Nanjing City Image Governance Based on China's Cultural Soft Power

Jinghao Huang
Hohai University Nanjing, China
hjh1960931477@163.com

Abstract. This study focuses on the city image governance based on China's cultural soft power, taking Nanjing, China, as an example, which is crucial for China to find the path of city image governance to enhance its national strength. Methodology: The research method of "logical analysis → mechanism exploration → path optimization" is used to demonstrate the relationship between cultural soft power and urban image governance from multiple perspectives. This method, which combines technology and theory, can fill the gap of the current research method which is too theoretical and lacks targeted research. Results: The relationship between cultural soft power and Nanjing city image governance was determined in the logical analysis. In the mechanism exploration, it is found that the two are consistent with the law of action and reaction. The relationship between the two and the relationship between theory and practice are mutually applicable in the path optimization. Conclusion: First, cultural soft power and urban image governance are correlated. Second, the interaction mechanism between the two is the relationship of action and reaction. Third, it is determined that the innovative mechanism of cultural soft power and urban image governance in Nanjing can be widely applied to practice and has general applicability for other cities in China. Innovation: Propose the type, structure, approach, and effectiveness of urban cultural governance in Nanjing that is compatible with national policies. It is suggested that urban governance constructs an innovative system of multifaceted and collaborative dynamic construction that is adapted to China's local realities, has a clear urban positioning, and aims to build, govern, and share together.

Keywords: Chinese cultural soft power; city image; urban governance; Newton's laws of motion.

1. Introduction

Improving cultural soft power is an important way for a country to enhance its international discourse power and comprehensive competitiveness, and it is also the key to shaping the image of a city and enhancing the attractiveness of a city. Ye Nanke proposed "urban image governance"[1], Cao Jinsong urban communication principles[2], Liu Lu innovative communication paths[3], Xie Xiaoyan attaches importance to the protection of urban characteristics[4], and Chen Youlun emphasizes the intelligent governance[5].

Current scholars mostly study issues such as cultural soft power or urban governance with a historical approach and logical method. NJ (NJ) city image governance based on China's cultural soft power is a research gap, and the research methods are too general and lack of relevance. At present, there is a general problem of inaccurate positioning in China's city image construction, and the city image construction in NJ, for example, suffers from the disconnection between city image and cultural soft power, the lack of uniqueness in city positioning, and the lack of city competitiveness. Therefore, China urgently needs a more suitable, innovative and systematic approach to address the realities of urban cultural construction and image governance.

A systematic research method of "logical analysis → mechanism exploration → path optimization" was applied. The first step is to determine whether there is a relationship between cultural soft power and NJ's urban image management by means of logical analysis. It is assumed that there is a relationship between the two, and that the internal logic of mutual promotion and common development between the two will lead to a richer and better urban image construction in the new era. The second step is to find the interaction between cultural soft power and NJ's urban image governance by means of mechanism exploration. It is assumed that this interactive
relationship can build a new urban institutional pattern. This includes that the enhancement of cultural soft power provides a driving mechanism for NJ city image governance, and NJ city image governance has a counter-effect on the enhancement of cultural soft power. The third step is to provide an innovative path for urban image governance in NJ by means of path optimization. It is assumed that this innovative path can apply the above theories in practice and be widely applied to advance the practice of urban image governance before it is an effective path.

Using causality, the law of action and reaction, and the relationship between theory and practice as participation criteria to verify the correlation between cultural soft power and NJ city image governance, we get the results: first, they are correlated. Second, the two are role and counteraction relationship. Third, this role and counteraction urban governance innovation mechanism can be widely applied to practice and has general applicability for other cities in China.

NJ city image governance based on Chinese cultural soft power is conducive to filling the gap in the research field of Chinese cultural soft power and city image governance. It will improve the Chinese modernization development theory, form a “Culture+Governance” model for NJ city image governance innovation, and take a big step towards the city image positioning goal. The interaction between the two will improve the distance between the two and solve the problem that cultural soft power is not firmly rooted and disconnected from practice. It will form a two-way benefit pattern and promote each other's high-quality development. At the same time, the research method to realize the mutual shaping mechanism is operable, and a regular path is found for China's urban governance.

