

Research on the Impact Mechanism of Food Safety Governance Level on Residents' Social Attitudes: Empirical research based on CGSS data

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Abstract:

Food safety is crucial for public health and the healthy and stable development of society. Therefore, exploring the impact of the government's food safety governance on residents' social attitudes is of significant importance. This paper primarily examines how the government's level of food safety governance affects residents' subjective well-being and perceptions of social justice. By establishing multiple linear regression models, we analyze the specific direction and extent of these influences. Additionally, this paper delves into the variations in these effects across different age groups and between urban and rural residents. The findings from this study offer a valuable and positive contribution to the field of food safety governance.

Keywords: food safety governance; social attitude; happiness; sense of fairness.

1. Introduction

Food is a fundamental necessity, and safety is paramount in its consumption. Food safety is intimately linked to public health and the overall well-being and stability of society. As living standards rise, so do people's expectations for food safety. Premier Li Keqiang emphasized the importance of firmly establishing the principles of "people first" and "life first" and urged for diligent work in food safety management. The government has elevated food security concerns as a top priority, vigorously enforcing pertinent measures to cultivate an all-encompassing societal framework for ensuring edible product safety. This endeavor has significantly bolstered public sentiment towards communal well-being, societal harmony, and governmental trustworthiness via efficient food safety oversight.

Thus, delving into the ramifications of the state's food safety administration on public societal viewpoints is imperative for addressing food safety challenges. This area has garnered substantial academic attention. However, a discernible research void exists concerning the interplay between governmental decision-making and monitoring practices in food safety management and citizens' perspectives on societal equity and contentment.

To bridge the existing knowledge gaps, this research paper explores the impact of governmental food safety oversight on the societal perspectives of residents. Employing quan-

titative analytical tools, including multiple linear regression and grouped regression models, the study reveals a substantial and favorable influence of food safety governance on citizens' perceptions of social equity.

2. Literature Review and Research Hypothesis

2.1 The Level of Food Safety Governance and Residents' Happiness

Current research underscores the profound influence of food safety governance on residents' happiness. For example, Tang Xin's 2017 study, drawing from surveys of urban dwellers in Sulu provinces, observed a reduction in negative happiness sentiments and an increase in positive ones following improved food safety governance. Similarly, Huang Shisheng's 2022 work titled "Keeping the Food Safety Line: People Have a Better Sense of Happiness" highlighted Panjin City's success in enhancing residents' food security and happiness through strengthened food safety oversight and accountability. Strategies like establishing a food safety model city, implementing traceability mechanisms, and comprehensive monitoring have significantly contributed to ensuring the safety of residents' food supply, thereby bolstering their subjective wellbeing. These findings emphasize the crucial role of government food safety governance in promoting residents' overall happiness.

2.2 The Level of Food Safety Governance and Residents' Sense of Social Justice

Zhang Hongfeng and colleagues discuss that consumers' food safety satisfaction is influenced by various factors, including individual characteristics, risk perception, and information acquisition. The study suggests that consumers' subjective perception of food safety risks can diverge from actual risks, affecting their satisfaction with food safety and their assessment of social justice (Zhang Hongfeng, Ping Li & Wang Chao, 2021). Therefore, the level of government food safety governance also significantly influences residents' sense of social justice.

Although existing research has revealed the influence of food safety governance on residents' sense of happiness and social justice, several shortcomings remain. To bridge these deficiencies, it is imperative to delve deeper into the effects of food safety governance on residents' happiness and sense of social justice, leveraging a wider array of participants and data spanning an extended timeframe.

Based on the above literature review, this paper proposes the following research hypotheses:

H1: The government's level of food safety governance positively promotes residents' happiness.

H2: The government's level of food safety governance positively promotes residents' sense of social justice.

H3: The impact of the government's food safety governance on residents' happiness varies significantly across different age groups.

H4: The impact of the government's food safety governance on residents' sense of social justice varies significantly across different age groups.

H5: The impact of the government's food safety governance on residents' happiness differs significantly between urban and rural areas.

H6: The impact of the government's food safety governance on residents' sense of social justice differs significantly between urban and rural areas.

3. Data Sources and Variable Measure-

ment

3.1 Data Sources

This study utilizes data from the Chinese General Social Survey (CGSS). This dataset is instrumental in summarizing long-term trends in social change.

