



# A Study on the Impact of the 2022 Winter Olympics on the City Image of Zhangjiakou

## —Based on the Emotional and Cognitive Perspectives of Generation Z

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### ABSTRACT

Based on the customer perceived value theory, combined with the interview method, the perception factor of the influence of the city image of Zhangjiakou in the 2022 Winter Olympics is designed. Then, through the questionnaire survey method, the Z generation in Zhangjiakou City is the survey object, and the sample data is obtained. Finally, descriptive statistics, factor analysis, one-way ANOVA are used to comprehensively analyze the impact of the 2022 Winter Olympics on Zhangjiakou's urban image and the differences in the perception of Generation Z. The study found that the perception dimensions of the impact of the 2022 Winter Olympics on the image of the city of Zhangjiakou by Generation Z are from strong to weak: Ecological, Emotional, Economy, Political and Cultural. The comprehensive scores of Zhangjiakou's urban image perception among different age, monthly disposable income and education levels are significantly different.

**Keywords:** Perception of the city image, 2022 Winter Olympics, Z Generation, Zhangjiakou.

## 1. INTRODUCTION

The "Generation Z" was born in the era of the rise of mobile electronic products and the Internet. Relevant studies have shown that the psychology of the "Generation Z" group is more complex and mature. Chinese Generation Z has a strong view of the honor and disgrace of the country and is keen to participate in discussions on government affairs and current affairs.

As an important group of urban residents, Generation Z perceptions and attitudes towards the city's image will have an impact on the future positioning of the city. How to attract the attention of Generation Z with the help of large-scale international sports events and change their perception of the city image plays an important role in the future economic construction and development of the city.

## 2. LITERATURE REVIEW

### 2.1. Overview of domestic and foreign research

The first is the literature on the image of the city and its perception. Kevin Lynch, who first proposed the concept of city image abroad, emphasizes that city image is the Perceived by a person's combined feelings [1]. In China, in the classic studies on city image, a basic consensus is: city is a subsystem of national image, and city image is composed of spiritual image, behavioral image and visual representation.

The second is about the impact of large-scale international sports events. Generally speaking, it can be roughly divided into five aspects: population, environment, politics, economy, and culture, and the elements of city image basically include these five dimensions[2]. Giffani (2000) believes that hosting large-scale international sports events can convey a positive and altruistic urban spiritual outlook to the public[3].

Thirdly, there is few previous studies sports events on the city image from the emotional and cognitive perspectives of the Generation Z, but the research on the impact of large-scale international sports events on the image of other specific cities from the perspective of residents' perception can be used for this paper. Foreign scholars GETZ D. (1993), LYNCH K. (1960) studied the impact of Olympics, World Cup football and other events on different aspects of the city from the perspective of residents' perception[4]. Domestic classic literature believes that hosting large-scale international sports events has both positive and negative effects on the city's image[5].

**2.2. The innovation of this study**

Therefore, this paper tries to innovate in the following aspects: First, the innovation of the research perspective, taking the 2022 Winter Olympics as the background, to explore the perception of the urban image of Zhangjiakou by Generation Z. Secondly, it enriches the research dimension of city image perception taking the perception of city emotional image into consideration, and forms a multi-dimensional city image perception together with traditional city cognitive image perception.

**3. METHOD**

**3.1. Research methods**

This paper uses the literature research method to sort out the theory of customer perceived value, and combines the interview method to design the perception factors that affect the city image of Zhangjiakou for the 2022 Winter Olympics. Then, the questionnaire survey method is used to get the sample data. Finally, descriptive statistics, one-way analysis of variance and factor analysis are used to comprehensively analyze the impact of the 2022 Winter Olympics on the city image of Zhangjiakou and the differences in the perceptions of Generation Z groups.

**3.2. Questionnaire design**

First of all, through interview method, there are positive and negative attitudes in evaluating the impact with 19 indicators in total.

The overall questionnaire is divided into three parts: the first part is to understand the attention of the 2022 Winter Olympics. The second part is a survey of Generation Z's perception of the impact of the 2022 Winter Olympics on Zhangjiakou's urban image emotionally and cognitively. And according to the Likert seven-point evaluation standard, each impact index under each level of the survey is evaluated. where "1 = strongly disagree" to "7 = strongly agree". The third part is the survey of respondents' demographic attributes including gender, education, occupation, age, monthly disposable income, etc.

