# Exploration of the Influence Factors of Policy Identity: Taking the Adjustment of Chinese Epidemic Prevention Policy as an Example
## Based on 791 Comments from Sina Weibo

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**Abstract.** The author crawls 791 comments on Sina Weibo from December 1 to 10 and identified the words concerned to generate the frequency data of negative terms and the policy resistance indexes across China, aiming to explore the impacts of various potential factors on policy identity for targeted groups. The study considers policy resistance as the explained variable and economic characteristics, epidemic status, and development level of network and education in different regions as the independent variables for multiple linear regression, which suggests that local aged-dependency ratio, growth of the primary industry, growth of the secondary industry, number of new infections in December are negatively correlated with policy resistance. The results are verified by a rigorous test of significance. Eventually, the author provides common-sense explanations for the result and attempts to propose a theoretical framework for analyzing different groups' sense of policy identity.

**Keywords:** policy identity, epidemic prevention, deregulation, regression analysis, public opinion

## 1    Introduction

On November 30, 2022, Haizhu, Tianhe, Fanyu, Liwan, and other districts in Guangzhou announced the reopening of all temporary prevention and control regions for the outbreak. Also, Beijing relaxed its requirements for nucleic acid screening. Then implicitly, the general epidemic prevention and control policy was coming to deregulation. On December 4, 5, and 6, many provinces and regions started to relax the requirements for nucleic acid screening, with nucleic acid testing no longer compulsory in most areas. On December 7, the Chinese government published the Notice on Further Optimizing the Implementation of COVID-19 Prevention and Control Measures, determining the adjustment direction of China's epidemic prevention and control

policy. However, during the deregulation, the public discussions on whether to lift the lockdown were persistent and controversial, which, to some extent, promoted the transformation of the policy.

The openness of such discussions revealed the emphasis of the Chinese government on freedom of speech. It helped the public to voice their opinions related to different groups' reflections on the outbreak and their interests. The research aims to understand what factors may impact the process and how they can enlighten the decision-makers on policy formulation.

## 2    Literature Review

The community is provided with different definitions of public policy. According to H. Lasswell and A. Kplan, public policy is "a program of purposes, value, and strategies [1]." Thomas R. Dye notes that "public policy is whatever the government decides to do or not [2]". While the former ignores public policy's particular political character that other policies do not possess, the latter is so extensive to include all affairs by the governments that fails to realize its public character that can pose a general effect on the public.

On the other hand, according to Shizong Wang, the contents of public policy are restrictions or guidance drafted by governments, political groups, and other public sectors for the public or themselves; the subjects of public policy are governments and other state-level authorities, political parties, and other public sectors with legal authority; the process of public policy is behavioral and symbolic; and public policy is an authoritative solution of allocation for non-personal items (value) in terms of function [3]. Thus, the topic of this research, the adjustment of the epidemic prevention and control policy (also known as policy relaxation or deregulation) is an issue of public policy.

The adjustment of the epidemic prevention and control policy (hereinafter, the adjustment) impacted and restricted all members of society, which made the public the target group of the adjustment. The target group can accept or not accept the public policy, referring to policy identity or resistance. Moreover, policy resistance is known as policy identity disturbance in forms of resistance or indifference. The former is psychological resistance or negative behaviors to a specific policy; the latter is superficial indifference and implicit resistance [4]. Multiple factors can be critical to policy identity, including political socialization, traditional mindsets and customs, people's perception of justice, cost-benefit balance, and the policy's general effects [5]. In contrast, policy resistance is related to value conflicts, media influences, the pursuit of short-term benefits, selective perception, and policy failure [6]. Policy identity affects social members' perceptions of social justice and fairness and is of significance to the effective operation of political power [7]. In this case, continuously depressing policy identity, especially for important ones, can lead to identity crises. Moreover, the cumulative effect will weaken the public's political identity, which puts the government's political power at severe risk [8].

Policy compliance has been used frequently in recent years and is often confused with policy identity. Policy compliance means that the target group obeys public policy regulations by adjusting and regulating their attitudes and approaches and avoiding behaviors that do not conform to the policy [9]. Policy identity is more of the psychological acceptance of a policy. They are connected, for policy compliance can rely on either the target group's mere policy identity or applying a policy directly to the target group through a particular mechanism, or forcing the target group to accept a policy after a rational calculation because there is a punishment [10]. Above, this research does not involve the question of whether the target group complies with the policy but their sense of policy identity.

