases of corporate online public opinion events and assign values using dichotomous variables. It is 1 if the

TABLE 3: Variable selection and calibration.

| Variable classification | Variable name | Fully affiliated | Intersections | Completely unaffiliated |
|---|---|---|---|---|
| Result variables | Corporate online opinion hotness generation | 97.9 | 63.76 | 31.8 |
| | Corporate public opinion feedback response speed | 5 | 3.5 | 0 |
| | Corporate public opinion feedback response attitude | 5 | 3.5 | 0 |
| Explanatory variables | Netizen attention | 11.1 | 4.23 | 0.8 |
| | Role of opinion leaders | 1 | | 0 |
| | Authoritative media coverage | 1 | | 0 |
| | Government public opinion response | 1 | | 0 |

central news unit is involved in the coverage and 0 if the central news unit is not involved in the coverage.

*(6) Government Response to Public Opinion.* If the government does not respond to online public opinion events in a timely manner, it will easily trigger the "Tacitus trap" effect [20]. The government assumes the responsibility of public affairs management and its regulation behavior affects the evolution of public opinion. Government regulation is divided into two dimensions: direct regulation and indirect regulation. Indirect regulation means regulating the public information of corporations and linked media [21]. Therefore, the government's public opinion response is crucial to effectively stabilize the social emotion before the general public has certain guesses or misjudgments about the public opinion events. Based on this, this paper observes and counts whether the government responds to public opinion events in 20 cases of corporate online public opinion events and assigns values using dichotomous variables. If the government responds to the online public opinion events, the value is 1; if the government does not respond to the online public opinion events, the value is 0.

*3.3.3. Variable Assignment.* In the above variables, all variables do not exist as a set, so it is necessary to calibrate all variables to give a set affiliation, which is between 0 and 1 after calibration. In order to calibrate the values of all variables to between 0 and 1, the qualitative anchor points need to be determined by selecting values that reflect the intermediate degree of the variables in conjunction with the actual distribution of values of the data [22].

The "four-value fuzzy set calibration method" and "mean anchor method" of the QCA analysis technique are used in the specific operation. In the "four-valued fuzzy set calibration method," "1" means fully affiliated and "0" means not affiliated at all. In the "mean anchor point method," the maximum value of each continuous variable data is set as "fully affiliated," and the minimum value of each continuous variable data is set as "fully unaffiliated." The intersection point takes the average of the maximum and minimum values of each variable data. The calibration process of the above variables was completed with the help of fsqca3.0 software, and the results are shown in Table 3.

# 4. Results and Discussion

*4.1. Univariate Necessity Analysis.* Before conducting the group analysis, the relationship between each explanatory

variable and the outcome variable needs to be examined to analyze whether each explanatory variable is an outcome variable, i.e., a necessary condition for the generation of corporate online public opinion hotness. Based on this, this paper uses fsqca3.0 software to analyze the consistency and coverage of each explanatory variable, and the results are shown in Table 3.

Ragin argues that the consistency takes a range of 0-1, and when the consistency index is greater than or equal to 0.8, the explanatory variable can lead to the outcome variable, and the condition variable is a sufficient condition for the outcome variable; when the consistency index is greater than or equal to 0.9, the explanatory variable is a necessary condition for the outcome variable [23]. The coverage indicates the empirical relevance of the consistent superset, and the greater the coverage, the greater the explanatory power of the explanatory variables on the outcome variable [24]. The analysis of individual explanatory variables in Table 4 shows that the only two explanatory variables with consistency greater than or equal to 0.8 are the response speed of corporate public opinion feedback and the role of opinion leaders, among which the only explanatory variable with consistency greater than or equal to 0.9 is the role of opinion leaders, so the role of opinion leaders is necessary to influence the generation of corporate online public opinion hotness. The consistency of other explanatory variables is less than 0.75, which means that other explanatory variables cannot influence the generation of corporate online public opinion enthusiasm alone, and it is necessary to extract the combination of multiple influencing factors that drive the generation of corporate public opinion enthusiasm through the conditional combination analysis below.

