



Research Article

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## The value evaluation system of Chinese strategic emerging industries' development

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### ABSTRACT

China's strategic emerging industries have made certain achievements after nearly three years of development, initially formed the character of the strategic emerging industries, and achieved a leading position in the field of the related industry segments. However, problems exist such as construction competition, repetitive investments, low inputs usage, serious waste of resources and other issues, due to overall low levels of economic development, shortage of innovation, combined with a lack of unified guidelines and policy system in the implementation process of the strategic emerging industries. This paper, using AHP (Analytic Hierarchy Process), Fuzzy Comprehensive Evaluation Method or any other methods to make sure the weights of the evaluation factors. At last, got a reasonable value evaluation system of Strategic Emerging industries resources, and chose one example to test if it's right.

**Keywords:** Value Evaluation System, Industry Development, strategic emerging industries

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### INTRODUCTION

Growing industrialized economies have benefited humans, while simultaneously resulting in a Increasingly series of problems. Since the 1990s, environmental issues have become clear especially with relation to the energy crisis and global warming. The impacts of the energy crisis and environmental deterioration have restricted the development of individual countries. In response to this situation, many countries have taken measures such as reducing carbon emissions, developing low-carbon technologies, increasing efforts to develop new resources, and reducing dependence on fossil fuels.

The international financial crisis since 2008 had a profound impact on the global economy, especially to those countries which depend on virtual valuations and resources. The result in the post-crisis era has been an imbalance of the world economic power and readjustment of the international labor workforce. In this case, countries around the world are aware of the urgency of the necessity to change the previous production and lifestyle into emerging industries that will promote economic and social development. In response to the economic crisis, countries considered technological innovation as the most important strategic investment. They commit to new energy production technologies and renewable energy development and look to seize a strategic position in the next round of economic growth.

During economic development, Chinese high supply and demand have always been required to sustain economic growth. This type of economic growth which depends mainly on the resource supplies to increase production has been constrained by limited resources and has brought serious consequences of deteriorating economic conditions. These issues urgently require the traditional economic growth model to be changed, that is, the transformation from the extensive economic growth model which relies heavily on increased consumption, to the intensive economic growth model which depends on improving the efficiency of resource utilization to increase the production.

China initially proposed the concept of strategic emerging industries in 2009. This concept mainly refers to new industries which have major scientific and technological breakthroughs as the premise, deep integration of emerging technologies and industries, aroused new market demands, high technical requirements, guiding ability, good overall efficiency, fast growth and high market potential, large-scale industry, and significant to the long-term development of the national economy. China promulgated the "State Council decision on accelerating the development of strategic emerging industries" on October 18, 2010 and determined to develop strategic emerging industries, and focus on fostering and developing the Following generation seven types of industry: energy-saving environmental protection, new information technology, biological technology, high-end equipment manufacturing, alternative energy production, new materials, and alternative energy automobiles. China has also prepared detailed goals and development roadmaps for the strategic emerging industries.

### 1. Classification of Strategic Emerging industries Resources and Value

Currently, there are sociologists define culture as the complex of science, technology, learning style, beliefs, knowledge, arts, law and other factors from the ethnological point of view[1]. In the early 1970, the U.S. National Park Service proposed "Strategic Emerging industries resources"[2]. Define the field of culture and value involved are basically the same, that "culture and values have interacted relationship."

#### 2.1 Classification of Strategic Emerging industries Resources.

Culture can be divided into seven categories: [4]

- a) Dynamic Arts Culture: opera, dance, crosstalk and other performance arts.
- b) Artifacts Culture: antiquities, ceramics, sculptures, etc.
- c) History Culture: classics, artifacts, paintings and other ancient cultures.
- d) Folk Culture: folk snacks, local customs and other ethnic cultures.
- e) Tourism Culture: scenic, historical sites, tourist attractions, such as national or local level.
- f) Religion Culture: religious classics and buildings, religious beliefs, etc.
- g) Book Culture.