Many research achievements have been realized for people's identity of a specific policy in China, most of which consider policy identity part of policy compliance. Zhu investigated the implementation of a policy that intended to build roads in all villages and analyzed its results. He found that the target group's recognition of the policy is closely related to their trade-off between costs and benefits and that the increasingly different interests between individuals within a single target group can cause a diversified sense of recognition of the same policy [11]. For social endowment assurance in rural areas, Qi noted that the democratization of decisions, the policy's guarantee level, implementation quality, the target group's cognition, and the grass-roots cadres' credibility could affect the target group's identity levels of the policy [12]. Based on their experimental study on the policy of "walking your dog on a leash" in eight cities, including Shanghai, Yan Li, Yu Geng, and Yidan Su pointed out that both mandatory and flexible styles of law enforcement contribute to policy identity and compliance in one-time interactions between the public and the officers. Moreover, the public's illusion of control can negatively affect their policy identity [13]. Wu et al. explored the relationships between information disclosure and public willingness to comply with policies based on questionnaire data. By analyzing the data with the regression and mediating effect models, the quantitative study suggested that the information disclosure of the outbreak had a significant positive effect on the public's policy identity and compliance [14].

Existing studies on policy identity for specific policies in China have provided insights into the impacts of policy formation, implementation procedures and manners, executive subjects, and the target group's cognition of policy identity, with few committing to exploring the indirect influence factors. Although the target group's cognition and stances can influence their sense of policy identity, various factors can influence their stances. Which interest subjects can accept or resist a given policy? Behind which, what mechanisms and influence factors are functioning? Later, this paper will take the adjustment of the epidemic prevention and control policy as an example to explore the factors that affect different groups' sense of policy identity and stances for the adjustment other than its formation and implementation and disclose their mechanisms of action.

# 3     Research Data and Design

## 3.1     Acquisition and Measurement of Dependent Variables

The research has crawled 791 comments under the news whose titles contained "outbreak", "COVID-19", and "lift lockdown" on Sina Weibo from December 1 to 10, 2022. According to the posters' I.P. addresses and the words, it generated word clouds for China and different provinces (including municipalities, autonomous regions, Hongkong, Macao, and Taiwan), as depicted in Figures 1,2,and3 for China, Guangdong Province, and the Xinjiang Uygur Autonomous Region, respectively. Due to limited space, other word clouds will be attached and not be displayed in this paper.

Then, the author used ChatGPT 3.5 to generate negative words for "epidemic" and "COVID-19". With synonyms added, a collection of negative words was obtained, such as "infection", "case", "death", "quarantine", "panic", "epidemic area", "outbreak", "resource shortage", "diffusion", "spread", "prevention", "transmission", "contagion", "variation", "outcome", "positive", "squeeze", "pain", "fear", "sadness", "hardship", "pass away", "die", "tragic". As shown in Table 1, the research generated the statistics for the frequencies of these negative words for different provinces, which indirectly reflected the degrees of policy resistance of the users across China. Hongkong, Macao, and Taiwan were not included in the following discussion in this paper because they had lifted lockdown early and embraced highly different epidemic statuses, epidemic prevention policies, and social systems compared with Mainland China.

**Table 1.** Frequencies of Negative Words in Different Provinces (Self-drawn)

| Taiwan 0 | Macao 0 | Hainan 1 | Hongkong 1 | Yunnan 2 | Inner Mongolia 2 | Heilongjiang 2 | Xinjiang 3 | Tibet 3 | Guizhou 3 |
|---|---|---|---|---|---|---|---|---|---|
| Qinghai 3 | Gansu 4 | Ningxia 7 | Chongqing 7 | Jiangxi 9 | Jilin 10 | Guangxi 11 | Fujian 11 | Liaoning 14 | Tianjin 15 |
| Anhui 15 | Beijing 16 | Shannxi 20 | Hebei 22 | Sichuan 23 | Hunan 25 | Jiangsu 28 | Henan 29 | Hubei 37 | Zhejiang 38 |
| Shandong 41 | Shanghai 45 | Guangdong 50 | | | | | | | |