2. Methodology

The research method of "logical analysis → mechanism exploration → path optimization" is based on the study of cultural soft power and Nanjing's urban image management in Nanjing, Jiangsu Province, China, using multi-disciplinary theoretical tools such as sociology, management, psychology, communication, design and culturology. This method can establish the multiple collaborative innovation system and the ranking model of innovation literature research method. At the same time, the system analysis method and cross-disciplinary research methods are used to analyze the problem mechanism.

2.1 Methodological principles

(A) The first step. To determine whether there is a connection between cultural soft power and NJ city image governance by means of logical analysis. It is assumed that there is a relationship between the two, and that the inner logic of mutual promotion and common development of the two will drive the urban image construction in the new era to be increasingly rich and perfect. Then, it is considered a true proposition that the relationship between cultural soft power and NJ city image governance is found by logical analysis, and it is necessary to explore the mechanism and optimize the path between the two.

Suppose there are two sets A (cultural soft power) and B (NJ city image governance), and their intersection is C. We can use the symbol to represent the intersection.(Fig. 1)
Fig. 1.Intersection diagram of cultural soft power and Nanjing city

Fig. 2.The relationship between cultural soft power and Nanjing city image governance

C = A ∩ B

Let x be an arbitrary element. If x belongs to A and x belongs to B, then x also belongs to A ∩ B. We can denote this relation by the notation. x ∈ A and x ∈ B ⇒ x ∈ A ∩ B

Let the elements of A and B be a and b. We can use the logical operator "∧" (with) in propositional logic to represent the relation that a belongs to A and b belongs to B: (a ∈ A) ∧ (b ∈ B)

By definition, when this proposition is true (True), both a and b belong to A ∩ B. Thus, we can express the general form of the intersection by the formula. A ∩ B = {x | x ∈ A ∧ x ∈ B}. This formula states that the intersection of sets A and B is a set in which the elements x belong to both A and B.

(B) The second step. To find the interaction between cultural soft power and NJ city image governance by means of mechanism exploration. It is assumed that this interactive relationship can build a new urban system pattern. This includes the promotion of cultural soft power to provide a driving mechanism for NJ's urban image governance and deeper exploration of cultural resources. NJ city image governance has a counter-effect on the enhancement of cultural soft power. Then this research method of mechanism exploration is a true proposition for shaping the innovative mechanism of NJ city image governance in the perspective of cultural soft power.

(C) The third step. To provide an innovative path for urban image governance in Beijing by means of path optimization. It is assumed that this innovative path can be applied to the above theories in practice and widely used to promote the practice of urban image governance is an effective path. After this step is completed, the research method of "logical analysis → mechanism exploration → path optimization" is completed.

2.2 Criteria for participation

(A) First step criteria. When the inner logical relationship between cultural soft power and NJ city image governance reaches mutual promotion and common development, it is able to continue mechanism exploration and path optimization, and this case meets the criteria of causality. (TABLE I.and Fig. 2.)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Constitute causality condition analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Different currence time</td>
</tr>
<tr>
<td>Cultural soft power (A)</td>
<td>conformance</td>
</tr>
<tr>
<td>NJ city image governance (B)</td>
<td>conformance</td>
</tr>
</tbody>
</table>

(B) The second step criteria. The mechanism of promoting cultural soft power to provide impetus for Nanjing city image governance is in line with Newton's third Law of action and reaction. Let $F_1$ be the cultural soft power and $F_2$ denote NJ city image governance. This means that in an ideal situation the forces applied are equal and opposite: $F_1 = -F_2$
On the basis of Newton's Second Law, assume that the quality of cultural soft power is $m_1$, the quality of Nanjing city image governance is $m_2$, and the accelerations applied to them are $a_1$ and $a_2$, respectively.