*4.2. Condition Combination Analysis*

*4.2.1. Overall Analysis.* In this paper, fsqca3.0 software is used to analyze the conditional combinations of explanatory variables, and the software outputs three solutions, namely, complex, intermediate, and simple solutions. Considering consistency and coverage, as well as reasonably well-founded and moderate complexity, the intermediate solution is used to analyze and interpret the above data [25]. The results show that the paths leading to higher hotness of corporate online opinion event generation are richly diversified, and there are five combinations of conditions, as shown in Table 5. The total consistency is 0.905, which indicates that 90.5% of the corporate online opinion events that meet the five groupings generate higher hotness. The total coverage is 0.542,

TABLE 4: Analysis of necessary conditions.

| Variable name | Consistency | Coverage |
| --- | --- | --- |
| Corporate public opinion feedback response speed | 0.805 | 0.589 |
| Corporate public opinion feedback response attitude | 0.759 | 0.551 |
| Netizen attention | 0.630 | 0.689 |
| Role of opinion leaders | 1.000 | 0.486 |
| Authoritative media coverage | 0.450 | 0.624 |
| Government public opinion response | 0.537 | 0.651 |

TABLE 5: Combination of conditions for the generation of corporate online public opinion hotness.

| Conditions | Combination 1 | Combination 2 | Combination 3 | Combination 4 | Combination 5 |
| --- | --- | --- | --- | --- | --- |
| Corporate public opinion feedback response speed | ● | ● | ● | ○ | ○ |
| Corporate public opinion feedback response attitude | | ● | ● | ● | ○ |
| Netizen attention | ● | | ○ | ● | ○ |
| Role of opinion leaders | ● | ● | ● | ● | ● |
| Authoritative media coverage | ● | ● | ○ | ○ | ● |
| Government public opinion response | ● | ● | ○ | ○ | ● |
| Original coverage | 0.170 | 0.200 | 0.161 | 0.111 | 0.091 |
| Net coverage ratio | 0.064 | 0.094 | 0.107 | 0.058 | 0.060 |
| Consistency | 1.000 | 0.92 | 0.886 | 0.850 | 1.000 |
| Consistency of solution | 0.905 | | | | |
| Coverage of the solution | 0.542 | | | | |

Note: ● means the condition exists, ○ means the condition does not appear, and blank means the condition variable is not important to the result.

indicating that the 5 condition combinations can cover 54.2% of the corporate online opinion events with high hotness. In terms of condition combinations, these five generation paths also represent the three patterns that currently influence corporate online public opinion generation with high hotness.

The first model is the internal and external linkage type, corresponding to combination 1, combination 2, and combination 4 in Table 5. Combination 1 indicates that, for public opinion events that are simultaneously influenced by four external factors, namely, netizens' attention, the role of opinion leaders, authoritative media reports, and government public opinion responses, even if the corporation or the parties involved in the public opinion provide timely feedback and response, the corporate online public opinion hotness is still generated. For example, in this study, a store in Xiaolongkan made and sold two tons of gutter oil in two years, and Akiyoshi was found illegal for overviewing Qing Yu Nian. Combination 2 indicates that, for public opinion events that are influenced by three external factors simultaneously, namely, the role of opinion leaders, authoritative media reports, and government public opinion responses, even if the corporation or the parties involved in the public opinion feedback respond in a timely manner and have a sincere response attitude, they will still generate corporate online public opinion hotness. For example, in this study, the Nanchang Burger King used expired bread to make burgers. Combination 4 indicates that even if a corporation or a person involved in an opinion situation responds sincerely to the public's continuous concern, the corporate online public opinion will still be generated because of the freedom of speech and wide dissemination. For example, there is the incident of the cancellation of Alipay payment channel by Meituan in this study.

The second model is internally dominated, corresponding to combination 3 in Table 5. This combination indicates that, under the role of opinion leaders, the corporation or the parties involved in the public opinion have timely feedback response speed and sincere response attitude, and even if there is a lack of netizen attention, authoritative media coverage, and government public opinion response, the corporate online public opinion fever will be generated. For example, in this study, the verdict of the molestation of girls by Wang Zhenhua, chairman of New City Holdings, was announced. This model event means that after the public opinion event is exposed, the public netizens do not pay much attention to the event itself, but due to the opinion leader-type communicators, the netizens form social emotions and publish them on social media platforms, thus promoting the generation [26].

