

# Study on the Satisfaction of Rural Population with Rural Revitalization Strategy in Yantai

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**Abstract:** This paper takes farmers as the focus of the implementation of rural revitalization strategy, and uses IPA analysis to conduct a quantitative study on rural farmers' perceived importance and satisfaction with the implementation of local rural revitalization strategy in Yantai, Shandong Province, so as to provide a reference for decision making in a more scientific way to consolidate the achievements of poverty alleviation, prevent poverty-returning and truly realize rural revitalization in rural areas of Yantai in the future.

**Key Words:** Rural revitalization; Party branch-led cooperative; IPA; Satisfaction evaluation.

## 1. Research Problem and Methodology

Rural revitalization strategy is the strategy proposed by President Xi Jinping in his report of the 19<sup>th</sup> Party Congress on October 18<sup>th</sup>, 2017. The report of the 19<sup>th</sup> National Congress points out that agriculture, rural areas and farmers is a fundamental issue related to the people's livelihood of our country. Therefore, we must always take the "three rural issues" as the top priority of the whole Party and implement the strategy of rural revitalization.

Many scholars have reviewed the development achievements of rural revitalization in certain regions at home and abroad, and actively learned the lessons of rural development in China and overseas, which provide important inspirations for the concrete implementation of rural revitalization strategies in other regions. However, there are great differences between domestic and foreign villages, and there are also different degrees of differences related to the natural environment, history and culture, and rural development of each region in China. Therefore, the concrete implementation of rural revitalization strategy needs to avoid the misconception of homogenization and rigid application, and it is necessary to explore the development mode of rural revitalization adapted to regional characteristics.

In recent years, Yantai has creatively implemented the important instruction of President Xi Jinping to "create a model of rural revitalization in Qilu", and has taken the lead in the country to propose and put party branch-led cooperative into practice, forming a very distinctive "Yantai experience" and creating a replicable and extendable model for rural revitalization in the new era

Since the research literature on satisfaction evaluation of rural revitalization strategy is relatively rare, there is almost no literature on the evaluation of the quality of services provided by party branch-led cooperative during the implementation of rural revitalization strategy from the farmers' perspective in China. Therefore, this paper uses the IPA method to evaluate the perceived satisfaction with the quality of services provided by party branch-led cooperative from the perspectives of farmers.

### 1.1 IPA Analysis

This study uses the IPA (Importance-Performance Analysis) analysis, which is a popular and efficient satisfaction evaluation method in the academic field.

IPA analysis focuses on the relationship between the two dimensions of satisfaction (performance value) and importance (expectation value), which is the relationship between public perception and expectation. The basic structure is a two-dimensional space, with the X-axis representing importance and the Y-axis standing for satisfaction, and the average importance and satisfaction of each attribute is used as the splitting point between the X-axis and Y-axis, thus dividing the space into four quadrants. Different quadrants are defined according to different importance and satisfaction. In this

paper, it is divided into advantage, improvement, opportunity and maintenance quadrant based on the actual condition of Yantai.

## 1.2 Selection of Indicators

Based on the basic situation of rural areas in Yantai and the five first-level indicators and 26 specific indicators proposed in *the strategic plan for rural revitalization (2018-2022)*, using reference including *the Evaluation Index System of rural revitalization at the county level*, *the satisfaction of rural residents with their life* and *the satisfaction of rural residents with poverty alleviation policies*, etc., the following aspects are identified for IPA evaluation research: (1) Industrial Prosperity. The measurement indicators include grain production capacity, development of modern agricultural science and technology, processing of agricultural products, leisure agriculture and rural tourism, and development of collective industries in cooperatives. (2) Ecological Livability. It includes comprehensive utilization of livestock and poultry waste, areas covered by greenery, treatment of domestic waste, and transformation and popularization of sanitary toilets. (3) Local Custom Civilization. Measurement indicators contain number of village comprehensive cultural service centers, number of "civilized village", "health village", "happy village" and other honorary titles, strength of teachers in compulsory education (the proportion of full-time teachers with bachelor's degree or above), personal expenditure on education, culture and entertainment, and harmony in clan relations. (4) Effective Governance. The measurement indicators are village planning and management, comprehensive service stations, village rules and regulations, the secretary of the party organization who is also the head of the village committee, relationship between the party and the people, homecoming of outgoing talents and policies on talent attraction. (5) Affluent Living. Indicators include Engel's coefficient, income comparison with urban residents, penetration of running water, and hardening of roads in the village.