\[ F_1 = m_1 \cdot a_1 \quad ; \quad F_2 = m_2 \cdot a_2 \quad ; \quad F_1 = -F_2 \quad ; \quad m_1 \cdot a_1 = -m_2 \cdot a_2 \]

Rearranging gives: $\frac{m_1}{m_2} = -\frac{a_2}{a_1}$

Show that the ratio of the masses of two objects is equal to the opposite of the ratio of their accelerations. From this equation, we can see that if the masses of two objects are equal, their accelerations are also equal, but in opposite directions. If the masses of the two objects are not equal, the ratio of their accelerations is also different, but still opposite. Therefore, in practical situations, even if the concept of cultural soft power and NJ city image governance is not quantifiable, it is at least possible to obtain that the law of action and reaction between the two is met, and this criterion is a true proposition.

(C) The third step criteria. This innovation path can put the above theory into real action and advance the practice of urban image governance is the effective path, which meets the test criteria of theory and practice.

T denotes practice (Practice), P denotes theory (Theory), and E denotes environment or actual situation (Environment). The function $f$ indicates the mapping or correlation between theory and practice. $T = f(P, E)$

### 2.3 Instruments used

(A) Verify the first step. There is a correlation between cultural soft power and NJ city image governance.

- Cultural soft power and NJ city image governance are not mutually exclusive events.
  - Suppose A is cultural soft power and B is NJ city image governance, $P(A) = 0$
  - Then $P(AB) = P(A)P(B) = 0$; $P(A|B) = P(AB)/P(B)$, $P(AB) = P(A|B)P(B)$; $P(AB) = P(A)P(B)$

  - However, in the actual case $P(A) \neq 0$ and $P(B) \neq 0$ then, $A \cap B \neq \phi$

  - The city image positioning of NJ in the process of city image governance is based on cultural soft power, which helps the city shape its image and is expressed in terms of domestic theories and policies. Prove that the two are related. (TABLE II.)

### TABLE II. Domestic theory and policy on Nanjing city image positioning

<table>
<thead>
<tr>
<th>Time</th>
<th>Nanjing city image positioning expression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ming and Qing Dynasties</td>
<td>The center of dynastic change</td>
</tr>
<tr>
<td>Before the founding of the PRC</td>
<td>One of the modern civilized cities</td>
</tr>
<tr>
<td>Found a state-1996</td>
<td>“The cultural center of the province is integrated with the characteristics of ancient capital, regional characteristics and modern civilization”[6]</td>
</tr>
<tr>
<td>1998</td>
<td>“Standing in the forest of cities in the world”[7]</td>
</tr>
<tr>
<td>2001</td>
<td>“A modern regional central city with some international functions”[8]</td>
</tr>
<tr>
<td>2002</td>
<td>“Cultural metropolitan area”[9]</td>
</tr>
<tr>
<td>2003</td>
<td>“The city of fraternity”[10]</td>
</tr>
<tr>
<td>2004</td>
<td>The domestic historical and cultural city and the international comprehensive transportation hub</td>
</tr>
<tr>
<td>2016-2025</td>
<td>“The capital of Jiangsu Province, a national central city, a national historical and cultural city, an international comprehensive transportation hub, a global innovation</td>
</tr>
</tbody>
</table>
(B) Verify the second step. Enhancing cultural soft power provides a driving mechanism for NJ city image governance and digs deeper into cultural resources. NJ city image governance is the counterproductive effect of enhancing cultural soft power, which is generally applied to the study of urban governance innovation mechanism in China.