The third model is the external constraint type, corresponding to combination 5 in Table 5. This combination indicates that the corporations or the parties involved in the public opinion did not respond to the public opinion event and were subjected to the pressure of netizens' speculation, media's misinterpretation, and the government's diversion of netizens' anxiety, which generated the hotness of the corporate online public opinion. For example, in this study, with ELEME Takeout "Would you like to give me 5 more minutes?" Response to the rollover, netizens misinterpreted ELEME Takeout published "Would you like to give me 5 more minutes?" statement, leading to the continuous

TABLE 6: Combination of conditions with higher hotness generation in the consumer rights category of corporate opinion.

| Conditions | Combination 1 | Combination 2 | Combination 3 | Combination 4 |
|---|---|---|---|---|
| Corporate public opinion feedback response speed | ● | ● | ○ | ○ |
| Corporate public opinion feedback response attitude | | ● | ● | ○ |
| Netizen attention | ● | | ● | ○ |
| Role of opinion leaders | ● | ● | ● | ● |
| Authoritative media coverage | ● | ● | ○ | ● |
| Government public opinion response | ● | ● | ○ | ● |
| Original coverage | 0.261 | 0.338 | 0.111 | 0.165 |
| Net coverage ratio | 0.096 | 0.173 | 0.111 | 0.114 |
| Consistency | 1.000 | 0.957 | 1.000 | 1.000 |
| Consistency of solution | 0.978 | | | |
| Coverage of the solution | 0.659 | | | |

fermentation of public opinion, triggering more negative emotions such as anger, disbelief, and pessimism among netizens, thus generating corporate network public opinion fever.

*4.2.2. Comparative Analysis.* For corporate online public opinion events with different causal factors, their corporate factors, Internet users' factors, media factors, and government factors are different, and the paths of corporate online public opinion hotness generation also differ. Based on this, this paper divides 20 cases of corporate online public opinion events into consumer rights and corporate management/manager issues for comparative study, among which the first 10 cases are consumer rights and the last 10 cases are corporate management/manager issues.

First, the conditional grouping analysis is conducted for corporate online public opinion events in the consumer rights category, and Table 6 shows four paths for such events to generate higher public opinion hotness, with a total coverage of 65.9% and a total consistency of 97.8%; combination 1, combination 2, and combination 3 can be classified as internally and externally linked, and combination 4 as externally constrained. Since most of the public opinion events in the consumer rights category are led by consumers' rights as a guide to cause the climax of public opinion. Consumers make use of the vulnerable condition that their rights and interests are violated to win the sympathy of the public in the development of public opinion and take the initiative to set the focus of public opinion or the attention of netizens to dominate the development of public opinion and finally realize their own interests with the pressure of public opinion [27]. Therefore, the external factors of consumer rights corporate online public opinion events, i.e., netizens' factor, media factor, and government factor, are important factors in generating public opinion hotness.

Secondly, for the conditional grouping analysis of corporate opinion events in the category of corporation management/manager issues, Table 7 shows 2 paths for such events to generate higher public opinion hotness, with a total coverage of 40.2% and a total consistency of 97.8%, with combination 1 being internally and externally linked and combination 2 being externally constrained. Corporation

management activities involve a wide range of dimensions or scopes, including personnel management, labor disputes, production sites, financial status, etc. [28]. Since the negligence or loopholes in the management of corporations lead to the spread of public opinion, corporations have to manage their own online public opinion crisis and play an important role in the whole public opinion event. If a corporation fails to do a good job of responding to the feedback of this public opinion, it will contribute to the generation of public opinion hotness. Therefore, the two paths of generating a higher degree of hotness fail to do a good job of feedback response to the corporate online public opinion.

By comparing the explanatory paths of corporate online opinion events in the consumer rights category and the corporation management/manager issues category, we further discover the patterns of public opinion hotness generation with different causative factors. First, government public opinion response has a greater influence on the hotness generation of both types of corporate online opinion events. Among the six explanatory paths for the two types of public opinion events, four of them reflect the influence of government public opinion response on the generation of public opinion hotness. However, government public opinion response must be combined with other conditions to lead to the generation of higher public opinion hotness, and it is not a sufficient condition for the generation of public opinion hotness. Secondly, among the four explanatory paths for the online public opinion events of corporations in the category of consumer rights, three of them reflect the greater influence of authoritative media reports on the generation of public opinion hotness. Combining the abovementioned important condition of government public opinion response and the necessary condition of the role of opinion leaders, the control of public opinion hotness in the online public opinion events of corporations in the category of consumer rights should be done to grasp the relevant external factors. Thirdly, there are two explanatory paths for corporate online public opinion events in the category of corporate management/manager issues, and the combination of conditions is relatively single due to the lack of corporate response attitude and authoritative media reports. If corporations want to use public opinion events to increase corporate hotness or

TABLE 7: Combination of conditions with higher hotness of corporate opinion generation in the category of corporation management/manager issues.

| Conditions | Combination 1 | Combination 2 |
|---|---|---|
| Corporate public opinion feedback response speed | ● | ○ |
| Corporate public opinion feedback response attitude | ○ | ○ |
| Netizen attention | ○ | ● |
| Role of opinion leaders | ● | ● |
| Authoritative media coverage | ○ | ○ |
| Government public opinion response | ○ | ● |
| Original coverage | 0.293 | 0.109 |
| Net coverage ratio | 0.293 | 0.109 |
| Consistency | 1.000 | 0.923 |
| Consistency of solution | 0.978 | |
| Coverage of the solution | 0.402 | |

reduce public opinion hotness to avoid risks, corporations should effectively manage key factors of online public opinion hotness generation.

