Why Do Rural Residents Participate in "Rural Revitalization Strategy"-- Based on Structural Equation Model

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Abstract:

"The strategy of rural revitalization" is an important strategic measure to build a well-off society in an all-round way, and it is particularly important to mobilize the enthusiasm of rural residents to participate. This paper uses structural equation model analysis to examine the impact of material needs, environmental needs, social needs and spiritual needs on rural residents' participation in effect of "strategy" implementation. The results show that material needs and environmental needs play a major role in the implementation of the strategy. In general, environmental needs have the greatest impact on rural residents' participation in the implementation of the "strategy", followed by material needs; social needs and spiritual needs for high-level needs, but the impact is smaller. Therefore, in the short run, it is expected to improve the material and environmental needs of farmers' participation in the implementation of the strategy; in the long run, it will be helpful to guide and cultivate the social and spiritual needs of rural residents' participation in the implementation of the strategy.

Keywords: Rural residents, Motivation, Rural Revitalization Strategy, SEM.

I. INTRODUCTION

Until now, great progress has been made in rural development, but the urban-rural dual structure is still the biggest structural problem in China, and the lagging agricultural and rural development is still the most prominent manifestation of China's unbalanced and insufficient development [1]. For example, in terms of income, the income of rural residents was 2687.76 USD in 2020, with an actual increase of 3.8%, the income of urban residents was 6877.32 USD in the same period, with an actual increase of 6.5%, and the income difference between urban and rural residents was 2.56 [2], Of course, there is still a gap between urban and rural per capita supply of public goods and per capita capital investment in economic construction. In order to solve the above problems, in February 2018, Chinese government issued the opinions on the implementation of" the Rural Revitalization Strategy" (referred to as the "strategy"), which requires overall promotion and comprehensive revitalization in accordance with the general requirements of industrial prosperity, ecological livability, rural civilization and affluent life; By 2050, rural areas will be revitalized in an all-round way, and agriculture will be strong, rural areas will be beautiful and farmers will be rich in an all-round way. In terms of the implementation principles of the "strategy", it is clearly

proposed to adhere to the dominant position of farmers and highlight the importance of rural residents in the implementation of the strategy, but it does not point out what factors affect the participation of rural residents and how to motivate rural residents to participate in the implementation of the "strategy". Therefore, the implementation of the strategy will help rural residents to better understand the factors affecting the implementation of the strategy.

According to the literature, the paper will find the influencing factors of rural residents' participation in the implementation of the "Rural Revitalization Strategy", determine the logical structure relationship between the influencing factors and the implementation of the "strategy", construct the research theoretical framework, carry out empirical research, and put forward countermeasures and suggestions. Specifically, it includes the following three aspects: (1) theoretically, it establishes the logical analysis framework of the main influencing factors and the enthusiasm of participating in the implementation of the "strategy"; (2) Empirically, 252 samples were analyzed by using structural equation model to test the impact of influencing factors on the enthusiasm of participating in the implementation of the "strategy"; (3) In practice, according to the research results, this paper puts forward strategic suggestions to encourage rural residents to participate in the implementation of the "strategy".

II. LITERATURE REVIEW

Since the state issued the "strategy" opinions, scholars have carried out interpretation from the connotation and implementation, but there are few literatures on their willingness to participate from the perspective of rural residents, which are only mentioned indirectly in some literatures. In the implementation of the "strategy", farmers' subjectivity. Zhou Xingyu emphasized highlighting the subjectivity of farmers in the implementation of Rural Revitalization Strategy, focusing on giving full play to the subjective and dynamic role of farmers [3]; We should pay attention to the role of "people", focus on targeted training for local people in rural areas, and improve the overall quality of existing people [4]; Liu Heguang also proposed to strengthen the mobilization and publicity of farmers; Activate the enthusiasm of participants and vigorously implement the Rural Revitalization Strategy [5]. In terms of issues concerned by farmers in the implementation of the "strategy", Wang Chao believes that rural areas are still areas where the poor are concentrated, and targeted poverty alleviation in rural areas is a major decision to implement the historical mission, responsibilities and requirements and phased work tasks of the Rural Revitalization Strategy [6]; Moreover, in the information age, farmers are also eager to increase their wealth through new production methods. In order to implement the national strategy of rural revitalization, we must implement "technological governance" and realize "technological upgrading" at the three levels of space technology, information technology and agricultural technology [7]. In terms of development mode, Han Jun believes that rural revitalization should be led by green development [8]; We must be guided by green development, that is, we should establish the concept of green development, promote green production mode, protect the green industrial environment and build a green policy system [9]. In terms of safeguard measures, Liu Huihui proposed to implement the Rural Revitalization Strategy to promote the overall, fundamental and long-term development of agriculture, rural areas and farmers. The basic work of upgrading the supply of rural public goods must be optimized [10]. Of course, in implementing the Rural