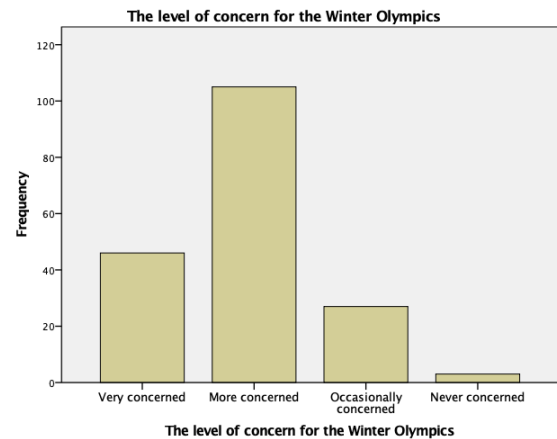
**3.3. Data sources and sample structure**

The online platform Snowball sampling was used to collect questionnaires. After excluding the samples whose IP address is not in Zhangjiakou, 181 valid samples are obtained.

The sample structure data shows that the proportion of male and female respondents is 47.5% and 52.5%, and the age groups are mainly concentrated in 19-23 years old (45.9%) and 24-27 years old (35.4%). Disposable income is mainly concentrated in more than 1,000 yuan to 5,000 yuan, accounting for 58.6% of the total number of respondents. The current occupations are mainly students and company employees, and most of them have a bachelor's degree (49.7%).

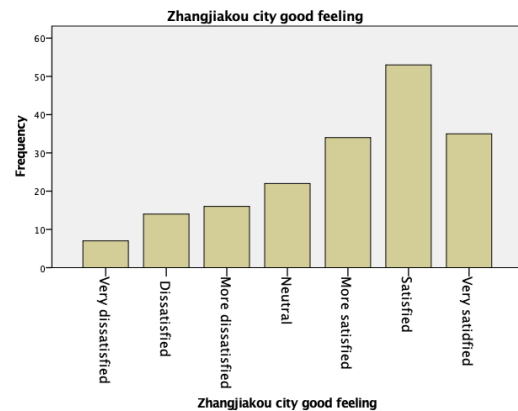
**4. RESULTS**

From Figure1, it can be seen that the Generation Z in Zhangjiakou pays a lot of attention to the 2022 Winter Olympics, a large-scale international sports event.



**Figure 1** The level of concern for Winter Olympics.

On the question of the favorable impression of Zhangjiakou city image, 67.4% of the respondents have a favorable impression of Zhangjiakou city image as "relatively satisfied" or above.



**Figure 2** Zhangjiakou city good feeling.

**4.1. Perceptual analysis of the comprehensive image of Zhangjiakou in the 2022 Winter Olympics, with a control perspective**

**4.1.1. Reliability analysis**

Table 1 indicates that the sample data has high internal consistency and can meet the requirements of factor analysis.

**Table 1. Reliability Statistics**

Cronbach's Alpha	N of Items
.931	19

**4.1.2. Factor analysis**

As shown in Table 2, the KMO value is 0.862, which is greater than 0.7. The significance level of Bartlett's sphericity test, Sig. <0.05, indicates statistical significance.

**Table 2. KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.862
Bartlett's Test of Sphericity	Approx. Chi-Square
	4002.662
	df
	171
	Sig.
	.000

Then, through the principal component analysis method, it can be seen from Table 3 that the rotated component matrix extracts 5 common factors from the 19 perceptual indicators. Therefore, the 5 common factors of the 19 perception indicators are named: 1) Urban Emotional Image Perception (SENS); 2) Urban Economic Image Perception (ECON); 3) Urban Political Image Perception (POLI); 4) Urban Social and Cultural Image Perception (SOCL); 5) Urban Ecological Image Perception (ENVI).

