World Journal of Advanced Research and Reviews
eISSN: 2581-9615 CODEN (USA): WJARAI
Cross Ref DOI: 10.30574/wjarr
Journal homepage: https://wjarr.com/

(RESEARCH ARTICLE)

Check for updates

# Research on the evaluation of rural revitalization level in Daqing City

Yuzhong Sun and Denan Kong *

*School of Economics and Management, Heilongjiang Bayi Agricultural University, Daqing city, Heilongjiang Province, China.*

World Journal of Advanced Research and Reviews, 2024, 23(01), 016–024

Publication history: Received on 14 May 2024; revised on 21 June 2024; accepted on 23 June 2024

Article DOI: https://doi.org/10.30574/wjarr.2024.23.1.1880

## Abstract

Starting from a systematic perspective, this study divides the rural revitalization system into five subsystems: Prosperous industries, Ecological livability, Rural cultural civilization, Effective governance, and Prosperous life , as well as 14 secondary indicators based on the rural revitalization strategy. It uses the coefficient of variation method and relative weighting method to determine the weight of each indicator. Based on this, the fuzzy comprehensive evaluation method is used to calculate the level of rural revitalization in Daqing City. The research shows that due to the continuous development of the prosperous industries subsystem and the prosperous life subsystem in Daqing, the level of rural revitalization in Daqing City has continued to rise. However, the fluctuation of the ecological livability subsystem caused by the increase in clean fuel use and the decrease in rural greening in Daqing City requires continuous improvement in rural greening. Further increasing the consumption expenditure of rural residents in education, culture, and entertainment can promote the continuous rise of the rural cultural civilization subsystem.

**Keywords:** Rural Revitalization; System Analysis; Level Evaluation; Daqing City; Heilongjiang Province

## 1 Introduction

The rural revitalization strategy is a major strategic innovation in solving the problems of agriculture, rural areas, and farmers in the new era, and is of great significance in solving the problem of imbalanced and insufficient development among the main social contradictions in China. Scholars have conducted in-depth research on issues related to rural revitalization, which provides important guidance and reference for the implementation of rural revitalization strategies. From the current research status, the connotation of rural revitalization, the measurement of rural revitalization level, and the promotion path of rural revitalization are the main research hotspots.

## 2 Literature Review

### *2.1* Research on the Connotation of Rural Revitalization

The purpose of rural revitalization is to achieve comprehensive modernization in the fields of agriculture, rural areas, and farmers. Specifically, rural revitalization aims to achieve coordinated development in five aspects: industry, culture, ecology, life, and society (Wang Jianing, 2017); The essence of rural revitalization is to pursue comprehensive revitalization in areas such as economy, ecology, and governance system (Wei Houkai, 2018). The multidimensional connotation of rural revitalization is not simply a parallel relationship. Industrial revitalization is the premise and foundation of rural revitalization (Chen Wensheng, 2017; Chen Xiwen, 2018), while cultural and spiritual revitalization of rural areas is the core of rural revitalization (He Xuefeng, 2017; Xue Xiujuan, 2018); In addition, the improvement of social and ecological governance is not only the foundation of rural revitalization, but also the main content of rural revitalization in the new era (Wen Tiejun, 2018; Du Zhixiong, 2018). The systematic interpretation of the connotation of rural revitalization provides specific ideas for the evaluation of the development level of rural revitalization.

* Corresponding author: Denan Kong

### *2.2* Research on Evaluation of Rural Revitalization Development Level

In terms of evaluation dimension design, most scholars are consistent with national planning and use the "Twenty Character Policy" for rural revitalization as five primary indicators to construct an evaluation system (Zhang Ting, 2018; Yan Zhoufu, 2019; Zhang Yan, 2021). While conducting overall evaluations, some scholars have also focused on specific aspects such as industrial development (Yang Awei, 2019), rural ecology (Sun Huibo, 2019), rural governance (Zhan Guohui, 2019), and affluent living (Shen Yun, et al., 2020).