Revitalization Strategy, grass-roots rural organizations must establish advanced governance concepts and constantly promote the modernization of rural governance [11]. In terms of soft environment, Ji Dekui believes that for rural revitalization, local culture should become the spiritual power source of Rural Revitalization [12]; As an important force, xinxiangxian can play the roles of "bridge", "think tank" and "model", and play an irreplaceable role in Rural Revitalization and rural governance [13]; Culture and socialist core values are also conducive to strengthening farmers' awareness of integrity, promoting the development of rural economy and improving the rural financial environment [14]. Understand the material and psychological needs of rural farmers through the questionnaire of Jiang Jiao's [15]. In short, in the implementation of the "strategy", farmers look forward to better education, more stable work, more satisfactory income, more reliable social security, higher level of medical and health services, more comfortable living conditions and more beautiful environment, and their children can grow up better, work better and live comfortably [16].

According to the opinions of the "strategy" and the views of the above scholars, although they did not clearly put forward what factors affect rural participation in the implementation of the "strategy", we can also see the importance of material needs, environmental needs, social needs and spiritual needs in the implementation of the "strategy". In addition, in the "strategy", they clearly put forward to improve the quality of agricultural development; Promoting rural green development; Prosper rural culture; Strengthening rural basic work; Improve the level of rural people's livelihood security; The implementation work in the fight against poverty and other aspects also confirms that the above needs are closely related to the interests of farmers . In 1943, Maslow first proposed the hierarchy of needs theory in his book human motivation theory. This theory divides human needs into five levels from low to high like a trapezoidal ladder, namely: physiological needs, security needs, social needs, respect needs and self realization needs [17]. Therefore, the influencing factors of farmers' participation in the implementation of the "strategy" can also be divided into low-level material needs, environmental needs and high-level social and spiritual needs.

III. RESEARCH HYPOTHESIS

The "strategy" is promoted by the state from top to bottom. For individual farmers, their behavior is dominated by the interests of rational people. When they participate in the implementation of the "strategy", they think more about what benefits they can obtain. According to the literature, the demands of farmers' participation in the implementation of the "strategy" are mainly manifested in material needs (Abbreviated as MN), environmental needs (Abbreviated as EN), social needs (Abbreviated as SN) and spiritual needs (Abbreviated as SPN), that is, whether farmers actively participate in the implementation of the "strategy" is mainly affected by these four need factors. Specifically, this paper proposes that rural residents' participation in the implementation of the "strategy" includes the following four research hypotheses:

Hypothesis 1: the stronger the material needs of rural residents, the higher the enthusiasm to participate in the implementation of the "strategy".

Hypothesis 2: the stronger the environmental needs of rural residents and the higher the enthusiasm to participate in the implementation of the "strategy".

Hypothesis 3: the stronger the social needs of rural residents and the higher the enthusiasm to participate in the implementation of the "strategy".

Hypothesis 4: the stronger the spiritual needs of rural residents, the higher the enthusiasm to participate in the implementation of the "strategy".

IV. RESEARCH METHODS, DATA SOURCES AND SAMPLE CHARACTERISTICS

4.1 Research Methods

Structural equation model is a covariance structure model. A complete covariance structure model includes two sub models: measurement model and structure model. The former mainly investigates the relationship between observation indexes and latent variables, while the latter investigates the relationship between latent variables. The measurement model is the reliability description of observation variables, and its equation is:

$$X = \Lambda_x \xi + \delta \text{ , } Y = \Lambda_y \eta + \varepsilon \tag{1}$$

Among them, X and Y are observable independent variables and dependent variables respectively; ξ 、 η They are unobservable exogenous and endogenous variables respectively; δ 、 ε Are the measurement errors of X and Y respectively; Λ_x is the exogenous latent variable of X index ξ Factor load matrix on; Λ_y is the endogenous latent variable of Y index η Factor load matrix on.