**Table 3. Rotated Component Matrix<sup>a</sup>**

	Component				
	1	2	3	4	5
SENS Q1	.144	.026	.164	.947	.098
SENS Q2	.009	.084	.125	.873	.091
SENS Q3	.116	.035	.070	.867	.069

SENS Q4	.208	-.016	.117	.850	.103
ECON Q1	.230	.265	.825	.133	.188
ECON Q2	.221	.249	.899	.132	.168
ECON Q3	.247	.255	.817	.197	.165
ECON Q4	.196	.252	.848	.146	.216
POLI Q1	.188	.192	.226	.108	.905
POLI Q2	.206	.133	.187	.142	.879
POLI Q3	.099	.201	.170	.113	.891
SOCL Q1	.168	.924	.234	.046	.142
SOCL Q2	.111	.836	.279	.029	.109
SOCL Q3	.196	.851	.177	.048	.129
SOCL Q4	.218	.833	.207	.016	.216
ENVI Q1	.913	.191	.219	.124	.157
ENVI Q2	.856	.159	.220	.175	.108
ENVI Q3	.885	.160	.194	.079	.123
ENVI Q4	.873	.202	.172	.162	.177

**4.1.3. The regression model between Zhangjiakou city image favorability and city emotion and cognitive image**

As can be seen from Table 5 for the Zhangjiakou Generation Z, four of urban image perception dimensions are all good for Zhangjiakou's urban image. The adjusted R-squared in Model 1 in Table 4 shows that this equation explains up to 52% of "Zhangjiakou city image favorability" variation, and the fitting effect is good. Among them, "City Economic Image Perception" and "City Emotional Image Perception" have prominent positive effects.

**Table 4. Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.730 <sup>a</sup>	.534	.520	1.1739
2	.757 <sup>b</sup>	.573	.548	1.1394

**Table 5.** Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.829	.451		-1.836	.068
ENVI	.106	.072	.094	1.477	.141
SENS	.296	.073	.229	4.066	.000
ECON	.342	.077	.311	4.424	.000
POLI	.201	.067	.182	2.973	.003
SOCL	.230	.078	.192	2.962	.003
2 (Constant)	-1.131	.556		-2.032	.044
ENVI	.162	.073	.143	2.218	.028
SENS	.277	.071	.214	3.881	.000
ECON	.332	.076	.302	4.363	.000
POLI	.166	.067	.151	2.477	.014
SOCL	.310	.079	.258	3.914	.000
gender	.439	.173	.130	2.544	.012
age	-.270	.219	-.115	-1.232	.220
income	.009	.166	.004	.054	.957
occupation	.214	.142	.112	1.502	.135
New_scholar	-.212	.145	-.113	-1.466	.145

a. Dependent Variable: Zhangjiakou city good feeling

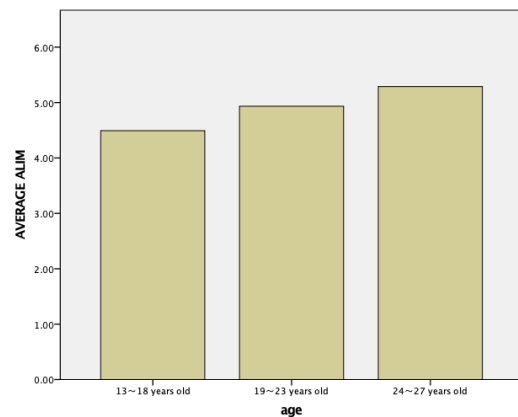
**4.2. Analysis of the differences in the perception of Zhangjiakou city image by the Z generation in Zhangjiakou**

This paper calculates the comprehensive score of Zhangjiakou's urban image perception in this survey based on the components of the urban image perception dimension. The formula is "Zhangjiakou City Image Perception Comprehensive Score" = ("Urban Emotional Image Perception" + "Urban Economic Image Perception" + "Urban Political Image Perception" + "Urban Social Culture Perception" Image Perception" + "Urban Ecological Environment Image Perception")/4)2. And One-way analysis of variance was used to explore the differences in the comprehensive score of

Zhangjiakou's urban image perception among Zhangjiakou Z-generation groups with different gender, age, highest education, monthly disposable income and occupation.

**4.2.1. Differences in the comprehensive scores of Zhangjiakou's urban image perception among Gen Z groups of different ages**

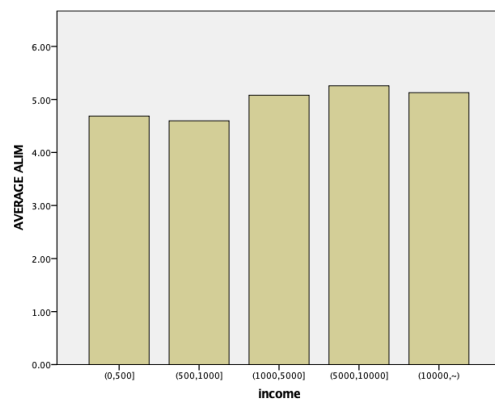
Figure 3 shows that the "Zhangjiakou City Image Perception Comprehensive Score (ALIM)" increases with age. The 19 to 23-year-olds of Generation Z are mostly college students, and most of the 24 to 27-year-olds are also working. They are "5G surfers" and pay more attention to hot events, rich in social life and experience, and more ideological.