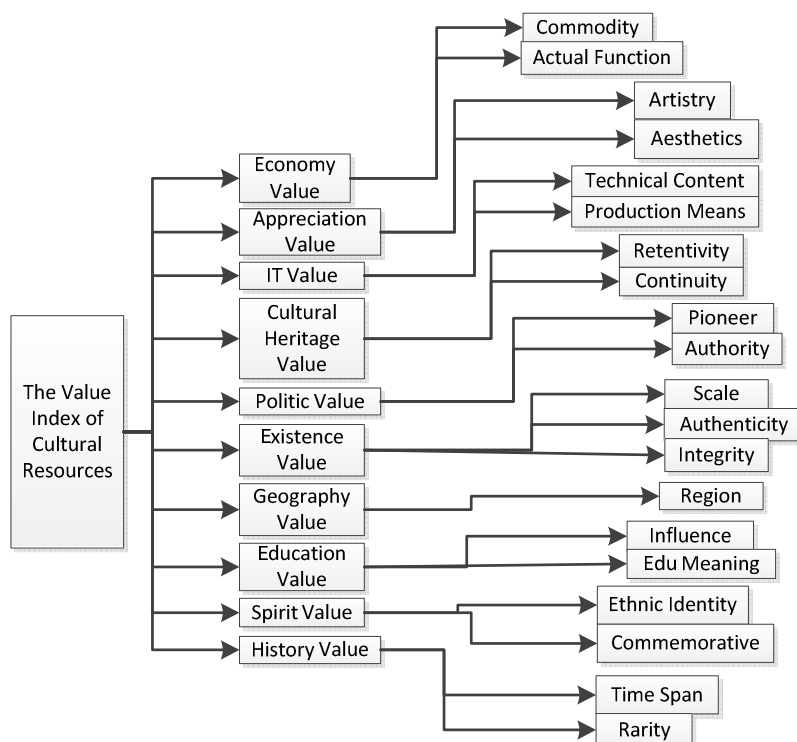


Fig. 2: The Value System of Strategic Emerging industries Resources

#### 2.2 Classification of Value.

Value is complex and has diverse forms. It can be classified according to its different specific characteristics. This paper divided the value index into primary index and secondary index from the Strategic Emerging industries value. The Primary Index of Strategic Emerging industries Resources: Economy Value ( $Y_1$ ), Appreciation Value ( $Y_2$ ), IT Value ( $Y_3$ ), Strategic Emerging industries Heritage Value ( $Y_4$ ), Politic Value ( $Y_5$ ), Existence Value ( $Y_6$ ), Geography Value ( $Y_7$ ), Education Value ( $Y_8$ ), Spirit Value ( $Y_9$ ), History Value ( $Y_{10}$ ). [5]

The Secondary Index of Strategic Emerging industries Resources: Commodity (P<sub>1</sub>), Actual Function (P<sub>2</sub>), Artistry (P<sub>3</sub>), Aesthetics (P<sub>4</sub>), Technical Content (P<sub>5</sub>), Production Means (P<sub>6</sub>), Retentively (P<sub>7</sub>), Continuity (P<sub>8</sub>), Pioneer (P<sub>9</sub>), Authority (P<sub>10</sub>), Scale (P<sub>11</sub>), Authenticity (P<sub>12</sub>), Integrity (P<sub>13</sub>), Region (P<sub>14</sub>), Influence (P<sub>15</sub>), Education Meaning (P<sub>16</sub>), Ethnic Identity (P<sub>17</sub>), Commemorative (P<sub>18</sub>), Time Span (P<sub>19</sub>), Rarity (P<sub>20</sub>).

## 2. Value System's pricing Model and Evaluation Methods of Strategic Emerging industries Resources

### 3.1 Value System of Strategic Emerging industries Resources.

The value index of Strategic Emerging industries resources can be divided into the primary index and secondary index and there are some relations between them. Specific weight of each index should be based on the classification of specific Strategic Emerging industries resources. Shown in Fig. 2:

### 3.2 Pricing Model of Strategic Emerging industries Resources.

According to the value system, this paper gives the pricing model [6] of Strategic Emerging industries resources, shown as follows:

$$P = A * \sum_{j=1}^{20} X_i P_j . \quad (1)$$

P is the price of the specific resource; X<sub>i</sub> is the variable, i = 1,2,3,4; P<sub>j</sub> is the weight, j = 1,2,.....19,20; A is a constant, means price.