In terms of determining the evaluation objects, scholars have conducted extensive discussions on the construction and evaluation of indicators at the provincial level (Jia Jin et al., 2018), county level development (Yi Xiaoyan, 2020), and rural level (Han Xinyu et al., 2019). In other related research areas, rich explorations on the measurement and evaluation of rural development processes nationwide and in various regions (Han Lei, 2019), as well as the evaluation of agricultural green development level (Zhao Huijie, 2019), and the measurement of high-quality agricultural development (Wang Jing, 2021), provide a research basis and reference for the design and specific selection of indicators for the evaluation system of rural revitalization in China.

In terms of selection of evaluation methods, comprehensive evaluation is mainly based on quantitative research, mainly using methods such as Analytic Hierarchy Process (Chen Yanwei et al., 2019), Factor Analysis (Ma Chengwen, Xia Jie, 2019), Entropy Method (Chen Yangfen et al., 2018), Principal Component Analysis (Du Guoming, 2019), and TOPSIS (Yang Shengqiang, 2019; Mao Jinhuang, Wang Lintao, 2020) to measure the level of rural revitalization and development in specific regions or times.

## 3 Measurement of the level of rural revitalization in Daqing

### 3.1 Selection of evaluation indicators

This study starts from the system and divides the rural revitalization system into five subsystems based on the rural revitalization strategy: prosperous industry, livable ecology, civilized rural culture, effective governance, and prosperous living. Referring to existing research, combined with the current reality of rural revitalization, and fully considering the availability of data and the hierarchy of evaluation indicators, 14 secondary indicators were selected.

#### *3.1.1 Indicators of Industrial Prosperity Subsystem*

The development of rural industries is first manifested as agricultural production efficiency (X1), where the total output value of agriculture, forestry, animal husbandry, and sideline fishing is divided by the number of rural populations; The level of agricultural industrialization (X2) is closely related to rural electricity consumption, therefore rural electricity consumption/rural population is used to represent the level of rural industrialization; The prosperity of the industry also depends on the level of agricultural mechanization in rural areas (X3), characterized by the total power of agricultural machinery/crop sowing area.

#### *3.1.2 Ecological livable subsystem indicators*

The intensity of chemical input in agricultural production (X4) is characterized by the ratio of fertilizer application rate to crop sowing area; Pay attention to the level of clean fuel use in rural areas (X5), characterized by the popularity of rural gas; Pay attention to the degree of rural greening (X6) and characterize it with the coverage rate of rural greening.

#### *3.1.3 Indicators of Rural cultural civilization Subsystem*

Rural cultural civilization pay attention to two aspects. Firstly, the level of rural education, culture, and entertainment consumption (X7), expressed as the proportion of rural education, culture, and entertainment expenditure to total expenditure; The second is the education level of rural population (X8), which is characterized by the proportion of illiterate population in rural areas.

#### *3.1.4 Effective governance subsystem indicators*

Effective governance is a new requirement for rural governance. Pay attention to the minimum living guarantee level in rural areas (X9), represented by the number of people who enjoy the minimum living guarantee per 10000 people in rural areas; Rural infrastructure accessibility (X10), expressed as the proportion of rural transportation and communication expenditure to total expenditure; The level of rural medical and health development (X11) is characterized by the number of healthcare professionals per thousand people in rural areas.

*3.1.5 Prosperity subsystem indicators*

Wealthy living is one of the goals of rural revitalization. Pay attention to the degree of income gap between urban and rural residents (X12), characterized by the ratio of disposable income of urban residents to per capita net income of rural residents; Pay attention to the income level of rural residents (X13), characterized by the per capita disposable income of rural residents; Pay attention to the Engel's coefficient (X14) of rural residents, characterized by the proportion of per capita food, tobacco, and alcohol consumption expenditure of farmers to total expenditure.

The evaluation index system for rural revitalization in Daqing is shown in Table 1.