3.2 Variable Measurement

3.2.1 Independent Variable

The independent variable in this study is the government's level of food safety governance. The indicator used is derived from the survey question: "What do you think is the level of handling affairs according to law in the following aspects of social governance?". The response options for this item are: 1- very low, 2- relatively low, 3- general, 4- relatively high, and 5- very high.

3.2.2 Dependent Variable

The dependent variable in this study is the social attitude of residents, which includes happiness and a sense of fairness.

Happiness: The measurement of happiness is based on the question: "Generally speaking, do you think your life is happy?" This corresponds to item A36 in the questionnaire, with response options ranging from 1 to 5, where 1 = "very unhappy," 2 = "relatively unhappy," 3 = "not happy," 4 = "relatively happy," and 5 = "very happy."

Sense of Fairness: The measurement of fairness is derived from the question: "Generally speaking, do you think the society today is fair or not?" This corresponds to item A35 in the questionnaire. The response options are: 1 = "completely unfair," 2 = "relatively unfair," 3 = "not fair but not unfair," 4 = "fairly fair," and 5 = "completely fair."

3.2.3 Control Variables

To account for potential confounding factors, the study includes several control variables: gender, age, religious belief, registered permanent residence, income level, education level, political outlook, and health level. The specific measurement criteria for these control variables are detailed in the table below.

Table 1 Variable measurement

Variable type	Variable name	Measurement topic	measure
dependent variable	Social Attitude-Happiness	A36 On the whole, do you think your life is happy?	1- Very unhappy 2- Less happy 3- Can't say happiness is not happiness 4- relatively happy 5- Very happy
	Social Attitude-sense of Fairness	A35. Generally speaking, do you think today's society is fair?	1- completely unfair 2- It's unfair 3- Not fair, but not unfair. 4- Fairer 5- Completely fair
independent variable	Food Safety Management Level	F13. What do you think is the level of handling affairs according to law in the following aspects of social governance? -Governance of food safety	1- Very low 2- relatively low 3- General 4- relatively high 5- Very high
Control variable	Gender	A2 gender	0- female, 1- male
	Age	A3 What's your date of birth?	physical age
	Religious Belief	A5 What is your religious belief?	0- not religious, 1- religious
	Location of Household Registration	A18 Your current household registration status is:	0- rural, 1- urban
	Income level	A8a. What was your total personal income/total labor or professional income last year?	continuous variable
	Level of Education	A7a. What is your current highest education level?	0-17
	Political Status	A10. What is your current political situation?	0- Non-Communist party member 1- Communist party member
	Health Level	A15. What do you think is your current physical health?	1- Very unhealthy 2- Less healthy 3- General 4- healthier 5- Very healthy

4. Descriptive statistics

Table 2 Descriptive Statistics of Variables

variable	Mean	Std. Dev.	Max	Min	N
Social Attitude-Happiness	3.8747	0.8148	five	one	9960
Social attitude-sense of fairness	3.2032	1.0013	five	one	9960
Food safety management level	2.8482	0.9581	five	one	3354
age	50.4562	16.7394	94	18	9960
Religious belief	0.1074	0.3097	one	0	9960

Location of household registration	0.4426	0.4967	one	0	9960
income level	33124.54	209704.6	9999990	0	9960
Degree of education	9.2247	4.1919	twenty	0	9960
Political status	0.1066	0.3087	one	0	9960
Health level	3.6130	1.0740	five	one	9960

According to the results of descriptive statistics, the number of men and women in the selected sample is nearly equal. The survey mainly covers middle-aged individuals, with the youngest respondent being 18 years old and the oldest 94 years old. The average length of education among the participants is 9.22 years. Regarding social attitudes, people's perception of social fairness is generally neutral, with an average score of 3.20 on the fairness scale. The average score for happiness is 3.87, indicating that the respondents' overall sense of happiness is above

average. The average level of food safety governance is 2.85, suggesting that people's satisfaction with food safety governance is moderately high.

5. Data Analysis and Regression Results

To test the research hypotheses, the study utilizes the following regression model. The interpretation of the specific results is detailed below.