**Fig. 1.** National Word Cloud Map



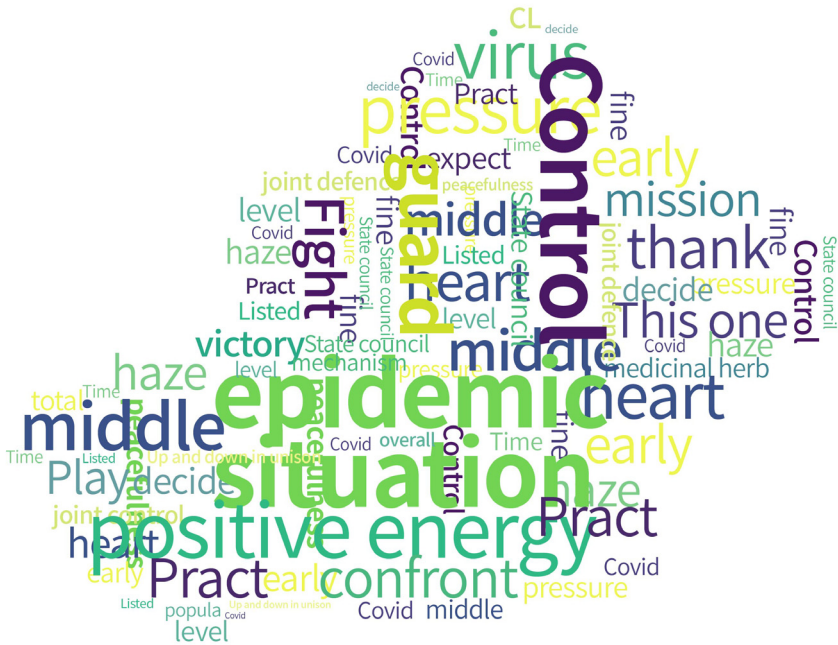**Fig. 2.** Word Cloud Map of Guangdong Province

**Fig. 3.** Word Cloud Map of Xinjiang Autonomous Region

The research has chosen the comments from December 1 to 10 because Guangzhou (Guangdong) and Beijing decided to adjust the prevention and control policy on November 30 after the White Paper Movement. The actions have made clear to the public the governments' stances and the variation trend of the policy. Thus, December 1 was when the public's points of view on the adjustment emerged. Given the purpose of exploring what potential factors may affect the target group's policy identity, the research chose December 10 as the end of the observation to control the influence of one of the potential factors from being excessive and "swallowing" or "covering" the effects of other factors. Therefore, the author needed to collect a proper collection of comments before the widespread infection of COVID-19.

The author released a small-scale questionnaire (45 participants) on the campus forum. It showed that, confronted with a suggestion, 75.55% of the respondents tend to express their objection indirectly by pointing out the possible impacts or describing the possible consequences if following the suggestion, 24.44% reject the suggestion directly, but none express their objection to the suggestion by commenting the proposer. Another questionnaire (35 participants) showed that, confronted with a suggestion and when someone shared his/her miserable experience for following it, 48.57% expressed their objection to the suggestion or the proposer. Despite the small sample size, the fact that the respondents can hold highly various concepts for the same subject has been proven. Undeniably, the case where the public is confronted with public policy is not roughly the same. However, considering China's particular environment of public

opinion for political issues and the close relationship between the governments and the people, it is reasonable for the author to believe that the public is more likely to express their ambiguous attitude towards public policy by presenting the negative impacts of the policy or that the policy may cause on themselves other than taking a stand or criticizing the policy. Therefore, the author intends to use a series of negative words describing "outbreak" and "COVID-19" to highlight the public's policy resistance to the adjustment.

## 3.2    Hypotheses and Dependent Variables

Interests are fundamental in policy acceptance and identity, and people's established mindsets can influence policy identity [15]. As the adjustment will inevitably come along with changes in the epidemic situation, people's recognition of the adjustment may be significantly impacted by the public's health needs, epidemic situations, and medical conditions in different regions. Therefore, Hypothesis 1 is proposed:

H1: The more severe the outbreak or the medical resource shortage, the more concerned the public.

The slogans in the White Paper Movement have reported people's appeals in the epidemic prevention policy and economy, such as "No Lockdown, We Need Freedom. No Nucleic Acid Assay, We Need Food." Studies have also shown that factors like household income can impact people's recognition of an economic policy.[16] Therefore, the research hypothesizes that the public identity of the adjustment may be impacted by local economic development. Mainly, it is possible that the businesses in industry and commerce that are highly constricted by the lockdown are delighted with the adjustment.

H2: The more sluggish the economic growth or the less developed the economy, the higher the public's concern index; the larger that share of industry and commerce in the economic growth, the lower the public's concern index.

It has been proven that there is a reverse correlation between the audiences' educational level and identity of science and technology innovation policies [17], consistent with university students and scholars being active in the Movement and network platforms. Also, the Internet has been prominent in generating and disseminating opinions supporting the adjustment and weak at disseminating those not. For the question that does educational levels influence the public's identity of the adjustment? The hypothesis is below:

H3: The higher the educational level, the lower the concern index.

As the platform for the public to express their political identity and resistance, the Internet can impact policy evaluation and identity [18]. For instance, the use of network media has been proven to contribute to farmers' identity of garbage sorting [19]. For whether the popularization of the network impacts the public's identity of the adjustment, Hypothesis 4 is suggested:

H4: The more developed the Internet, the lower the concern index.