Motivation mechanism: Cultural soft power promotes the city's cultural consciousness, cultural identity and cultural self-confidence. First, in the principle of cultural consciousness, Nanjing Silicon Alley uses stock space to renew and build high-tech cultural industries with colleges and universities, and uses ultra-creative radiation to drive the old city space and inject vitality. According to statistics, in 2021, "15 sub-provincial cities (including Nanjing) achieved business income of 2,744 billion yuan, an increase of 22.9% over the same period last year, and an average increase of 12.2% in two years." 2.2 percentage points higher than the average level of all cultural enterprises; It accounted for 32.6% of the country's total, 0.3 percentage points higher than the same period last year.[12]" Second, in the principle of cultural identity, enabling culture to form a smart pension city brand identity. This can not only deal with the uncertainty of cultural empowerment, but also deeply understand the urban cultural gene and obtain the wisdom of the continuation of civilized governance. In March 2023, Lishui District of Nanjing will provide 132 communities and several pension centers for the elderly with unconditional sharing and open resources.(Fig. 3) Thirdly, in the principle of cultural self-confidence, residents are the main body of urban governance. In the process from alienation to identification, the optimization concept of three main bodies participating in urban image governance is formed. The three main bodies rely on cultural soft power to form cultural consensus confidence and governance impetus in the interaction.(Fig. 4)
the Yangtze River Economic Belt and the Yangtze River Delta; in the field of urban renewal, 2.03 billion yuan is used to build 33 projects to ensure orderly progress of the transformation; in the field of ecological and environmental governance, the plan to invest 4.48 billion yuan and 90 projects. Nanjing signed friendly cooperation agreements with foreign cultural institutions to form a model of cultural co-prosperity. For example, according to documents No. 31 of the Nanjing Commission Office and No. 40 of the Nanjing Compilation Office[14], the Nanjing People's Foreign Affairs Office has 9 internal organs, including the grass-roots units of the sister cities such as the United States, Europe and Africa, and Asia. Nanjing has signed sister city agreements with Florence, Copenhagen, Oakland, the District of Columbia, Adelaide and other places to carry out cultural, tourism, education, sports, economic and trade exchange activities. Third, to create a psychological reaction mechanism: Nanjing city governance has enhanced its cultural soft power by focusing on the spirit of awakening. Since 2014, China has designated December 13 as the National Memorial Day for the victims of the Nanjing Massacre, which reflects China's firm stance of safeguarding human dignity and safeguarding justice, and is also a spiritual and cultural inheritance that takes history as a mirror and faces the future. The establishment of national Memorial Day is to protect the cultural spirit and has important practical significance to the world.(Fig. 5.)

![Fig. 5. Reaction mechanism analysis diagram](image)

(C )Verify the third step. the path practice between cultural soft power and NJ city image governance. In his book "City Imagery", Kevin Lynch points out that city imagery is the group imagery of a city formed by synthesizing the aesthetics and perceptions of city users about a city. It is the process of selecting, organizing and giving meaning to the content of a city by the observer's own will, and it is composed of a total of five elements. Therefore, shaping urban imagery should also start from five aspects: roads, boundaries, nodes, areas, and signifiers:(Fig. 6.)

![Fig. 6. Quantitative analysis map of city factors](image)
2.4 Reliability and validity

According to the research method of "logical analysis → mechanism exploration → path optimization", the reliability and validity of the study are as follows:(TABLE III)

<table>
<thead>
<tr>
<th></th>
<th>AB is associated</th>
<th>AB action and reaction relationship</th>
<th>AB Relationship between theory and practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logical analysis</td>
<td>R;V</td>
<td>NR;NV</td>
<td>NR;NV</td>
</tr>
<tr>
<td>Mechanism exploration</td>
<td>R;V</td>
<td>R;V</td>
<td>NR;NV</td>
</tr>
<tr>
<td>Path optimization</td>
<td>R;V</td>
<td>R;V</td>
<td>R;V</td>
</tr>
<tr>
<td>Synthesis</td>
<td>R;V</td>
<td>R;V</td>
<td>R;V</td>
</tr>
</tbody>
</table>

(A: Cultural soft power; B: NJ city image governance; R: Reliability; V: Validity; NR: Not reliable; NV: Not valid)

3. Results

In the mechanism exploration, we found that the two are in the path optimization to get the relationship and theory of the two

Step 1: In the logical analysis to determine the existence of relationship between cultural soft power and NJ city image governance.

Step 2: In the research method of mechanism exploration discovery method to determine that the relationship between cultural soft power and NJ city image governance is in accordance with the law of action and reaction.