Table 3 Full Sample Regression Results

variable	Model 1	Model 2
Food safety management level	0530*** (3.72)	1786*** (9.93)
gender	-.0930*** (-3.40)	0030 (0.09)
age	0070*** (6.82)	0114*** (8.75)
Religious belief	1504*** (3.45)	0487 (-.89)
Location of household registration	0205 (.65)	0469 (-1.18)
Degree of education	0187*** (4.11)	0073 (1.28)
Political status	1357*** (2.89)	0231 (0.39)
Health level	2145***	1057*** (6.18)
constant term	2.4353*** (23.14)	1.6983*** (12.78)
R2	0932	0.0646
N	3354	3354

Note: *P<0.1**P<0.05***P<0.01.

To test Hypothesis 1, this paper established Model 1. The results of Model 1 indicating the impact of the government's food safety governance level on residents' happiness is 0.0530, with a p-value of less than 0.01. Therefore, it can be concluded that the government's food safety gov-

ernance level has a significant positive effect on residents' happiness. Specifically, for every one-unit improvement in the level of food safety governance, residents' happiness increases by 0.0530 units.

According to Model 2, the coefficient for the influence of the government's food safety governance level on resi-

dents' sense of social justice is 0.1786, with a p-value of less than 0.01. Thus, it can be considered that the government's food safety governance level has a significant positive impact on residents' sense of social justice. Specifically, for every one-unit improvement in the level of food safety governance, residents' sense of social justice

increases by 0.1786 units.

It categorizes individuals aged 35 and below as young people, those aged 36 to 60 as middle-aged people, and those over 60 as older people, followed by conducting group regression analyses.

Table 4 Regression results of age groups

variable	Model 3 Youth Group	Model 4 Middle-aged Group	Model 5 Elderly Group
Food safety management level	-0.0183 (-0.61)	0.0510** (2.46)	0.0929*** (3.55)
gender	-0.0343 (-0.61)	-0.0838** (-2.11)	-0.158*** (-3.03)
age	-0.00709 (-1.16)	0.00239 (0.81)	0.00435 (1.26)
Religious belief	0.308*** (2.80)	0.197*** (3.21)	0.0134 (0.18)
Location of household registration	0.110* (1.72)	-0.0403 (-0.86)	0.0570 (0.99)
Degree of education	0.0194** (2.14)	0.0204*** (2.96)	0.0128 (1.54)
Political status	0.0410 (0.36)	0.168** (2.31)	0.151** (2.05)
Health level	0.219*** (6.35)	0.226*** (11.75)	0.204*** (8.84)
constant term	2.948*** (10.44)	2.564*** (13.22)	2.669*** (9.62)
<i>N</i>	740	1615	999
<i>R</i> ²	0.09	0.10	0.10
adj. <i>R</i> ²	0.08	0.10	0.10

* p < 0.1, ** p < 0.05, *** p < 0.01

From Model 3, we can find that the government's food safety governance level does not have a significant impact on the subjective well-being of young residents.

Based on Model 4, we can find a one-unit increase in governance level translates to a 0.0510-unit boost in their well-being.

Furthermore, Model 5 reveals that every unit of improvement in food safety governance leads to a 0.0929-unit

increase in the subjective well-being of the elderly.

A comparative analysis of Models 3, 4, and 5 underscores the disparity in the influence of food safety governance on residents' subjective well-being across age groups. While no significant impact is observed among young people, a significant positive influence emerges among middle-aged and elderly populations. Notably, the strongest association is found among the elderly, as evidenced by the highest regression coefficient.

Table 5 Regression results of age groups

variable	Model 6 Youth Group	Model 7 Middle-aged Group	Model 8 Elderly Group
Food safety management level	0.137***	0.199***	0.163***
	(3.51)	(7.58)	(5.10)
gender	-0.00871	0.0265	-0.00697
	(-0.12)	(0.53)	(-0.11)
age	0.0000378	0.0115***	0.00828*
	(0.00)	(3.07)	(1.96)
Religious belief	-0.0164	0.00489	-0.121
	(-0.11)	(0.06)	(-1.32)
Location of household registration	0.0963	-0.114*	-0.0232
	(1.15)	(-1.91)	(-0.33)
Degree of education	0.0256**	0.00841	-0.0169*
	(2.17)	(0.96)	(-1.65)
Political status	-0.0891	0.0143	0.121
	(-0.60)	(0.15)	(1.34)
Health level	0.0975**	0.151***	0.0515*
	(2.16)	(6.18)	(1.82)
constant term	1.922***	1.417***	2.343***
	(5.22)	(5.76)	(6.89)
<i>N</i>	740	1615	999
<i>R</i> ²	0.04	0.06	0.04
adj. <i>R</i> ²	0.03	0.06	0.04

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

From the results of Model 6, it can be considered that the government’s food safety governance level has a significant impact on young residents’ sense of social justice. Specifically, for every one-unit improvement in the level of food safety governance, young residents’ sense of social justice increases by 0.137 units.