## 1.3 Questionnaire Design

The questionnaire mainly consists of three parts: the first part is the basic demographic characteristics of the surveyed farmers; the second part is the perceived ratings of farmers' expectations of the importance of each indicator; and the third part is the perceived ratings of farmers' satisfaction with the actual experience of each indicator.

Likert five-point scale is used to measure the variables, and the scale descriptions and scores are "very satisfied/very important" (5 points), "relatively satisfied/relatively important" (4 points), "average" (3 points), "less satisfied/less important" (2 points), and "very dissatisfied/very unimportant" (1 point).

## 1.4 Data Sources

From November 2020 to July 2021, the researcher conducted a questionnaire survey among rural residents in Laishan District, Penglai District and Longkou District of Yantai. Villagers with certain literacy and reading ability were asked to answer the questionnaire directly, while villagers with low literacy or dyslexia were assisted to complete the questionnaire by the interview. The questionnaire was distributed mainly in paper form, supplemented by an online electronic questionnaire (Wenjuanxing).

A total of 308 questionnaires were distributed and all of them were recovered. Excluding the unqualified questionnaires, the total number of qualified questionnaires was 300, with 100% recovery and 97.4% efficiency.

## 2. Empirical Analysis and Conclusion

### 2.1 Sample "Self-Selection" Bias Test

Since villagers' decision to join the party branch-led cooperative is usually influenced by factors such as household economic situation and social resource endowment in addition to personal characteristics, but these indicators are often difficult to observe or accurately measure. Therefore, whether to join the cooperative or not exists "self-selection". The villagers who have a strong desire for a certain service of the cooperative may be inclined to join them, and their importance evaluation of the service is higher. If we only study and compare the importance and satisfaction analysis of each indicator among villagers who join cooperatives, it may cause bias in the evaluation measurement, which is not conducive to the analysis of the actual implementation of rural revitalization strategy. In order to avoid the biased evaluation of cooperative service quality caused by the self-selection of the sample, this study compares and analyzes the importance of each indicator between the villagers who joined the cooperative and those who did not. As shown in Table 1, there is no significant difference between the indicators. This implies that there is no significant self-selection bias in the sample selected for this study, so the findings of this study are relatively objective and fair.

Table 1. T-Test Analysis of the Importance of Cooperative Services by Members and Non-Members

Importance	Non-member	Mean value	Member	Mean value	Difference
Grain production capacity	132	3.909	168	4.250	-0.341
Development of modern agricultural science and technology	132	3.727	168	4.214	-0.487
Processing of agricultural products	132	3.909	168	4.250	-0.341
Leisure agriculture and rural tourism	132	4.273	168	4.500	-0.227
Development of collective industries in cooperatives	132	4.455	168	4.500	-0.045
Comprehensive utilization of livestock and poultry waste	132	4.000	168	4.250	-0.250
Areas covered by greenery	132	4.591	168	4.571	0.019
Treatment of domestic waste	132	4.545	168	4.714	-0.169
Transformation and popularization of sanitary toilets	132	4.409	168	4.607	-0.198
Comprehensive cultural service centers	132	4.545	168	4.500	0.045
Number of honorary titles	132	4.500	168	4.607	-0.107
Strength of teachers in compulsory education	132	4.091	168	4.571	-0.481
Personal expenditure on education, culture and entertainment	132	4.227	168	4.464	-0.237
Harmony in clan relations	132	4.318	168	4.607	-0.289
Village planning and management	132	4.591	168	4.571	0.019
Comprehensive service stations	132	4.545	168	4.750	-0.205
Village rules and regulations	132	4.636	168	4.893	-0.256
The secretary of the party organization who is also the head of the village committee	132	4.727	168	4.929	-0.201
Work attitude and style of the secretary of the party branch	132	4.727	168	4.929	-0.201
Work attitude and style of the grassroots party organization	132	4.727	168	4.893	-0.166
Homecoming of outgoing talents	132	4.227	168	4.286	-0.058
Policies on talent attraction	132	4.136	168	4.286	-0.149
Engel's coefficient	132	4.182	168	4.071	0.110
Income comparison with urban residents	132	4.364	168	4.286	0.078
Penetration of running water	132	4.636	168	4.714	-0.078
Hardening of roads in the village	132	4.727	168	4.786	-0.058

## 2.2 Ranking Analysis of the Importance and Satisfaction of Cooperative Services

Based on the results of questionnaire, the importance and satisfaction mean values are calculated and ranked, and this study further conducts a significance analysis on the difference in cooperative services (P-I), which is shown in the following table.