**Table 1** Indicators for characterizing the level of industry city integration

| complex system | Subsystems | Characterization indicators | Meaning of indicators | index attribute |
|---|---|---|---|---|
| Rural Revitalization | Industrial prosperity | X1: Agricultural production efficiency | Total output value of agriculture, forestry, animal husbandry and fishery/rural population | Positive |
| | | X2: Rural industrialization level | Rural electricity consumption/rural population | Positive |
| | | X3: Agricultural mechanization level | Total power of agricultural machinery/crop sowing area | Positive |
| | Ecological livability | X4: Chemical input intensity | Fertilizer application rate/crop sowing area | Negative |
| | | X5: Rural clean fuel usage degree | Rural gas penetration rate | Positive |
| | | X6: Rural greening degree | Rural green coverage rate | Positive |
| | Rural cultural civilization | X7: Education, culture, and entertainment expenses for farmers | Culture, and entertainment expenditure to total expenditure | Positive |
| | | X8: Education level of rural population | The proportion of rural education | Negative |
| | Effective governance | X9: Rural minimum living guarantee level | The proportion of rural residents who enjoy the minimum living guarantee per 10000 people | Positive |
| | | X10: Rural infrastructure accessibility | total expenditure on transportation and communication, as well as | Positive |
| | | X11: Rural medical and health development level | the number of health and technical personnel per thousand people in rural areas | Positive |
| | Prosperous life | X12: Degree of income gap between urban and rural residents | Per capita disposable income of urban residents/per capita net income of rural residents | Negative |
| | | X13: Income level of rural residents | per capita disposable income of rural residents | Positive |
| | | X14: Engel's coefficient of rural residents | per capita food, tobacco, and alcohol consumption expenditure as a percentage of total expenditure | Negative |

### 3.2 Determination of evaluation methods

This study uses the coefficient of variation method and relative weighting method to determine the weights of evaluation indicators, and uses the fuzzy comprehensive evaluation method to measure the level of rural revitalization and development in Daqing.

#### *3.2.1 Coefficient of variation method and relative weighting method*

The weight that indicators should occupy in the indicator system is related to their own characteristics and can be considered from two dimensions: first, the variability of the indicators themselves. According to the theory of entropy, indicators with high variability contain more information, so they need to be given higher weights; The second is to consider the relationship between indicators and other indicators, as well as the entire system. The coefficient of variation method can be used to reflect the degree of change of the indicator itself, and the correlation degree between the indicator and other indicators as well as the overall system can be calculated using the correlation weighting method.

The first step is to use the coefficient of variation method to calculate the degree of change of the indicator itself, as shown in formula (3-1):

$$CV_i = \frac{\sigma_i}{\overline{x}_i} \qquad (3\text{-}1)$$

In the formula, $\overline{X_i}$ is the average value of this indicator; $\sigma_i$ is the standard deviation of this indicator;

Step 2, calculate the correlation between the indicator and the entire indicator system, as shown in formula (3-2).

$$R_i = \sum_{k=1}^{n} r_{ik} \qquad (3\text{-}2)$$

In the formula, $R_i$ is the correlation between the i-th evaluation indicator and the entire indicator system; $R_{ik}$ is the correlation between the i-th and k-th indicators.

Step three, calculate the importance of the indicator in the entire indicator system, as shown in formulas (3-3):

$$E_i = C_i \times R_i \qquad (3\text{-}3)$$

In the formula, $E_i$ is the importance of the i-th evaluation indicator in the entire indicator system. The higher the degree of influence, the greater the weight it should hold.

Step 4: Regarding $E_i$ normalization processing is used to calculate the weights of each indicator in the indicator system, as shown in formulas (3-4):

$$Wi = \frac{Ei}{\sum_{i=1}^{n} Ei} \qquad (3\text{-}4)$$

#### *3.2.2 Fuzzy comprehensive evaluation method*

The use of fuzzy comprehensive evaluation requires normalization of the raw data of indicators. Due to differences in the nature of indicators, the processing methods for indicators may also vary. $r_{ij}$ is the standard value for the i-th indicator and the j-th evaluation object.

For the selected positive indicators, use equations (3-5) for standardization: .

$$r_{ij}=\begin{cases}[X_{ij}-\min_j(X_{ij})]/[\max_j(X_{ij})-\min_j(X_{ij})], X_{j\max}\neq X_{j\min}\\ 1, X_{j\max}=X_{j\min}\end{cases} \quad (3\text{-}5)$$

For the selected negative indicators, use equations (3-6) for standardization:

$$r_{ij}=\begin{cases}[\max_j(X_{ij})-X_{ij}]/[\max_j(X_{ij})-\min_j(X_{ij})], X_{j\max}\neq X_{j\min}\\ 1, X_{j\max}=X_{j\min}\end{cases} \quad (3\text{-}6)$$

For moderate indicators, use equations (3-7) for standardization:

$$r_{ij}=\begin{cases}[X_{ij}-\min_j(X_{ij})]/[M-\min_j(X_{ij})], X_{i\min}\leq X_{ij}<M\\ 1, X_{ij}=M\\ [\max_j(X_{ij})-X_{ij}]/[\max_j(X_{ij})-M], M\leq X_{ij}\leq X_{i\max}\end{cases} \quad (3\text{-}7)$$

Among them, M is the theoretical optimal value of the moderate indicator.