Above, the author collected data from 31 provinces, autonomous regions, and municipalities in 2022 from the National Bureau of Statistics, the National Health Commission of the People's Republic of China, and the 51st China Statistical Report on

Internet Development released by the China Internet Network Information Center (CNNIC).

**Table 2.** Indicators of Variables, Data Sources, and Hypotheses

| Indicator and Unit | Data Source | Hypothesis |
|---|---|---|
| GDP Per Capita (CNY 10 Thousand) | National Bureau of Statistics | H2: The more sluggish the economic growth or the less developed the economy, the higher the public's concern index |
| Per Capita Income (CNY 10 Thousand) | | |
| GDP Growth (%) | | |
| Production Growths of the Primary, Secondary, and Tertiary Industries (%) | | |
| Urbanization Rate (%) | | |
| Per Capita Fiscal Expenditure (CNY 10 Thousand) | | |
| Number of Hospital Beds /10,000 People | National Health Commission of the People's Republic of China | H1: The more severe the outbreak or the medical resource shortage, the more concerned the public. |
| Number of Infections /10,000 People (Sept. 22) | | |
| Number of New Infections /10,000 People (Dec.) | | |
| Number of New Infections (Sept. to Dec.) | | |
| Number of Cumulative Deaths (Sept. 22) | | |
| Number of New Deaths (Sept. to Dec.) | | |
| Average Years of Education for People Over 15 | National Bureau of Statistics | H3: The higher the educational level, the lower the concern index. |
| Percentage of Netizens (%) | China Internet Network Information Center and National Bureau of Statistics | H4: The more developed the Internet, the lower the concern index. |

To evade the impacts of the differences in population and economic aggregates between provinces on the analysis, the author transferred the independent variables into per capital indicators or percentages:

Percentage of netizens = Number of mobile internet users / Resident population in the province.

For explained variables, the negative word frequencies were treated as below:

Policy concern index = (Negative word frequency / Number of netizens in the province) ×10000.

The sample size for each indicator is 31, and the indicators' descriptive statistics are shown in Table 3.

**Table 3.** Descriptive Statistics of Indicators (Self-drawn)

| | Mean | Median | Standard Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| GDP Per Capita (CNY 10 Thou- | 8.442 | 7.101 | 3.604 | 4.499 | 19.009 |

| | | | | | |
|---|---|---|---|---|---|
| sand) | | | | | |
| Per Capita Income(SNY 10 Thousand) | 3.497 | 3.046 | 1.365 | 2.207 | 7.803 |
| Aged-dependency Ratio(%) | 19.932 | 19.500 | 4.594 | 8.400 | 26.700 |
| GDP Growth(%) | 2.800 | 3.100 | 1.646 | -1.900 | 4.700 |
| Growth of the Primary Industry(%) | 9.249 | 8.965 | 5.268 | 0.217 | 22.702 |
| Growth of the Secondary Industry(%) | 38.913 | 40.145 | 8.130 | 15.873 | 53.976 |
| Griwth of the Third Industry | 51.839 | 50.536 | 8.701 | 39.998 | 83.858 |
| Number of Hospital Beds/10000 people | 67.065 | 68.030 | 9.265 | 46.430 | 83.370 |
| Urbanization Rates(%) | 64.507 | 63.420 | 10.804 | 36.612 | 89.313 |
| Average Yaer of Education for People Over 15 | 9.879 | 9.840 | 0.989 | 6.750 | 12.640 |
| Per Capita Fiscal Expandenditure (CNY 10 Thousand) | 0.842 | 0.625 | 0.620 | 0.357 | 3.122 |
| Number of Infections/10000 People | 3.695 | 1.186 | 5.960 | 0.278 | 26.285 |
| Cumulative Deaths(20220922) | 168.581 | 3.000 | 813.066 | 0.000 | 4512.000 |
| Number of New Infections/10000 People | 1.047 | 0.472 | 2.109 | 0.026 | 11.273 |
| Number of New Death(Sept to Dec.) | 0.516 | 0.000 | 1.998 | 0.000 | 11.000 |
| Percentage of Netizens (%) | 1.016 | 0.990 | 0.155 | 0.819 | 1.544 |
| Negetive Emotion Index | 39.284 | 31.741 | 29.896 | 4.922 | 124.426 |

## 3.3    Multiple Regression Analysis and Result Interpretation

The multiple regression analysis took the indicators in Table 2 as the independent variables and the policy concern index as the dependent variable. In order to capture the suitable variable, the author used backward elimination that applied all variables first, then located and eliminated those with the greatest p-values. A significant variable was obtained [20]. Meanwhile, with efforts, the author built a more suitable regression model that used the quadratic term of the GDPs per capita and per capita incomes of each province and took the values of Log 10 for the cumulative deaths because of COVID-19 in each province. The results are shown in Table 4.