Table2 Significance analysis of difference ( P-I )

Indicators	Importance mean value	Importance ranking	Satisfaction mean value	Satisfaction ranking	Difference (P-I)	T value	Two-tailed significance (P)
Grain production capacity	3.48	24	4.1	24	0.62	4.390	0.000
Development of modern agricultural science and technology	3.48	25	4	26	0.52	3.746	0.000
Processing of agricultural products	3.48	26	4.1	25	0.62	4.157	0.000
Leisure agriculture and rural tourism	4.36	15	4.4	16	0.04	0.286	0.776
Development of collective industries in cooperatives	4.58	13	4.48	14	-0.1	0.151	0.881
Comprehensive utilization of livestock and poultry waste	3.9	22	4.14	22	0.24	3.485	0.001
Areas covered by greenery	4.8	9	4.58	9	-0.22	-0.868	0.389
Treatment of domestic waste	4.86	6	4.64	8	-0.22	-1.043	0.302
Transformation and popularization of sanitary toilets	4.16	16	4.52	12	0.36	5.250	0.000
Comprehensive cultural service centers	4.76	11	4.52	13	-0.24	-1.098	0.278
Number of honorary titles	4.84	8	4.56	11	-0.28	-1.385	0.172
Strength of teachers in compulsory education	4.16	17	4.36	17	0.2	1.908	0.062
Personal expenditure on education, culture and entertainment	4.06	19	4.36	18	0.3	2.935	0.005
Harmony in clan relations	4.42	14	4.48	15	0.06	1.294	0.202
Village planning and management	4.68	12	4.58	10	-0.1	-0.85	0.399
Comprehensive service stations	4.76	10	4.66	7	-0.1	0.227	0.821
Village rules and regulations	4.88	2	4.78	4	-0.1	0.299	0.766
The secretary of the party organization who is also the head of the village committee	4.86	5	4.84	1	-0.02	1.528	0.133
Work attitude and style of the secretary of the party branch	4.88	3	4.84	2	-0.04	1.071	0.290
Work attitude and style of the grassroots party organization	4.84	7	4.82	3	-0.02	1.300	0.200
Homecoming of outgoing talents	3.96	20	4.26	20	0.3	2.68	0.010
Policies on talent attraction	3.88	23	4.22	21	0.34	3.145	0.003
Engel's coefficient	3.92	21	4.12	23	0.2	3.107	0.003
Income comparison with urban residents	4.14	18	4.32	19	0.18	2.090	0.042
Penetration of running water	4.88	4	4.68	6	-0.2	-1.159	0.252
Hardening of roads in the village	4.92	1	4.76	5	-0.16	-0.573	0.569

As can be seen from Table 2, in terms of perceived importance, the mean range of scores is 3.48-4.92, indicating that there are large differences in farmers' expectations of importance. The top three ranked in importance are: hardening of village roads, the village rules and regulations, and work attitude and style of the party secretary, with scores of 4.92, 4.88, and 4.88 respectively. The last three ranked in importance are: grain production capacity, development of modern agricultural science and technology, processing of agricultural products of the village, with a score of 3.48.

In terms of perceived satisfaction, the mean score range is 4.00-4.84, which is smaller in magnitude than the perceived importance, indicating that the satisfaction evaluation of the villagers' indicators is more concentrated. Among them, the three highest scores are the secretary of the party organization who is also the head of the village committee, work attitude and style of the secretary of the party branch, and work attitude and style of the grassroots party organization. The three lowest scores are grain production capacity, development of modern agricultural science and technology, processing of agricultural products of the village.