The structural model specifies the causal relationship between the assumed potential exogenous variables and potential endogenous variables, and its equation is:

$$\eta = \beta\eta + \Gamma\xi + \zeta \tag{2}$$

Among them, β Describe the relationship between potential endogenous variables, Γ Describing the influence of potential exogenous variables on potential endogenous ζ variables is the residual, that is, the unexplained part of the model. The structural variance model generally uses Amos software to realize drawing and calculation. According to the above assumptions, model I is constructed. The structural relationship between material needs, environmental needs, social needs and spiritual needs and rural residents' participation in the implementation of the "strategy" is shown in Fig 1.
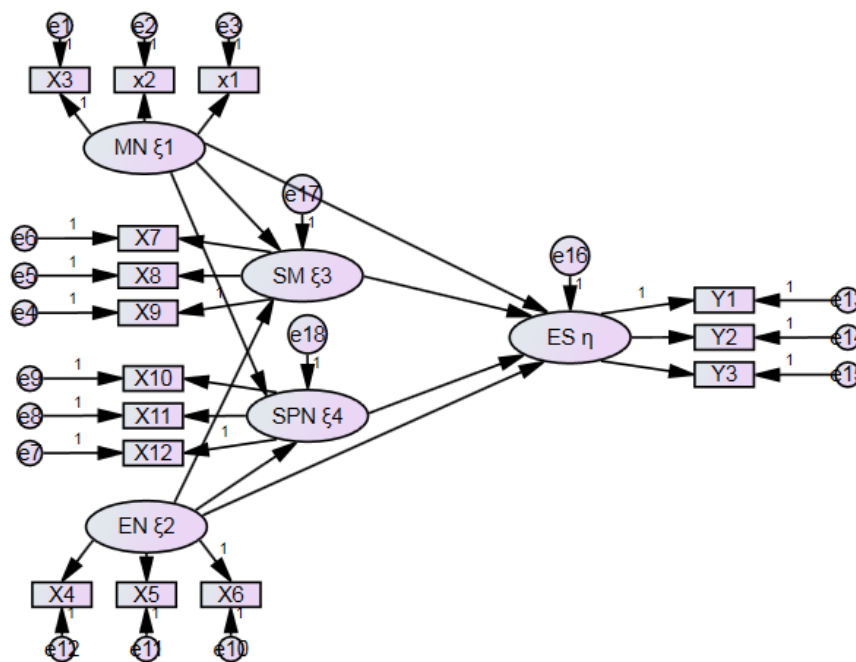
Fig 1: Structure of influencing factors of rural residents' participation in the implementation of the "strategy" (model I)

4.2.Data Sources and Sample Characteristics

In order to understand the influencing factors of rural residents' participation in the implementation of the "strategy", the paper adopts the questionnaire to collect data. The questionnaire is divided into three parts: survey description, basic information of interviewees and survey content. According to the relevant literature in the review, five latent variables related to the implementation of the "strategy": material needs(MN), environmental needs(EN), social needs(SN) and spiritual needs, (SPN) and effect of "strategy" implementation(ES). For each latent variable, three observable variables are designed according to the needs to collect data, a total of 15, as shown in TABLE I. The observable variables are designed according to the five-level system of Likert scale and assigned as follows: very disagree = 1, disagree = 2, neutral = 3, agree = 4, very agree = 5. After the preliminary trial survey and revision of the questionnaire, the sample selection adopts the cluster sampling method. Seven villages in Huizhou District and Qimen County, Huangshan City, Southern Anhui Province are selected for survey. A total of 280 questionnaires are distributed, 28 invalid questionnaires are excluded, and a total of 252 valid questionnaires are collected. The total effective rate of the questionnaire is 89.4%. In 252 valid questionnaires, 135 male respondents, accounting for 53.6%, 117 female respondents, accounting for 46.4%; In the occupational composition, there are 100 farmers and 152 other occupations; In the age distribution, there are 102 people over the age of 50 and 143 people under the age of 50; There are 181 people above junior middle school, including 46 people above university; There are 53 people with a family income of 10000-30000, 72 people with a

family income of 40000-60000, 45 people with a family income of 70000-90000 and 50 others. The data were collected by spss24 0 software and amos24. 0 software.