**Table 4.** Results of Multiple Regression Analysis with Policy Concern Index as the Independent Variable (Self-drawn)

| Expained Variable: Policy Concern Index | | | | | | | |
|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| Number of Hospital Beds/10000 People | -0.108 (0.506) | | | | | | |
| Per Capita Fiscal Ex-panditure | 9.487 (22.852) | 8.516 (21.670) | | | | | |
| Average Year of Education for People Over 15 | -6.158 (8.020) | -5.948 (7.703) | -4.720 (6.851) | | | | |
| Square of Gdp Per Capital | -0.182 (0.131) | -0.178 (0.125) | -0.162 (0.116) | -0.152 (0.113) | | | |
| GDP Growth | 4.685 (3.428) | 4.760 (3.300) | 4.939 (3.181) | 4.567 (3.080) | 3.781 (3.096) | | |
| Number of Infec-tions/10000 People(Sept.) | 1.670 (1.089) | 1.658 (1.053) | 1.740 (1.004) | 1.530 (0.942) | 1.231 (0.936) | 0.531 (0.750) | |
| Vertical Intercept | -2095791. 000*** (571509.2 00) | -2112923. 000*** (547532.7 00) | 2188554. 000*** (498877. 800) | 2278781. 000*** (473870.9 00) | -2193347. 000*** (480221.0 00) | -1953561. 000*** (443879.3 00) | -2012785. 000*** (430441.7 00) |
| Square of GDP Per Capital | -1.539 (1.114) | -1.575 (1.066) | -1.427 (0.970) | -1.386 (0.953) | -2.188 (0.762) | -1.688 (0.651) | -1.651 (0.641) |
| Aged-deoende ncy Ratio | -1.883 (1.063) | -2.020* (0.820) | -2.058* (0.792) | -1.997* (0.775) | -1.886* (0.788) | -2.039* (0.788) | -2.040* (0.779) |
| Grwoth of the Primary Industry | 20953.84 0** (5714.583 ) | 21124.94 0** (5474.974 ) | 21881.03 0** (4988.49 9) | 22783.06 0*** (4738.633 ) | 21928.730 *** (4802.133 ) | 19531.45 0*** (4438.922 ) | 20123.660 *** (4304.557) |
| Grwoth of the secend Indus-try | 20956.55 0** (5714.372 ) | 21127.73 0** (5474.709 ) | 21883.86 0*** (4988.19 6) | 22785.93 0*** (4738.236 ) | 21931.520 *** (4801.787 ) | 19534.42 0*** (4438.603 ) | 20126.520 *** (4304.264) |
| Grwoth of the Third Industry | 20957.16 0** (5714.451 ) | 21128.45 0** (5474.721 ) | 21884.67 0*** (4988.11 7) | 22786.71 0*** (4738.236 ) | 21932.490 *** (4801.735 ) | 19534.81 0*** (4438.326 ) | 20126.980 *** (4303.965) |
| Urbanization Rate | 2.332** (0.907) | 2.363* (0.866) | 2.335* (0.840) | 1.946** (0.612) | 1.661* (0.588) | 1.461* (0.572) | 1.438* (0.563) |
| Log Cumula-tive Deaths(Sept.) | 9.543 (5.692) | 9.291 (5.388) | 8.911 (5.158) | 8.939 (5.078) | 9.688 (5.161) | 12.833* (4.530) | 14.738*** (3.597) |
| Number of New Infec-tions/10000 people(Dec.) | 9.543 (5.692) | 9.291 (5.388) | 8.911 (5.158) | 8.939 (5.078) | 9.688 (5.161) | 12.833* (4.530) | 14.738*** (3.597) |
| Number of New Deaths(Sept. to Dec.) | 12.638* (4.338) | 12.361** (4.005) | 11.976** (3.779) | 11.108** (3.507) | 9.780* (3.442) | 9.985** (3.483) | 9.532* (3.380) |

| Percentage of Netizens | 134.673* (57.960) | 136.133* (55.692) | 143.258* (51.248) | 142.810* (50.446) | 156.886** (550.470) | 133.669* (47.353) | 144.246** (44.368) |
|---|---|---|---|---|---|---|---|

Note: The regression coefficients are standard. The numbers in ( ) are standard errors. ***, **, and * indicate that the regression coefficients pass the significance tests at the 0.001, 0.01, and 0.05 levels, respectively. Since the sample size of the regression model does not precisely meet the requirement of multiple linear regression (the sample size should be 10-20 times or more of the independent variable), the author used one of the strict frequently-used tests of significance that considers 0.05 as the baseline to decide the significance of the variable as a remedy.