**Figure 3** Age group result.

**4.2.2. The difference in the comprehensive score of Zhangjiakou city image perception among Gen Z groups with different monthly disposable income levels**

Figure 4 shows that the type of Generation Z with a monthly disposable income of 5,000-10,000 yuan tends to have relatively stable work income and more Concerned about social and economic development and changes, with a strong sense of social civic responsibility and a sense of "ownership".



**Figure 4** Income group result.

#### 4.2.3. The difference in the comprehensive score of the perception of the comprehensive image of Zhangjiakou city at the Winter Olympics among the Gen Z groups with different education levels

Results in Figure 5 tell that comparing the low-educated generation Z, the high-educated generation Z has a high degree of participation and attention in large-scale international sports events, and has a more profound and extensive perception of the impact of sports events.

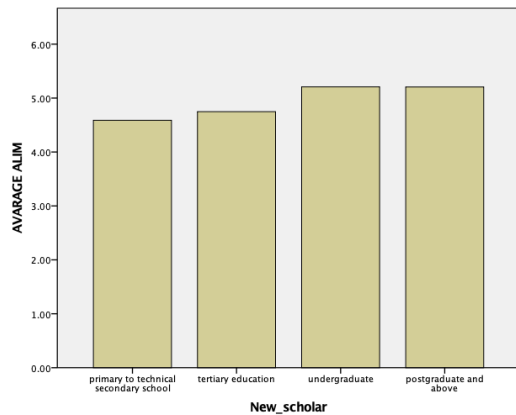


Figure 5 Scholar group result.

#### 4.2.4. The difference in the comprehensive score of the perception of the comprehensive image of Zhangjiakou city in the Winter Olympics among the Gen Z groups of different occupations

From the analysis in Figure 6, it indicates that as members of the team serving the people, these Generation Z keep abreast of current affairs and have higher civic quality and consciousness.

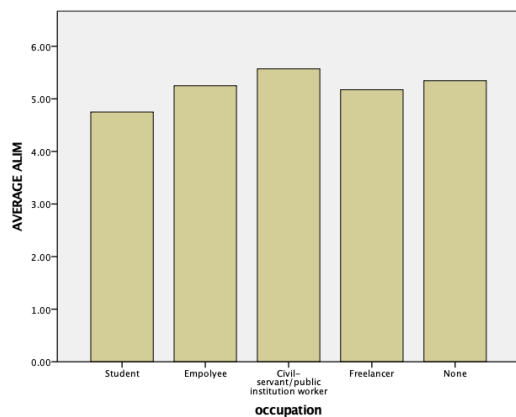


Figure 6 Occupation group result.

## 5. CONCLUSION

### 5.1. Research conclusion

(1) From the emotional and cognitive perspective of Zhangjiakou Generation Z, the impact of the 2022 Winter

Olympics on the image of Zhangjiakou city also has both positive and negative directions.

(2) Zhangjiakou's Z-generation believe that the positive perception of the city's emotional image has indispensable impact on the favorability of Zhangjiakou's city image.

(3) The more mature, the stronger the perception. They are concerned about hot current affairs, have a strong sense of regional identity, good civic qualities and the spirit of "ownership", which clearly shows the unique characteristics of Generation Z.

### 5.2. Policy Suggestions on the Construction of Zhangjiakou's Urban Image

(1) Zhangjiakou should take advantage of the heat and wind of the 2022 Winter Olympics, and introduce more high-tech and new energy technology industries.

(2) Traditional media platforms should cooperate with new media platforms such as Tiktalk, Kuaishou, Xiaohongshu, Weibo, etc. to launch special limited programs and urban promotional videos adhering to user-oriented product thinking, focusing on the integration of multiple contexts to create identity and scene resonance.

However, due to geographical and political factors, Zhangjiakou has more resources than other resource-based cities. Perceptions of the Z-generation groups in Zhangjiakou City from different districts may also be different, so future research can conduct more in-depth discussions.

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