In the formula: $X_{ij}$ represents the value of the jth evaluation indicator in the i-th year, min $\{X_j\}$ and max $\{X_j\}$ are the minimum and maximum values of the jth evaluation indicator in all years, k=1/lnm, where m is the number of evaluation years and n is the number of indicators.

After standardization, the matrix R is obtained. Therefore, the standardized matrix of various indicators in the evaluation system is shown in the table below:

$$R=\begin{vmatrix} r_{11} & r_{12} & \cdots & r_{1n}\\ r_{21} & r_{22} & \cdots & r_{2n}\\ \cdots & \cdots & \cdots & \cdots\\ r_{i1} & \cdots & r_{ij} & \cdots\\ \cdots & \cdots & \cdots & \cdots\\ r_{m1} & r_{m2} & \cdots & r_{mn}\end{vmatrix}$$

Calculate single indicator evaluation score:

$$S_{ij}=W_i\times \mathrm{r}_{ij} \quad (3\text{-}8)$$

### 3.3 Comprehensive Measurement of Rural Revitalization Level in Daqing City

#### *3.3.1 Data processing*

Normalize the raw data of the indicators of Daqing Rural Revitalization System using formulas 2-5 and 2-6, and the results are shown in Table 2.

**Table 2** Normalized Data of Daqing Industry City Integration System Indicators

| index | | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Industrial Prosperity** | X1 | 0.00 | 0.20 | 0.28 | 0.34 | 0.31 | 0.41 | 0.47 | 0.63 | 0.82 | 0.87 | 1.00 |
| | X2 | 0.02 | 0.00 | 0.02 | 0.12 | 0.30 | 0.31 | 0.31 | 0.41 | 0.42 | 0.98 | 1.00 |
| | X3 | 0.00 | 0.32 | 0.39 | 0.54 | 0.61 | 0.75 | 0.89 | 0.86 | 1.00 | 0.68 | 0.73 |
| **Ecological livability** | X4 | 0.68 | 0.67 | 0.66 | 0.23 | 0.00 | 0.24 | 0.34 | 0.55 | 0.83 | 0.92 | 1.00 |
| | X5 | 0.00 | 0.07 | 0.11 | 0.12 | 0.11 | 0.63 | 0.69 | 0.83 | 0.86 | 1.00 | 1.00 |
| | X6 | 0.78 | 0.88 | 0.94 | 1.00 | 0.98 | 0.77 | 0.79 | 0.00 | 0.02 | 0.01 | 0.02 |
| **Rural cultural civilization** | X7 | 0.00 | 0.00 | 0.75 | 0.85 | 0.85 | 0.77 | 0.66 | 1.00 | 0.14 | 0.27 | 0.26 |
| | X8 | 0.48 | 0.48 | 0.43 | 0.43 | 0.00 | 0.33 | 0.62 | 0.48 | 1.00 | 1.00 | 1.00 |
| **Effective governance** | X9 | 0.75 | 0.84 | 0.78 | 0.88 | 1.00 | 0.59 | 0.20 | 0.00 | 0.89 | 0.83 | 0.85 |
| | X10 | 0.00 | 0.27 | 0.41 | 0.69 | 0.98 | 1.00 | 0.70 | 0.88 | 0.56 | 0.79 | 0.81 |
| | X11 | 0.00 | 0.09 | 0.17 | 0.21 | 0.28 | 0.31 | 0.34 | 0.43 | 0.46 | 1.00 | 0.91 |
| **Prosperous life** | X12 | 0.06 | 0.29 | 0.06 | 0.04 | 0.00 | 0.00 | 0.10 | 0.26 | 0.62 | 0.74 | 1.00 |
| | X13 | 0.00 | 0.13 | 0.24 | 0.30 | 0.37 | 0.44 | 0.55 | 0.67 | 0.77 | 0.93 | 1.00 |
| | X14 | 0.00 | 0.00 | 0.88 | 0.88 | 0.91 | 0.95 | 0.98 | 0.99 | 0.99 | 1.00 | 0.88 |