Step 3: The research method discovery method of path optimization determines that cultural soft power and NJ city image governance innovation mechanism and the relationship between theory and practice are mutually applicable.

In probabilistic analysis as follows: TRUE POSITIVE( TP) FALSE POSITIVE( FP) FALSE NEGATIVE( FN) TRUE NEGATIVE( TN)

\[ P(T) = 1 - P(F); P(P) = 1 - P(N); \]

It is known that: \[ P(TP) = P(T) \cdot P(P); P(FN) = P(F) \cdot P(N); P(FP) = P(F) \cdot P(P); P(TN) = P(T) \cdot P(N) \]

The innovative research method of "logical analysis → mechanism exploration → path optimization" by probabilistic analysis was proved to be a true proposition.

4. Discussion

The validation of this method was found to be generalizable to other cities in China and has a wide range of methods. At the same time, the results are different from other current results of subjective logical reasoning, and the objective results are obtained after verification of mathematical formulas and physical laws, and further logical analysis makes the results scientific and practicable. Therefore, the results obtained by the innovative research method of "logical analysis → mechanism exploration → path optimization" are of academic value, including the innovation of NJ city image shaping path, optimization of city image communication mechanism, and enhancement of city cultural soft power.

However, the following problems exist in the research process. First, the research references are insufficient, and there are fewer studies on NJ's image construction. Especially since the theory of cultural governance of socialist modern cities was proposed soon, less attention has been paid to the
attitude based on this theory to target NJ's local brand image. City image construction is also accustomed to rely only on local government, without specifically accumulating relevant field materials, and there is not much targeted literature to draw on. Second, the screening of urban collaborators is blurred. The city image construction involves a variety of industries and relationships that are difficult to identify. Sorting out the interests and possible cooperation points of multiple subjects from the complicated relationship network, and locating the collaborative subjects for the city is the key to achieving collaborative and innovative construction. Third, the city scenario identification is blurred. The object system of city image is placed in the current information age with advanced network, and the high information quantity, uncertainty and dynamics of the scenarios faced, as well as the complexity, subjectivity and unstructured evaluation criteria of the system of city image, increase the difficulty of accurately identifying the scenario types.

At the same time, it is suggested that NJ should refine and display the spiritual symbols of excellent traditional culture, promote the innovative integration of traditional Chinese culture with NJ's distinctive culture, and form a city culture with unique characteristics of the times. The city should explore and develop NJ's distinctive culture, and tell the story of NJ, Jiangsu and China.

5. Conclusion

The research method of "logical analysis→exploration of mechanism→optimization of path" has led to the following conclusions: Firstly, cultural soft power and urban image governance are related. Secondly, the interaction mechanism between the two is the relationship of action and reaction. Third, the mechanism of cultural soft power and urban image governance innovation in NJ can be widely applied in practice and has general applicability to other cities in China.

Further, we will innovate the type, structure, mode and effectiveness of urban cultural governance in NJ in the new era, which is in line with the national policy. We will innovate and establish a modern guidance mechanism, evaluation mechanism and long-term governance mechanism for urban cultural governance adapted to NJ's local conditions, and build a positive tripartite interaction mechanism among the government, social organizations and the people. Innovate to construct a benign interaction model for the construction of the city's image, which can make the internal and external images of NJ in the new era complement each other and improve together. To reveal the mechanism and law of enhancing the city brand value in the process of benign interaction between urban cultural governance and urban image construction in the new era, and to clarify the supporting mechanism and evolutionary law of diversified collaborative governance between the government and other subjects. We will build a collaborative innovation mechanism system based on cultural self-confidence and establish a dynamic construction innovation system with multiple synergies that is adapted to the local situation of NJ, with a clear urban positioning, and with the goal of common construction, governance and sharing.

Therefore, the next step to put this mutual shaping mechanism into the governance of NJ's city image and continuously improve and innovate is a necessary decision to enhance cultural soft power, build a socialist cultural power and improve China's cultural influence.

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References