However, as shown in Table 5, the model is suffered from serious collinearity as the VIF values of three variables are over 10 in the model formed under Table 4.

Table 5. VIF Values from the First Multiple Linear Regression Model (Self-drawn)

| Variance Inflation Factor | VIF | 1/VIF |
|---|---|---|
| Growth of the Tertiary Industry | 2.586e+08 | 0 |
| Growth of the Secondary Industry | 2.258e+08 | 0 |
| Growth of the Primary Industry | 94849048 | 0 |
| Square of Per Capital Income | 13.586 | .074 |
| Number of New Infections / 10,000 people (Dec.) | 8.943 | .112 |
| Percentage of Netizens | 8.738 | .114 |
| Number of New Deaths (Sept. to Dec.) | 8.411 | .119 |
| Urbanization Rate | 6.836 | .146 |
| Aged-dependency Ratio | 2.359 | .424 |
| Log Cumulative Deaths (Sept.) | 1.545 | .647 |
| Mean VIF | 57900000 | . |

The author conducts another analysis of the variables in Table 4 to deal with collinearity. The results are shown in Table 6.

Table 6. Analysis of the First Multiple Linear Regression Model (Self-drawn)

| | Square of Per Capital Income | Aged-dependency Ratio | Growth of the Primary Industry | Growth of the Secondary Industry | Growth of the Tertiary Industry | Urbanization Rate |
|---|---|---|---|---|---|---|
| | | | | | | |
| Square of Per Capital Income | 1 | | | | | |
| Aged-dependency Ratio | 0. 161 | 1 | | | | |
| Growth of the Primary | -0. 66 | -0.148 | 1 | | | |
| Growth of the Secondary Industry | -0. 458 | -0. 05 | -0.212 | 1 | | |
| Growth of the | 0. 827 | 0. 136 | -0. 407 | -0. 806 | 1 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Tertiary | | | | | | |
| Urbanization Rate | 0. 787 | 0. 383 | -0. 605 | -0. 197 | 0. 55 | 1 |
| Number of Infections / 10,000 people (Dec.) | 0. 632 | 0. 095 | -0.211 | -0. 564 | 0. 655 | 0. 448 |
| Number of Log Cumulative Deaths (Sept.) | 0. 369 | 0. 329 | -0. 103 | -0.422 | 0. 457 | 0.3 |
| Number of New Infections / 10,000 people (Dec.) | 0. 559 | -0. 113 | -0. 329 | -0. 450 | 0. 62 | 0. 452 |
| Number of New Deaths (Sept, to Dec.) | 0. 551 | 0. 068 | -0. 318 | -0.517 | 0. 675 | 0. 366 |
| Percentage of Netizens | 0. 881 | 0. 068 | -0. 501 | -0.445 | 0-719 | 0. 791 |

| | Urbaniza-tion Rate | Number of Infections / 10,000 people (Dec.) | Number of Log Cu-mulative Deaths (Sept.) | Number of New Infec-tions /10,000 people (Dec.)/ | Number of New Deaths (Sept, to Dec.) | Percentage of Netizens |
|---|---|---|---|---|---|---|
| Square of Per Capital Income | | | | | | |
| Aged-dependency Ratio | | | | | | |
| Growth of the Primary | | | | | | |
| Growth of the Secondary Industry | | | | | | |
| Growth of the Tertiary | | | | | | |
| Urbanization Rate | 1 | | | | | |
| Number of Infections / 10,000 people (Dec.) | 0.448 | 1 | | | | |
| Number of Log Cumulative Deaths (Sept.) | 0.3 | 0.656 | 1 | | | |
| Number of New Infections /10,000 people (Dec.) | 0.452 | 0.297 | 0.126 | 1 | | |

| | | | | | |
|---|---|---|---|---|---|
| Number of New Deaths (Sept, to Dec.) | 0.336 | 0.261 | 0.174 | 0.889 | 1 | |
| Percentage of Netizens | 0.791 | 0.59 | 0.254 | 0.677 | 0.592 | 1 |

In general, a coefficient of correlation is significant if over 0.8, which means that the growth of the tertiary industry correlates very strongly with the square of per capita income, the growths of the primary and secondary industries, and the deaths and new infections in December. Based on the VIF values of each variable, the author eliminated the growth of the tertiary industry for another regression analysis to generate new VIF values, as shown in Table 7.