## 2.3 Analysis of P-I Difference and Paired Sample T Test of Cooperative Service

The P-I differences of cooperative members' perceptions of cooperative services are calculated, and paired sample T tests (95% confidence level) are conducted on the villagers' importance expectations and satisfaction. The results shows that 13 of the 26 indicators surveyed have positive P-I differences, which reveals the mean value of villagers' actual satisfaction is greater than that of perceived importance. 13 indicators have negative P-I differences, indicating that the village still needs further breakthroughs in many aspects at present. Secondly, according to the results of paired sample T test, the P value of paired sample T test of the 10 indicators including grain production

capacity, development of modern agricultural science and technology, processing of agricultural products of the village is less than 0.05, with significant difference statistically.

The P-I difference and significance test indicates that there is a large gap between villagers' expectations and satisfaction with the implementation needs of rural revitalization strategy, and only by further improving and upgrading the quality of services provided by party branch-led cooperative can we enhance farmers' satisfaction and sense of acquisition with rural revitalization.

## 2.4 IPA Analysis of Cooperative Services

The mean scores of importance and satisfaction of the 26 indicators are processed by using SPSS software and scatter plots were drawn. Here, the horizontal coordinates indicate the villagers' perceived satisfaction ratings for each indicator and the vertical coordinates indicate their perceived importance ratings for each indicator.

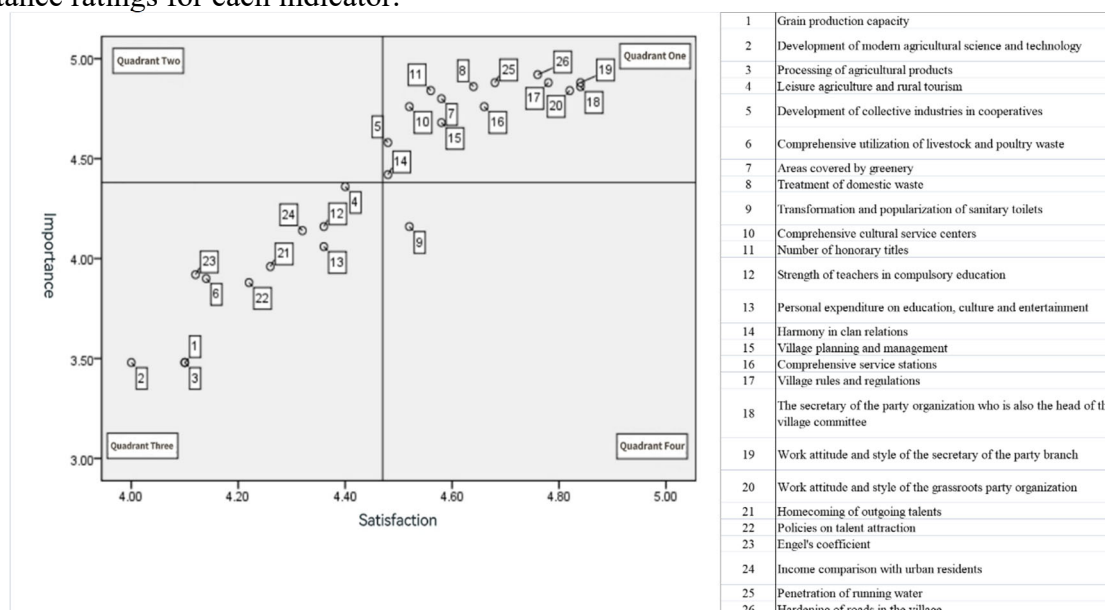


Figure 1. IPA location analysis map

As can be seen from Figure 1, the mean value of satisfaction is 4.46 and the mean value of importance is 4.38, which indicates that the implementation of rural revitalization in Yantai is relatively effective, and the rural population has a high evaluation. The intersection of these two mean values (4.46, 4.38) is used as the coordinate origin to divide the four quadrants of IPA, and each indicator is projected to the corresponding IPA quadrant according to the mean value.