TABLE I. Questionnaire design and reliability test of sample validity

Unobservable variable	Observable variable	Factor load	α value
MN ξ_1	I want to get higher income X1	0.79	
	I want to have a brand of agricultural products X2	0.73	0.79
	I want to build a modern farm X3	0.56	
EN ξ_2	I think the village is clean and hygienic X4	0.60	
	I want to produce more green agricultural products X5	0.56	0.823
	I want to have measures to protect the environment X6	0.59	
SN ξ_3	I want to get better social security X7	0.64	
	I want to have better organization and management X8	0.65	0.86
	I want to build a more equitable rural society X9	0.69	
SPN ξ_4	I want to improve the quality of rural residents X10	0.63	
	I want to improve the rural spirit X11	0.61	0.808
	I want the countryside to have more cultural life X12	0.48	
ES η	I want to be strong in agriculture Y1	0.72	
	I want be beauty in rural Y2	0.80	0.865
	I want farmers to be rich Y3	0.77	
All samples			0.916

Before the empirical analysis of the data, it is generally necessary to test the validity and reliability. Exploratory factor analysis (EFA) was used to analyze the validity of the questionnaire. It was found that the load coefficient of each latent variable on the observation variable was higher than 0.5, as shown in TABLE I, indicating that more than 50% of the variance of the observation variable can be reflected by the latent variable[18]; Reliability generally carries out Cronbach alpha coefficient analysis on the data. After calculation, it is found that the Cronbach's alpha coefficient of the influencing factors of each latent variable is greater than or equal to 0.8, and the cronbachs alpha coefficient based on the standardized term of all samples is 0.916. See TABLE I, which shows that the internal consistency of the questionnaire is very high, and the data collected by the questionnaire is very reliable.

V. RESULT ANALYSIS

5.1 Model Inspection and Correction

Use amos24 0 software draws the structural path map of influencing factors of rural residents participating in the implementation of the "strategy", as shown in Fig 1. Import data and estimate. The specific results of fitting data of model I are shown in TABLE II. From the perspective of absolute fitness, $X2/df=3.736$, slightly greater than 3; Both GFI and AGFI were close to 0.9; In terms of growth suitability, among the nine indicators, NFI, RFI, IFI, TLI and CFI are all above 0.8, very close to 0.9. Generally speaking, there is a small gap between the model goodness of fit index of model I and the optimal standard, which is generally good, but each index may continue to be optimized, so model I needs to be modified appropriately.

TABLE II. Fitting index and judgment standard of structural equation model

Index	Fit index	ModelI	ModelII	Judgment standard
		Model		
Absolute fit index	X2/df	3.736	2.451	1<X2/df<3
	GFI	**0.879↓**	0.911	>0.9
	AGFI	**0.820↓**	**0.866↓**	>0.9
Value-added fit index	RMSEN	**0.104↑**	0.076	<0.08
	PGFI	0.593	0.607	>0.5
	PNFI	0.669	0.696	>0.5
	PCFI	0.693	0.721	>0.5
	NFI	**0.867↓**	0.914	>0.9
	RFI	**0.828↓**	**0.887↓**	>0.9
	IFI	**0.899↓**	0.947	>0.9
	TLI	**0.868↓**	0.930	>0.9
	CFI	**0.898↓**	0.947	>0.9

(1) It is corrected according to whether the regression results are significant ,as shown in TABLE III. Through the regression data, it is found that the path of participating in the implementation of the "strategy" < - social needs is negative, P = 0.574 > 0.05, which is not significant, so we can consider deleting this path; Although the path of spiritual need < - material need estimate is positive, P = 0.264 > 0.05, which is not significant. You can also consider deleting this path.