**Table 7.** VIF Values from the First Multiple Linear Regression Model, with the Growth of the Tertiary Industry Eliminated (Self-drawn)

| Variance Inflation Factor | VIF | 1/VIF |
|---|---|---|
| Square of Per Capital Income | 13.573 | .074 |
| Number of New Infections / 10,000 people (Sept. to Dec.) | 8.860 | .113 |
| Percentage of Netizens | 8.431 | .119 |
| Number of New Deaths (Sept. to Dec.) | 8.064 | .124 |
| Urbanization Rate | 5.732 | .174 |
| Growth of the Primary Industry | 5.650 | .177 |
| Growth of the Secondary Industry | 4.758 | .21 |
| Aged-dependency Ratio | 2.186 | .457 |
| Log Cumulative Deaths (Sept.) | 1.504 | .665 |
| Mean VIF | 6.529 | = |

Unfortunately, the practice failed to solve the problem of collinearity, which led to another round of backward elimination for the remaining variables in Table 7. The regression analysis generated new VIF values, as shown in Tables 8 and 9.

**Table 8.** Results of Multiple Linear Regression with the Growth of the Tertiary Industry Eliminated (Self-drawn)

| | | | | | | |
|---|---|---|---|---|---|---|
| Explained Variable: Pol icy Concern Index | | | | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Urbanization | 0.379 (0.729) | | | | | |
| Number of New Deaths (Sept. | 6.323 | 5.343 | | | | |
| | (4.674) | (4.207) | | | | |
| Square of Per Capital | -1.559 | -1.455 | -1.43 | | | |
| | (0.905) | (0.868) | (0.879) | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Percentage of | 105.4 | 117.7' | 103 | 33.66 | | |
| | (61.54) | (55.85) | (55.35) | (36.56) | | |
| Number of Log Cumulative | 11.98* | 12.01* | 11.05* | 10.15 | 10.09 | |
| | (5.01) | (4.926) | (4.932) | (5.066) | (5.05) | |
| lAged- | -3.027** | -2.693** | -2310** | 2307** | -2.281** | -1.838* |
| | (1.058) | (0.828) | (0.782) | (0.808) | (0.805) | (0.817) |
| Growth of the Primary | -6.096*** | -6.149*** | -6.460*** | -462*** | -5.082*** | -5.439*** |
| | (1.483) | (1.455) | (1453) | (0.946) | (0.801) | (0.824) |
| Growth of the Secondary | -1.859* | -1.795* | -2.132* | -1.258 | -1.507* | -2.037** |
| | (0.882) | (0.859) | (0.828) | (0.651) | (0.591) | (0.557) |
| Number of New Infections / | -16.14** | -15.27** | -10.82*** | -9.371*** | -8.494*** | -9113*** |
| | (4.641) | (4.258) | (2451) | (2.36) | (2.153) | (2.25) |
| Vertical | 124.5 | 125.9 | 147.6* | 146.0* | 192.7 *** | 215.0 *** |
| | (62.87) | (61.76) | (60.14) | (62.16) | (35.79) | (35.91) |
| N | 31 | 31 | 31 | 31 | 31 | 31 |
| $R^2$ | 0.746 | 0.743 | 0.724 | 0.692 | 0.681 | 0.63 |
| adj. $R^2$ | 0.637 | 0.649 | 0.64 | 0.615 | 0.617 | 0.573 |

Note: The regression coefficients are standard. The numbers in ( ) are standard errors. ***, **, and * indicate that the regression coefficients pass the significance tests at the 0.001, 0.01, and 0.05 levels, respectively.

**Table 9.** VIF Values of the Secondary Multiple Linear Regression Model (Self-drawn)

| Variance Inflation Factor | VIF | 1/VIF |
|---|---|---|
| Number of New Infections (Sept. to Dec.) | 1.77 | .565 |
| Growth of the Primary Industry | 1.62 | .619 |
| Growth of the Secondary Industry | 1.48 | .674 |
| Aged-dependency Ratio | 1.11 | .902 |
| Mean VIF | 1.49 | |

The multiple linear regression model corresponding to Table 8 explains the variation of 57.3% in the policy concern index, and the VIF values of all variables are less than 5. According to the collinearity diagnostics suggested by Hair (1995), a VIF less than 10 is acceptable when the independent variables' tolerances are over 0.1. In this case, there is no significant collinearity between the variables in this model [21]. At last, it is reasonable for the author to conclude that, for a given province, the policy concern

index is negatively correlated with the aged-dependency ratio, the growths of the primary and secondary industries, and the new infections.

This conclusion does not support H1, 3, and 4, whereas, to some extent, it supports H2. More specifically, the regression results show that the provinces with a higher aged-dependency ratio, more favorable growths of the primary and secondary industries, and more new infections in December are less concerned about the deregulation.