Data source: manually calculated

### *3.3.2 Calculation of Weights*

On the basis of normalized data in Table 2, use EXCEL to calculate the mean and standard deviation of various indicators such as X1-X12, then use the coefficient of variation formula to calculate the coefficient of variation of each indicator, use EXCEL to calculate the correlation coefficient of each indicator, calculate the coefficient of variation (CVi) and correlation coefficient (ri) of each indicator, and then calculate the correlation coefficient (Ri) of all indicators. Use formula 2-3 to calculate the importance level Ei of the indicator, use the importance level (Ei) of indicators X1-X12, and use formula 2-4 to calculate the weights of each indicator. The results are shown in Table 3 and continued Table 3.

**Table 3** Weights of Indicators for Daqing Rural Revitalization System

| **index** | **Industrial prosperity** | | | **Ecological livability** | | |
|---|---|---|---|---|---|---|
| | X1 | X2 | X3 | X4 | X5 | X6 |
| weight | 0.0797 | 0.1150 | 0.0465 | 0.0497 | 0.1018 | 0.0891 |

| **index** | **Rural cultural civilization** | | **Effective governance** | | | **Prosperous life** | | |
|---|---|---|---|---|---|---|---|---|
| | X7 | X8 | X9 | X10 | X11 | X12 | X13 | X14 |
| weight | 0.0455 | 0.0578 | 0.0152 | 0.0410 | 0.0970 | 0.1340 | 0.0827 | 0.0449 |

Data source: manually calculated

### *3.3.3 Calculation of Rural Revitalization Level*

After calculating the weights of indicators X1-X12, the normalized data in Table 2-3 was used to calculate the scores of rural revitalization level and various subsystems of rural revitalization using Formula 2-8. The results are shown in Table 4.

**Table 4** Rural Revitalization System Level and Subsystem Level Scores

| | 2012 年 | 2013 年 | 2014 年 | 2015 年 | 2016 年 | 2017 年 | 2018 年 | 2019 年 | 2020 年 | 2021 年 | 2022 年 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total score** | 0.1523 | 0.2593 | 0.3416 | 0.3737 | 0.3780 | 0.4608 | 0.5066 | 0.5329 | 0.6261 | 0.7965 | 0.8427 |
| **Industrial prosperity** | 0.0018 | 0.0303 | 0.0427 | 0.0654 | 0.0875 | 0.1032 | 0.1153 | 0.1365 | 0.1595 | 0.2144 | 0.2286 |
| **Ecological livability** | 0.1029 | 0.1191 | 0.1282 | 0.1126 | 0.0980 | 0.1443 | 0.1578 | 0.1114 | 0.1305 | 0.1485 | 0.1536 |
| **Rural cultural civilization** | 0.0275 | 0.0277 | 0.0591 | 0.0635 | 0.0388 | 0.0544 | 0.0659 | 0.0730 | 0.0643 | 0.0703 | 0.0696 |
| **Effective governance** | 0.0115 | 0.0325 | 0.0450 | 0.0624 | 0.0825 | 0.0799 | 0.0647 | 0.0778 | 0.0807 | 0.1423 | 0.1348 |

Data source: manually calculated

### 3.4 Result analysis

Table 4 and Figure 1 show that the level of rural revitalization system in Daqing has shown a continuous upward trend from 2012 to 2022.