TABLE III. Model correction index

Covariance Correction Index	MI	Par chang	Regression coefficient correction index	MI	Par chang
MN<-->EN	36.030	0.106	X3<-EN	38.231	0.412
e1<-->EN	38.231	0.160	X3<- SN	40.922	0.417
e7<-->e12	23.934	0.113	X3<- SPN	37.046	0.506

(2) The size of the MI is corrected according to the index ,as shown in TABLE III. MI index can be divided into covariance correction index and regression coefficient correction index. These two large MI index values are listed in TABLE II. Based on the persuasion of theoretical explanation, the paper only uses covariance correction index to correct the model. According to the size of MI index, it is found that there is a strong correlation between material needs and environmental needs, e1 and environmental needs, e7 and e12, and the two are linked by double arrows in the structure diagram, It can greatly reduce the chi square value.

After correction, model II is obtained. The structural relationship is shown in Fig 2, which is shown in amos24 0 software. See TABLE II for the specific test results of model II. It is found that X2/df=2.451, less than 3; GFI=0.911, AGFI also improved, closer to 0.9; Among the 9 indicators of value-added fitness, except RFI, all other indicator data meet the optimal standard. Through modification, the insignificant path is removed and the correlation connection is added, so the performance of model II is more concise and optimized.
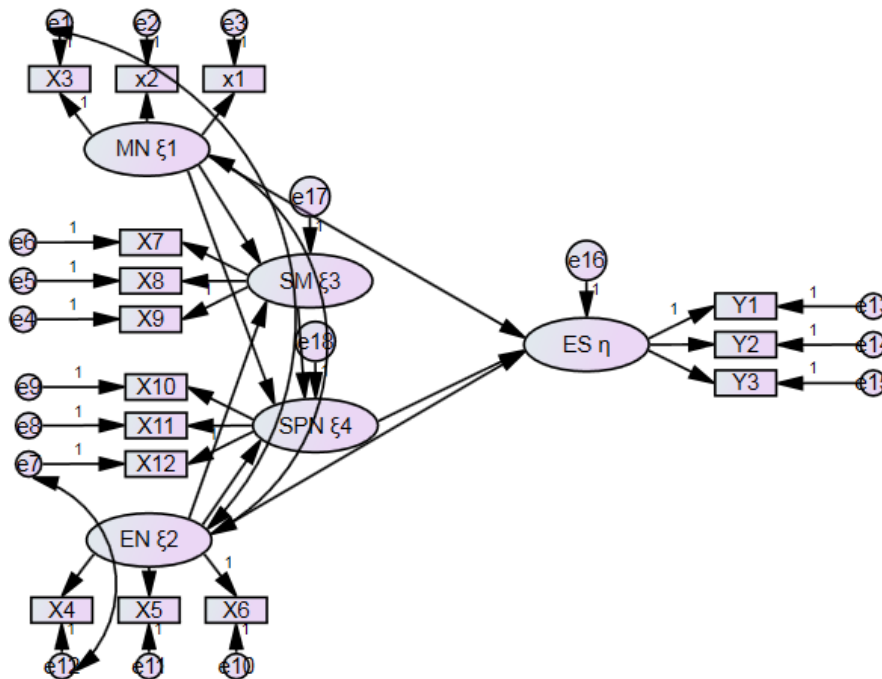
Fig 2: revised structure of influencing factors of rural residents' participation in the implementation of the "strategy" (model II)

5.2. Empirical Results

According to amos24 0 software, the standardized path coefficients among the variables of model II are obtained. See TABLE IV for details. The direct path coefficients of material needs, environmental needs, spiritual needs and rural residents' participation in the "strategy" implementation variables are all positive, and the p value is all less than 0.05, indicating that hypothesis 1, hypothesis 2 and Hypothesis 4 are tenable; There is no direct path relationship between social needs and rural residents' participation in the implementation variables of the "strategy", but there is an indirect path relationship, which is positive, and the p value is less than 0.05. Hypothesis 3 is partially supported. The specific influence relationship between variables is as follows.

(1) There is a direct path and an indirect path for the impact of material needs on rural residents' participation in the implementation of the "strategy". The direct path coefficient of material need motivation to rural residents' participation in the implementation of the "strategy" is 0.302, hypothesis 1 is true; The indirect path is the material needs →the social needs →the spiritual needs →the participation in the implementation of the "strategy", the path coefficient is 0.037, and the total path coefficient is 0.339, indicating that the motivation of material needs plays an important role in the direct path of participation in the implementation of the "strategy".