## 3.4    Possible Explanations for the Analysis Results

The author has released a survey covering 63 participants, which showed that 88.93% of Sina Weibo users choose not to share their life pressure.

For provinces with a high aged-dependency ratio, the group of labor age is under more significant stress to live. The extensive spread of the virus because of the adjustment will aggravate their burden and the risk of being infected for the elder in their families. In this case, people living in a province with a high aged-dependency ratio may resist the adjustment, whereas it is not consequent that they would voice their negative emotions on Sina Weibo, where different opinions are intertwined. In addition, the high aged-dependency ratio itself indicates that the percentage of the elder is relatively high in the region, which means fewer Weibo users who would like to express their ideas on the Internet. Above, these possibilities may lead to a negative relationship between the aged-dependency ratio and the policy concern index.

The effects of epidemic diffusion and lockdown relief because of the adjustment may be different and lopsided in the primary, secondary, and tertiary industries. It explains the findings that the primary and secondary industries are negatively related to the public's degree of concern other than the tertiary industry. In essence, the primary and secondary industries rely on the logistics chain for their production and sales. Thus, these businesses can be highly influenced by both the lockdown and the deregulation, which explains their higher recognition of the adjustment.

On the other hand, the new coronavirus has been mutating and decreasing in pathogenicity while the Chinese government was carrying out the dynamic zero-COVID policy. After lifting the lockdown, most people considered suspending their industrial or agricultural production activities only if they were tested positive for COVID-19. Before December 10, the virus did not diffuse so extensively to impact industrial and agricultural production, and the practitioners did not yet have negative emotions for the adjustment.

Overall, for workers in primary and secondary industries, their recognition of the adjustment can be greater than their rejection of its adverse effects in the short term, which explains that regions with higher shares of the primary and secondary industries tend to have a lower policy concern index. Nonetheless, the service sector that was greatly impacted by the lockdown policy may come to setbacks in the short term since people's prediction of the situation, instinctive fear of viruses, and thinking inertia can restrict their consumption activities in the public place to avoid the virus. The deregulation has brought long-run upturn and short-run depression for the tertiary industry, which complicated their attitudes towards the adjustment. In this case, the regression model failed to capture a significant correlation.

The data of new infections in December is up to December 31, and most infections emerged after December 10; that was when the indicator for the explained variable was formed. Thus, the actual dependent variable should be the number of new infections. More specifically, the benefits from the adjustment are considered more acceptable for residents living in a province with a lower policy concern index. With similar effects or benefits, residents are likely to underestimate the costs of epidemic diffusion, leading to insufficient protective measures and rapid transmission of COVID-19.

# 4        Conclusions and Inspirations

In order to explore the influences of potential factors on the target group's policy identity, the author crawled 791 comments from December 1 to 10, 2022, and extracted the words within for negative word frequencies for different regions so as to generate policy resistance indexes. The research took the policy resistance index as the explained variable and the regions' economic characteristics, epidemic status, and network and education development level as the independent variables for multiple linear regression. After several adjustments, the author solved the collinearity problem in the regression mode and found that a province's aged-dependency ratio, growths of the primary and secondary industries, and new infections in December are negatively correlated with its policy resistance index. This result passed a strict test of significance. Finally, the author provided explanations: (1) a province with a high aged-dependency ratio comes with great life pressure for the labor group and a high percentage of the elder, for which a small number of Sina Weibo users choose not to express their negative emotions in the Internet; (2) the effects of epidemic diffusion and lockdown relief because of the adjustment are different and lopsided on primary, secondary, and tertiary industries, and provinces with more significant shares of the primary, secondary industries tend to embrace the deregulation; (3) a low policy resistance index indicates that the residents are less concerned about the costs of the transmission, which lead to a great number of new infections.

Furthermore, the author attempts to provide a method to analyze the policy identity of different groups. The effects of a new policy can be divided into the crowding out effect because of the substitute of the new policy for the former one and the effect caused by the new policy's contents. It can discuss these two effects on different groups separately to evaluate their cost-benefit relationships and sense of policy identity for better policy analysis.

Today, the digital divide remains significant. The opinions published on Sina Weibo and the White Paper Movement cannot fully reflect the public's will and overall interests. A piece of public policy for the whole society and its adjustments often comes with highly differential and contentious opinions, requiring the decision-makers to keep unswerving and dispassionate. They should take advantage of the situation and try to perceive the public's true will behind the angry waves of opinions, maintaining a stable and peaceful country. Also, it requires more experience and continuous exploration to gain insight into a policy's unbalanced effects and mechanisms of action for groups with different interests.

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