*4.2.3. Robustness Test.* In order to avoid the impact on the accuracy of the analysis results caused by the classification of corporate online public opinion events based on different causes, robustness tests need to be conducted on the above analysis results. In this paper, we adjust the assignment methods of the outcome variables of the consumer rights category and the corporate management/manager issues category, appropriately increase the peak value of the hotness index of corporate online opinion generation, raise the value of the intersection point, and conduct a conditional combination test on the two types of corporate online opinion events. The test results show that the original findings are basically consistent with the conclusions of the robustness test, so the effects of the conditional combinations in Tables 6 and 7 on the hotness generation of the two types of corporate online opinion events can be judged to be robust.

## 5. Conclusions

Based on the above analysis, this paper proposes the following recommendations for the guidance of corporate public opinion.

Firstly, strengthen the identification and connection for opinion leaders. The comments made by opinion leaders break through the limitation of time and space, so that more people can frequently browse them and spread their personal attitudes to others, thus influencing the formation of others' opinions on public opinion events. Thus, it can be seen that opinion leaders have a greater range of influence on the general public and a deeper degree of influence [29]. Therefore, companies should first improve their ability to identify opinion leaders not only by reputation value and the number of followers, but also by two dimensions of centrality and recognition. Secondly, companies should increase the contact with opinion leaders, who are the representatives of daring to speak out and often actively express their views out of social responsibility, economic interests, or other

factors. Companies should actively communicate with opinion leaders and cultivate their professional and rational voices to reduce the spread of inaccurate information.

Secondly, strengthen the cooperation with the government and authoritative media. The government plays an important role in the generation of corporate online public opinion, influencing the level of public opinion, and shaping the development trend of public opinion. In the new era, there are more and more corporate online public opinion events that lead to problems in the related management system and urgently require government responses and solutions. If the authoritative media can reduce the coverage of negative public opinions and eliminate the negative emotions of the public, it can play a role in "cooling down" the hot public opinion events. Therefore, corporations should improve their communication with the government and authoritative media, such as improving their communication ability with the media, enhancing their relationship with the media, grasping the media's reporting tendency, and strengthening the government's direction.

Thirdly, strengthen the level of feedback and response of corporate online public opinion. The speed and attitude of corporations' response to public opinion determine the attention and discussion degree of public netizens. Corporations respond to public opinion events on official social media platforms in a timely manner to avoid unnecessary rumors, and their response attitude, including the content of response, is also highly valued by public netizens. Based on this, although the response level of corporations is influenced by factors such as the image of corporations in the early stage, the strength of corporations in dealing with emergencies, the scale of corporations, and the status of corporations in the industry [30], corporations should respond to public opinion events quickly and timely while paying attention to the following two points: first, improve the degree of information disclosure to bring netizens closer to the truth, and perceive the source and context of the facts can effectively reduce netizens' suspicion and negative emotions. Secondly, to show the courage to take responsibility, to admit the mistakes, and to take the necessary responsibility is to show the embodiment of the corporation's sense of responsibility, which can be recognized by the public [31].

Based on the actor network theory, taking the corporate public opinion cases from microblog as samples, this paper systematically analyzes the generation mechanism of corporate online public opinion event hotness, reveals three configuration paths of public opinion hotness generation, and provides reference for corporations to prevent and resolve public opinion crisis and public opinion governance.

## Data Availability

This paper uses the "2020 Enterprise Public Opinion Event Inventory Report" released in March 2021 in the public opinion think tank of Sina Public Opinion Tong, a big data service platform for government and enterprises, as the main source of event cases, specifically at https://www.yuqingsina.com/news/535.cshtm, and also combines the search results of Sina Weibo and Baidu search, etc. According to the standard principles of QCA research method, the selected cases should be comparable, typical, diverse, different, and comprehensive among each other. Therefore, 20 cases of enterprise online public opinion crises in the 2020 Enterprise Public Opinion Incident Inventory Report were selected as typical cases for the study.

## Conflicts of Interest

The authors declare that they have no conflicts of interest.

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