(2) There are one direct path and two indirect paths for the impact of environmental need motivation on the implementation of the "strategy". The direct path coefficient is 0.308, and hypothesis 2 is true; Indirect path 1 is the environmental needs → the social needs → the spiritual needs →the participation in the implementation of the "strategy", and the path coefficient is 0.060; Indirect path 2 is the environmental needs →the spiritual needs →the participation in the implementation of the "strategy", with a path coefficient of 0.048 and a total path coefficient of 0.419, which is greater than the path coefficient of material needs for participation in the implementation of the "strategy", indicating that the impact of environmental needs motivation on rural residents' participation in the implementation of the "strategy" is greater than material needs, which plays a major role in rural residents' participation in the implementation of the "strategy"

(3) Social and spiritual needs have a special impact on the implementation of the "strategy". Among them, social needs motivation has no direct impact on the implementation of the "strategy", but indirectly affects the implementation of the "strategy" through spiritual needs. The path coefficient is 0.115, and the assumption is valid; The motivation of spiritual needs has only a direct impact on the implementation of the "strategy", without indirect impact. The path coefficient is 0.179. Hypothesis 4 is true. The path coefficients of both are less than the path coefficients of material needs and environmental needs, indicating that the impact of social needs and spiritual needs on Rural residents' participation in the "implementation" is less than that of material needs and environmental needs.

TABLE IV. Estimation results of model path coefficient

Unobservable variable	Path Coefficient Type	Symbol	Coefficient value
MN ξ1	direct path coefficient	β1	0.302
	Indirect path coefficient 1	β13β34β4	0.321×0.641×0.179=0.037
	total path coefficient	β1+β13β34β4	0.339
EN ξ2	direct path coefficient	β2	0.308
	Indirect path coefficient 1	β23β34β4	0.54×0.641×0.179=0.060
	Indirect path coefficient 2	β24β4	0.269×0.179=0.048
	total path coefficient	β2+β23β34β4+β24β4	0.419
SN ξ3	direct path coefficient	β3	0
	Indirect path coefficient	β34β4	0.641×0.179=0.115

	total path coefficient	$\beta34\beta4$	0.115
SPN $\xi4$	direct path coefficient	$\beta4$	0.179
	total path coefficient	$\beta4$	0.179

VI. CONCLUSION AND SUGGESTIONS

Rural residents' participation in the implementation of the "strategy" is affected by many factors. Based on the correlation and causality between variables, the paper uses the structural equation model analysis method to establish model I. after introducing the data operation and analysis, the model is appropriately modified according to the relevant indicators to obtain model II, and analyzes the material needs, environmental needs and The impact of social needs and spiritual needs on rural residents' participation in the implementation of the "strategy", draw the following conclusions and suggestions.

First, from the perspective of direct path impact, rural residents' participation in the implementation of the "strategy" is mainly affected by material needs motivation and environmental needs motivation. Therefore, in the implementation of the "strategy", by improving the expectation of material needs and environmental needs, we can encourage rural residents to participate in the implementation of the "strategy".

Second, from the perspective of the overall path impact, among the material needs, environmental needs, social needs and spiritual needs, the environmental needs have the greatest impact on rural residents' participation in the implementation of the "strategy", followed by the material needs, the social needs and spiritual needs with less impact, indicating that the environmental factors have been given high expectations in the implementation of the "strategy". Therefore, in the short term, the implementation of the "strategy" and putting the improvement of rural ecological environment in the first place can well stimulate the enthusiasm of rural residents to participate in the "strategy".

Third, although the impact of rural residents' participation in the implementation of the "strategy" is low, it is not only an important intermediate variable in the path, but also the ultimate goal of the implementation of the "strategy", which is often ignored by rural residents and basic organizers in terms of the importance of influencing factors. Therefore, in the long run, the implementation of the "strategy" should pay attention to guiding and cultivating the awareness of participants and organizers, which will be conducive to the realization of the ultimate goal of the "strategy".

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