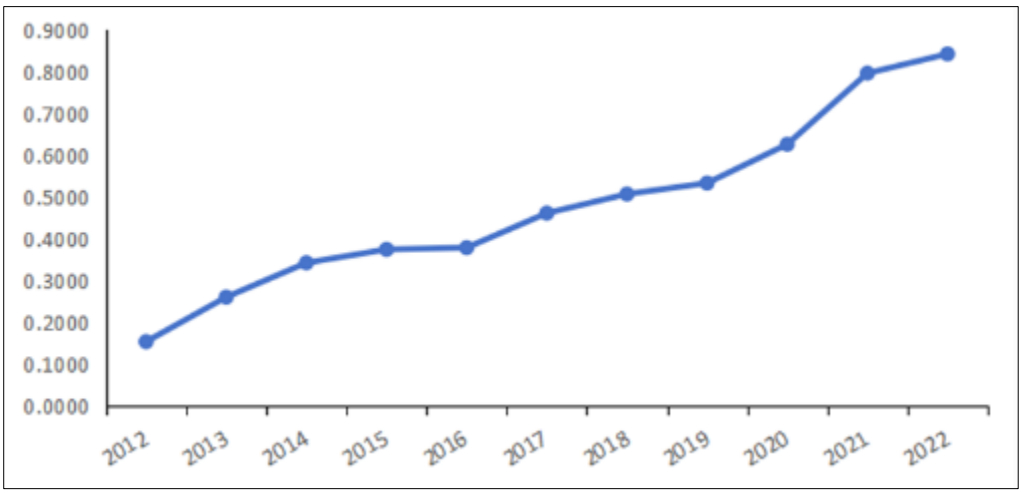


**Figure 1** Score of Daqing Rural Revitalization Level

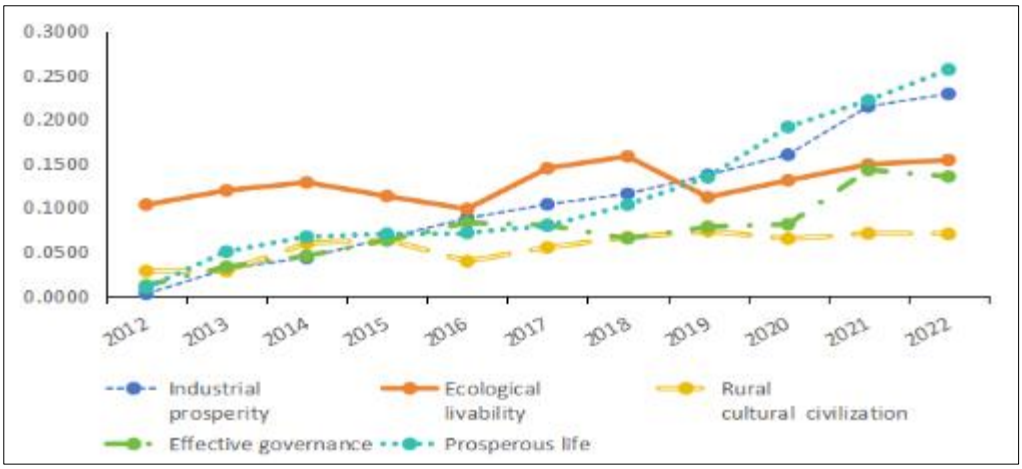


**Figure 2** Situation of Various Subsystems in Daqing Rural Revitalization

Figure 2 shows the changes in scores of five subsystems in the Daqing Rural Revitalization System. It can be seen that from 2012 to 2022, the two subsystems of industrial prosperity and affluent living have developed the best; The ecological livable subsystem has the greatest fluctuations, while the development of the rural civilization subsystem is the slowest.

Table 3 and Continued Table 3 show that in the subsystem of industrial prosperity, indicator X2 (rural industrialization level) has the highest weight. The data shows that rural electricity consumption, which represents the level of rural industrialization, continues to rise, which is also the foundation and manifestation of sustainable development of rural industries. In the affluent lifestyle subsystem, indicator X12 (degree of income gap between urban and rural residents) has the highest weight, and the data also shows that as the income of farmers in Daqing continues to increase, the income gap between urban and rural residents in Daqing continues to narrow. In the ecological livable subsystem, the weights of indicators X5 (degree of rural clean fuel use) and X6 (degree of rural greening) are the highest and close. However, X5 (the level of clean fuel use in rural areas) continues to rise, while X6 (the level of rural greening) continues to decline, which leads to fluctuations in the score of the ecological livable subsystem. In the rural civilization subsystem, the weights of indicator X7 (education, culture, and entertainment consumption level of rural residents) and indicator X8 (education level of rural population) are close, and the two indicators show a stable state with little change, resulting in a slow increase in the score of this subsystem.

