Research on Influencing Factors of Resource Efficiency of Tobacco Farmer Cooperatives Based on Interpretive Structural Model

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ABSTRACT. *This paper uses literature metrology method to statistical analyze related literatures. 14 influencing factors of Resource Efficiency common benefit mechanism of tobacco farmer cooperatives are determined and selected from predecessors' research achievements. Relational structure of 14 influencing factors are analyzed by ISM model. Results show that collective asset security, operational efficiency of Resource Efficiency, flexibility of collective assets application, Resource Efficiency allocation and Resource Efficiency preservation are fundamental factors. The study has important significance for grasping the formation, development and evolution mechanism of Resource Efficiency common benefit mechanism of tobacco farmer cooperatives.*

1. Introduction

In reality, some farmers cooperatives did not implement quantitative distribution of external subsidy assets. Its beneficiaries are often just a handful of core members. The amount of money in member account column "quantify share of external subsidy funds""quantify share of donated property" is casual, so cooperative cohesion decline. Therefore, research on influencing factors of Resource Efficiency common benefit mechanism of tobacco farmer cooperatives is especially important.

At home and abroad, there are few studies on Resource Efficiency common benefit mechanism of tobacco farmer cooperatives. Wang Li (2014) pointed out that the development form of collective economy was rural community stock cooperative. Its essence was to quantify collective assets to each rural community members who accord with certain conditions. So influencing factors of Resource Efficiency common benefit mechanism of tobacco farmer cooperatives mainly have flexibility of collective assets application, collective asset income rights, collective asset

compensation rights, collective asset mortgage, collective asset security right[1].

Kong Youli (2014), in the analysis of property rights of rural community share economic cooperatives, pointed out that, in most developed rural areas, there are not directly link between collective assets and farmers interests, assets operation was bad, collective assets massively lost. Therefore, influencing factors of Resource Efficiency common benefit mechanism of tobacco farmer cooperatives mainly have management efficiency of Resource Efficiency, Resource Efficiency protection, Resource Efficiency appreciation, Resource Efficiency allocation, Resource Efficiency share[2]. Shandong province, through collective property rights reform, quantifies collective asset shares to organization members of village economic. The shares held by collective economic organization members form community economic professional cooperatives. Community economic cooperatives as an independent legal person and market players, bear collective asset management, operation and investment functions, establish collective property right system with clear subject and ownership, clear responsibility and authority, strict protection [3].Chinese Rural Cooperative Economic Management Institute, Zhang Xiaoshan (2015) proposed collective assets cure equity, land rights and real right by right confirmation, registration and certification work, clear property rights. Its essence is to determine the shares of collective economic organization members to collective assets or resources at a certain point, determine the fairness of starting point. In the future, collective economy development direction will be from closed to open, from curing to flow, curing is to get a better flow, on the basis of clear property rights, the joint-stock form of cooperation is conducive to promoting the flow of equity, land rights and real right, increases funding, expands stocks[4]. We pay relatively little attention on orders enterprises investment subsidies or donations, attention to property particularity of cooperatives Resource Efficiency is also not enough.

2. Influencing Factors Determination of Resource Efficiency of Tobacco Farmer Cooperatives

Literature metrology studies quantity, quality and application of essence and structure about various types of documents using theory and method of mathematics, statistics and logic[5]. In this paper, this method is used to determine and select influencing factors of Resource Efficiency common benefit mechanism. Chinese journal full-text database did not have papers about influencing factors of Resource Efficiency common benefit mechanism of tobacco farmer cooperatives before 2000. There are 34 papers of which title contain "influence factors of Resource Efficiency common benefit mechanism of tobacco farmer cooperatives" in Chinese journal full-text database from January 2000 to July 2015. With literature metrology method, we analyzed influencing factors that were studied or mentioned in various literatures, and got 14 important factors, including flexibility of collective assets application, collective asset income rights, collective asset compensation rights, collective asset mortgage, collective asset security right, management efficiency of Resource Efficiency, Resource Efficiency protection, Resource Efficiency appreciation, Resource Efficiency allocation, Resource Efficiency share, clear property rights,

equity curing, land rights curing and real right curing.

3. Relationship Structure Analysis of Influencing Factors

3.1 Determination of Relationship Between Various Factors

In order to analyze the impact of these factors, we establish a interpretation structure model[6]. First, combined with previous research results, we clarify logical relationship between various factors, as shown in figure 1. The "A" represents the row factors have a direct impact on the column factors. The "V" represents the column factors have a direct impact on the row factors. "X" represents the row factors and the column factors have a direct impact on each other. "O" represents the row factors and the column factors do not have a direct impact on each other.

$$r_{ij} = \begin{cases} 1, & S_i \text{ directly impact } S_j \\ 0, & S_i \text{ not directly impact } S_j \end{cases},$$

$$R = \begin{bmatrix} 0 & 1 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 0 & 1 & 0 & 1 & 0 & 0 & 1 & 0 & 0 & 1 & 0 & 1 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 \\ 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & 1 \\ 1 & 1 & 1 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 1 & 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 \\ 0 & 1 & 0 & 0 & 1 & 0 & 0 & 1 & 0 & 1 & 0 & 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 0 & 1 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 1 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 1 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 1 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

3.2 Relationship Between Different Levels of Various Factors

The reachable matrix $M = (R+I)^4$ is obtained by correlation matrix R, and I is the 15 order unit array, M is calculated by Matlab software.

(1) The first node of influencing factors can be obtained from data in table 1: $L_1 = \{15\}$.

(2) Delete line 15 and column 15 of reachable matrix, get the second node: $L_2 = \{2,4,11,12,13,14\}$.

(3) Delete line 2,4,11,12,13,14 and column 2,4,11,12,13,14, get the third node: $L_3 = \{5,8,10\}$.

(4) In the same way, the fourth node and the fifth node: $L_4 = \{1,3,7,9\}$, $L_5 = \{6\}$.

According to above analysis, we establish interpretive structural model of

influencing factors of Resource Efficiency common benefit mechanism of tobacco farmer cooperatives, as shown in figure 2.

3. Conclusion

Research on the relationship structure between influencing factors, we can find out surface direct influencing factors, middle and indirect influencing factors, fundamental influencing factors. Collective asset security right, management efficiency of Resource Efficiency, flexibility of collective assets application, Resource Efficiency allocation and Resource Efficiency protection are fundamental influencing factors, which produce deep and fundamental impact on the formation, development and evolution of Resource Efficiency common benefit mechanism of tobacco farmer cooperatives. Distinguishing function levels and their relationship of each influencing factor has an important significance for grasping the formation, development and evolution mechanism of Resource Efficiency common benefit mechanism of tobacco farmer cooperatives.

Acknowledgement

Reference

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