The first quadrant is the advantage zone. The indicators in this area have higher importance and satisfaction ratings, and they are what villagers expect in demand and have higher perceived satisfaction. From the figure, it can be seen that 14 indicators fall in the first quadrant, which is the advantage of the current development of the sample villages and should continue to be maintained in the future. Combined with Table 2, it can be concluded that the indicators of work attitude and style of the secretary of the party branch, and work attitude and style of the grassroots party organization are in the top of the satisfaction and importance ratings. This indicates that party organizations have played an important role in the development process of the sample villages in this study, and in the future, efforts to promote the form of party branch-led cooperative should be increased in a certain range. Meanwhile, it is supposed to strengthen the capacity of leading, appealing, organizing and executing of rural party organizations, so as to give full play to the key role of organizational revitalization in rural revitalization.

The second quadrant is the improvement zone, in which the indicators within this area are considered by villagers to be of high importance, but the actual perceived satisfaction is not high. The absence of indicators in this quadrant implies that a majority of villagers are satisfied with the implementation of the local rural revitalization strategy, which shows that the local party branch has

made quite good achievements in leading the development of the cooperatives, and has really fulfilled the aim of serving and doing practical things for the villagers.

Quadrant three is the opportunity zone, where the indicators in this area are not considered by the villagers to be of high importance and satisfaction. A total of 11 indicators fall in this quadrant, including grain production capacity, development of modern agricultural science and technology, processing of agricultural products, leisure agriculture and rural tourism, comprehensive utilization of livestock and poultry waste, strength of teachers in compulsory education, personal expenditure on education, culture and entertainment, homecoming of outgoing talents and policies on talent attraction, Engel's coefficient, income comparison with urban residents. The services that generally fall in this quadrant do not need to be focused on at this stage. However, the P-I differences for the three indicators of grain production capacity, development of modern agricultural science and technology, and processing of agricultural products are all greater than 0.5, and the P-values are all less than 0.01, which shows that there is a significant difference between the villagers' actual satisfaction and perceived expectations for these four indicators. This indicates that although the improvement of the four types of services provided by party branch-led cooperative should not be given a priority, so as to raise the villagers' perception and satisfaction with the services and the village's competitiveness in future development, they can be treated as the secondary key improvement projects and be improved and upgraded when the external conditions and self-strength permit.

Quadrant four is the maintenance zone, where the indicators within this zone have a low level of perceived importance but a relatively high level of satisfaction among villagers. The P-I difference of 0.38 is greater than 0 for the indicators of sanitary toilet renovation and popularity, and the P-value is less than 0.05, which is a significant difference. This indicates that villagers have low expectation of the demand for the renovation and popularization of sanitary toilets in their village, but their satisfaction exceeds expectations. Villagers may have been used to using traditional dry latrines and have low expectation of demand in this regard, but the transformation of sanitary latrines has actually improved the living conditions of villagers, enhanced their quality of life, and increased their sense of acquisition from the rural revitalization strategy, and such train of thought based on the smallest details should be continued in the future rural revitalization work.

### 3. Implications

This paper uses IPA analysis to study the current situation of rural residents' perceptions of the services provided by party branch-led cooperative in Yantai by conducting a survey of rural residents in rural areas of Yantai. It visually demonstrates farmers' real attitudes toward the quality of services of cooperatives in their villages, and drawing the following four suggestions.

1). We should comprehensively strengthen the development of rural basic organizations, raise the residents' awareness of modern democracy, select the wise and capable. Moreover, measures should be taken in implementing the system of basic party building and cadre job list, and we need to focus on cultivating the work attitude and style of cadres, give play to the pioneering role of party members, and improve rural social governance.

2). We should make use of science and technology to empower the village, grasp the opportunity for innovation. With the help of modern agricultural technology and tools, it is supposed to promote higher yields of grain and cash crops in the village supplemented by deep processing technology, to achieve a significant improvement of agricultural technology and contribute to the rural economy.

3). Great efforts should be made to improve the rural living environment and create a new look for the countryside by focusing on cleaning up the environment, treating pollution and planting trees. The progress of infrastructure construction is expected to realize the interconnection of urban and rural infrastructure and the sharing of public facilities, so as to ensure the quality of life of the villagers.

4). It is suggested to build a characteristic rural culture, integrate rural culture with urban public culture, enhance farmers' spirits, cultivate and foster new ideas in line with modern requirements, in order to realize harmony among families, neighbors, and cadres and the masses.

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