## 4 Conclusion

The level of rural revitalization in Daqing City continues to rise, thanks to the sustained development of the Daqing Industrial Prosperity Subsystem and the Daqing Life Prosperity Subsystem. However, the trade-off between the use of clean fuels and rural greening in Daqing City has led to significant fluctuations in the ecological livable subsystem, and it is necessary to continuously improve the level of rural greening. Further increasing the consumption expenditure of rural residents on education, culture, and entertainment can be inferred as a sustained rise in the rural civilization subsystem.

## Compliance with ethical standards

*Acknowledgements*

This research is supported by the Philosophy and Social Sciences Planning Research Project of Daqing City. The project name is "Research on the Evaluation and Promotion Pathways of Rural Revitalization Development Level in Daqing City in the New Era ". (DSGB2023046).

## References

[1] Wang Jianing. Development Orientation of Liangjiahe from the Perspective of Rural Revitalization [J]. Reform, 2017 (11): 16-18

[2] Wei Houkai. Key and Difficulties in Implementing Rural Revitalization Strategy [J]. Shandong Economic Strategy Research, 2018, No. 336 (11): 34-35

[3] Chen Xiwen. Proposal of Rural Revitalization Strategy from the Perspective of Forty Years of Rural Reform [J]. Rural Work Communication, 2018, No. 725 (09): 19-23+2

[4] [4] Xue Xiujuan. Addressing the "Spiritual Shortcomings" of Rural Revitalization [J]. People's Forum, 2018 (05): 140-141

[5] Wen Tiejun. Ecological Civilization and Rural Revitalization Strategy from a Comparative Perspective [J]. Global Business Classics, 2018 (04): 98-109

[6] Zhang Yan, Zhao Yaqiao, Zhou Aluminum, Wang Qi, Feng Lu. Evaluation and Regional Comparison of Rural Revitalization Based on Improved TOPSIS Method [J]. China Agricultural Resources and Zoning, 2021,42 (02): 207-2017

[7] Zhan Guohui. Research on the Construction of Rural Governance Quality Evaluation System under the Rural Revitalization Strategy: A Three dimensional Analysis Based on Theory, Principles, and Indicator System [J]. Guangxi Social Sciences, 2019 (12): 59-65

[8] Jia Jin, Li Xuefeng, Shen Yun. Index System Construction and Empirical Analysis of Rural Revitalization Strategy [J]. Financial Science, 2018 (11): 70-82

[9] Chen Yanwei, Wang Qiang, Huang Heliang. Research on Performance Evaluation of County Rural Revitalization Development in Fujian Province [J]. Fujian Forum (Humanities and Social Sciences Edition), 2019, No.328 (09): 182-190

[10] Ma Chengwen, Xia Jie. Research on Statistical Evaluation of Regional Rural Revitalization Level in China [J]. Journal of Fuyang Normal University (Social Science Edition), 2019, No.192 (06): 120-125

[11] Chen Yangfen, Huang Xiujie, Wang Lijuan. Rural Revitalization and Evaluation in China from the Perspective of Multifunctional Theory [J]. China Agricultural Resources and Regionalization, 2018,39 (06): 201-209

[12] Shen Yun, Chen Hui, Chen Xiaojuan et al. Construction and Empirical Analysis of Evaluation Index System for Rural Industry Revitalization [J]. World Agriculture, 2020, No. 490 (02): 59-69

[13] Mao Jinhuang, Wang Lintao. Construction of an Evaluation Index System for Rural Revitalization: An Empirical Study at the Provincial Level [J]. Statistics and Decision Making, 2020,36 (19): 181-184.

## Author's short biography

**Yuzhong Sun** is an associate professor at School of Economics and Management of Heilongjiang Bayi Agricultural University. His research field is mainly concerned with China's urban-rural integration and other related issues in the macro field. The micro field mainly focuses on the financial performance and financial risk analysis of enterprises.

**Denan Kong** is a postgraduate student at Heilongjiang Bayi Agricultural University. Her research interests are urbanization related issues and enterprise performance evaluation.