There is a method to calculate A. Design a questionnaire for the middle-income families to survey the ideal price of users (such as 500 copies), then we can know the price range of this Strategic Emerging industries resource. For example, the price range is from a1 to a2, its middle is (a1+a2)/2, and the middle of 1 to 4 is 2.5, so the price formula is A= (a1+a2)/ (2\*2.5) [7].

After knowing the specific Strategic Emerging industries resource and its evaluation factors, we can get the specific price.

### 3.3 Evaluation Methods.

The evaluation methods of this paper are: Analytic Hierarchy Process [8] (AHP), Delphi Method [9], Fuzzy Comprehensive Evaluation Method [10] and User Survey Method.

In summary, to begin with get variables by Delphi method. Secondly, calculate the weight of each index by AHP. Thirdly, analyze the result by Fuzzy Comprehensive Evaluation method. Finally, get the value system of tourism Strategic Emerging industries resources.

## 3. Case Study

### 4.1 Value Evaluation of Tourism Strategic Emerging industries Resources.

#### 1) Definition of Tourism Strategic Emerging industries Resources

Tourism includes the natural landscape and Strategic Emerging industries landscape, and tourism culture can be divided into tourism material culture, tourism spirit culture and tourism norm culture. If tourism culture is a big system, then tourism material culture is the surface layer, tourism norm culture is the middle layer, and tourism spirit culture is the deepest layer, which is the chore of the system and determines the basic features and characteristics of a specific kind of tourism culture[11].

#### 2) Value System of Tourism Strategic Emerging industries Resources

According to the value system of Strategic Emerging industries resources, this paper gives the value system of tourism Strategic Emerging industries resources [12], shown in Table 1 which was shown later.

Each index weight in the table is calculated as follows:

a) User Survey Method: Analyzing the feedbacks of users' questionnaires (508 copies).

b) Delphi Method: Scoring variables and sorting the primary indexes of tourism Strategic Emerging industries resources according to their degree of importance.

Appreciation Value > Strategic Emerging industries Heritage Value > History Value > Education Value > Existence Value > Spirit Value > Economy Value > Geography Value > IT Value > Politic Value

The important degree on price is: 9 (Very Important); 7 (Quite Important); 5 (A Little Important); 3 (Not So Important); 1 (Not Important).

Given the result as follows:

9: Appreciation Value

7: Strategic Emerging industries Heritage Value, History Value, Education Value

5: Existence Value, Spirit Value, Economy Value

3: Geography Value

1: ITS Value, Politic Value

c) AHP: Taking the result above into YAAHP to analysis and calculate the weight of each index.

3) Pricing of Qilihai National Wetland Park

This paper assesses the value of Qilihai National Wetland Park through the data, shown in bold font in Table 1 and combines them to the formula (1).

Issuing questionnaires (100 copies) to users to know that people's willingness to pay for Qilihai is 60-120 yuan. So A is:

$$A = (60 + 120) / (2 * 2.5) = 36(\text{yuan}) \quad (2)$$

The price of the park is given as follows:

$$P = 36 * 2.9374 = 105.75(\text{yuan}) \quad (3)$$

The result is close to the actual price of Qilihai—120 yuan, verifying that the hypothesis is established.

### CONCLUSION

The example mentioned above is mainly to build the value evaluation system according to the content of Strategic Emerging industries resources. However, there are still some problems in the research. In a word, recognized evaluation system is hard to determine, if want to get a perfect value evaluation system, there is still a long way to go. We should continue to improve it through comparative analysis and apply it on more actual examples until get the most accurate result and closest to the actual value system.

### Summary

This paper gave a more complete classification about Strategic Emerging industries resources and value, and made much expansion on the basis of some experts to assess the value of Strategic Emerging industries resources more comprehensive so that got a more perfect and accurate value system. In addition, this essay selected tourism Strategic Emerging industries resources as the example to research and improved its original value index to get a more reasonable pricing system. Finally, the value system was applied on a specific scenic.

However, the value system still has some drawbacks. Culture cannot be divided so accurate and the value of culture is too complicated to be considered. Furthermore, all evaluation methods are a little subjective. To sum up, in the future will take more researches to validate so that get a perfect value evaluation system that is applicable to all kinds of Strategic Emerging industries resources.

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