From the results of Model 7, it can be seen that the coefficient for the influence of the government’s food safety governance level on middle-aged residents’ sense of social justice is 0.199, with a p-value of less than 0.01. Therefore, it can be considered that the government’s food safety governance level has a significant impact on middle-aged residents’ sense of social justice. Specifically, for every one-unit improvement in the level of food safety governance, middle-aged residents’ sense of social justice increases by 0.199 units.

From the results of Model 8, it can be seen that the coef-

ficient for the influence of the government’s food safety governance level on elderly residents’ sense of social justice is 0.163, with a p-value of less than 0.01. Therefore, it can be considered that the government’s food safety governance level has a significant impact on elderly residents’ sense of social justice. Specifically, for every one-unit improvement in the level of food safety governance, elderly residents’ sense of social justice increases by 0.163 units.

Through the comparison of Models 6, 7, and 8, it can be seen that the influence of the government’s food safety governance level on residents’ sense of social justice indeed varies among different age groups. Furthermore, the comparison of regression coefficients indicates that the impact of the government’s food safety governance level on residents’ sense of social justice is most significant for middle-aged people.

Table 6 Regression Results of Urban and Rural Groups

variable	Model 9 Rural Group	Model 10 City Group	Model 11 Rural Group	Model 12 City Group
Food safety management level	0.0461** (2.30)	0.0608*** (3.01)	0.164*** (6.72)	0.196*** (7.37)
gender	-0.0826** (-2.16)	-0.111*** (-2.80)	-0.0174 (-0.37)	0.0198 (0.38)
age	0.00853*** (5.72)	0.00538*** (3.77)	0.0149*** (8.18)	0.00754*** (4.02)
Religious belief	0.158*** (2.68)	0.142** (2.20)	-0.154** (-2.14)	0.0995 (1.17)
Location of household registration	0 (.)	0 (.)	0 (.)	0 (.)
Degree of education	0.0238*** (3.36)	0.0142** (2.42)	0.0111 (1.29)	0.00523 (0.68)
Political status	0.0590 (0.66)	0.180*** (3.31)	0.0136 (0.12)	0.0528 (0.74)
Health level	0.230*** (12.73)	0.192*** (9.33)	0.111*** (5.02)	0.0997*** (3.68)
constant term	2.285*** (15.45)	2.653*** (16.51)	1.540*** (8.51)	1.818*** (8.60)
N	1875	1479	1875	1479
R2	0.09	0.08	0.08	0.06
adj. R2	0.09	0.08	0.07	0.05

* p < 0.1, ** p < 0.05, ***p < 0.

Analysis of Models 9 and 10 indicates that the government’s food safety governance exerts a significant positive influence on residents’ happiness, with a more pronounced effect among urban residents (coefficient of 0.0608, p<0.01) compared to rural residents (coefficient of 0.0461, p<0.05). This disparity underscores the importance of food safety governance in enhancing the happiness of urban populations.

Similarly, Models 11 and 12 reveal that the level of food safety governance significantly contributes to residents’ sense of social justice, with an even stronger impact observed among urban residents (coefficient of 0.196, p<0.01) than rural residents (coefficient of 0.164, p<0.01). This finding highlights the potential of food safety governance to bolster urban residents’ perception of fairness and equity.

Utilizing multiple linear regression models, this study comprehensively examines the impact of food safety governance on residents’ subjective well-being and sense

of social justice, identifying distinct variations across different groups. These insights are invaluable for policy-makers, providing a foundation for targeted interventions aimed at enhancing food safety governance and subsequently promoting the happiness and social justice of residents, particularly in urban areas.

6. Summary

Through theoretical discussion and empirical test, this study analyzes the influence of food safety governance level on civil society attitude, which has certain contribution to enriching the research in this field.

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