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Explaining Peasants' Intention and Behavior of Farmland Trusteeship in China: Implications for Sustainable Agricultural Production

Jianying Xiao [1], Yan Song [2] and Heyuan You [3],*

1   School of Public Policy & Management, China University of Mining and Technology, Xuzhou 221116, China; xiaojianying@cumt.edu.cn
2   Department of City and Regional Planning, the University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-3140, USA; ys@email.unc.edu
3   School of Public Administration, Zhejiang University of Finance and Economics, Hangzhou 310018, China
*   Correspondence: youheyuan@zufe.edu.cn

Abstract: Developing countries generally face the problem of sustainable agricultural production during the process of agricultural modernization. Farmland trusteeship is an emerging mode of sustainable agricultural production and has played an important role in China. At present, the Chinese government has taken it as a pilot mode, but its effect also depends on the extensive participation of peasants. Based on the theory of planned behavior (TPB) and structural equation model (SEM) method, the paper analyzed peasants' participation intention, behavior, drivers, and the influence of policy support on peasants' participation behavior, using survey data of Jiangsu province and peasants' participation variables. The results suggest that: (1) The behavioral attitude, subjective norms, and perceived behavioral control variables of peasants' participation in farmland trusteeship have a significant direct impact on peasants' willingness to participate, and these three factors indirectly influence peasants' participation behavior by influencing peasants' intention; (2) perceptual behavioral control variables such as the size of farmland trusteeship organization had no significant influence on peasants' participation behaviors; (3) government policy support has a direct and significant impact on peasants' participation behaviors. These findings not only generate broad direct implications for Chinese policymakers to improve peasants' participation for sustainable agricultural production, but also provide lessons for other developing countries for agricultural modernization.

Keywords: farmland trusteeship; peasants' intention and behavior; sustainable agricultural production

1. Introduction

Farmland trusteeship, which is an agricultural production service mode with Chinese characteristics, started from peasants' farming practice in some rural areas. It refers to the practice of some unwilling or unable peasants entrusting their farmland to service organizations, such as ranches or cooperative organizations, for cultivation and management by buying agricultural production services, without any change in farmland tenure. During the rapid development of urbanization in China, a large number of peasants migrated to cities for work, resulting in the problem of agricultural labor force shortages in rural areas [1,2]. Farmland trusteeship played an important role in solving such sustainable agricultural production problems as who to farm, how to farm, how to realize the simultaneous development of peasants' grain production, and income increasing at that time.

Now, China is in the basic national conditions of the coexistence of smallholder production and diversified farming operation organizations production, which will last for a long time. The bottleneck problem it faced is that small farmers cannot effectively apply big science and technology, big agricultural

machinery, or connect with big processing and big market, which restricts the development of modern agriculture. Through reform of the rural land management system, farmland trusteeship has effectively promoted the connection between agricultural production and operation organizations and agricultural modernization, and has become one of the main promotion modes of sustainable agricultural production. Since 2012, "the number one document from the national central government in China" has gradually promoted agricultural production service for eight years. "Reports of the 19th National Congress of the Communist Party of China (CPC)" and the "rural revitalization strategic program (2018–2020)" have planned to further improve the service and issued important instructions to deploy. "Opinions of the State Council of the CPC Central Committee on Doing A Good job in Agriculture, Rural Areas and Farmers to Ensure A Moderately Prosperous Society in All Respects" has also determined farmland trusteeship to be one of the main modes for stabilizing food security and developing rural industries to enrich peasants. Many explorations and attempts have been made in such sustainable agricultural production practices as farmland trusteeship by governments, enterprises, cooperatives, and other different participants, showing that peasants' participation is a key point. Hence, understanding peasants' participation intention and behavior is the goal of this study.

Regarding the area of agricultural production service, previous research has studied many issues. These issues could be mainly divided into four categories: (1) The adoption of agricultural production service; (2) agricultural production service impact on sustainable farming and management; (3) drivers influencing agricultural production service practice; (4) the relationships of governments, businesses, and non-profit organizations in agricultural production service. But there is little research involved with peasants' intention and behavior, especially in the area of farmland trusteeship [3–5]. The three research questions of interest to this study are: (1) What are the peasants' attitudes about farmland trusteeship? (2) What factors affect peasants' participation intention and behavior? (3) Does policy support have a great impact on peasants' participation behavior? To address these questions, the rest of this paper is structured as follows. Section 2 reviews the existing research in relevant fields. Section 3 theoretically explains how peasants' behavior is produced and proposes a model with six hypotheses. Sections 4 and 5 empirically estimate the drivers with data from Jiangsu Province in China and summarize the findings. Section 6 discusses policy implications and makes a conclusion. The results of this study will not only provide valuable information on the factors influencing peasants' participation intention and behavior, but also put forward suggestions for appropriate agricultural production service promotion policy in similar areas, including China.

2. Literature Review

Academic research on farmland trusteeship is generally found under the framework of agricultural services as a sustainable agricultural production pattern. Agriculturally developed countries have established completed agricultural service systems for sustainable development of agriculture. Relevant research started during the transformation from subsistence agriculture to commodity agriculture. The first proposed mode is an agricultural and commercial complex, aiming at promoting all industrial sectors to provide services for agricultural development, based on the increasing dependence of American agriculture on industrial and commercial related services in the mechanization process [6].

At the beginning of the 20th century, Fisher, Clark, and Kuznets regarded service as the tertiary industry and the driving force of economic recovery. Their research on the third industry theory, service economy theory, and the relationship with national economic structure and economic fluctuation further promoted the penetration of the service industry into the agricultural field. Costs of transaction and administration have been seen as the main factors affecting the implementation of agricultural services [7].

From the mid-20th century to the early 21st century, most countries established and improved their agricultural service system. Literature is rich, including the main function of agricultural service [8–10], agricultural service types [11,12], agricultural service quality [13,14], agricultural service policy and finance [15], sustainable development of relationships among people, organizations,

and social processes [16]. With the application of modern information technology such as satellite positioning, the integrated intelligent service of "precision agriculture + Internet of things," based on big data, has been paid more attention recently [17–19]. Various opinions on the influencing factors of agricultural service have also been brought forward: (1) The structure of cooperative organizations and government support were important factors for explaining the quality of services. Suggestions were proposed that policies should be placed to moderate variables that affect services [20,21]. Zhao (2011) concluded that official and semi-official service organizations are developing well because of financial and fiscal support [22]. Farrington et al. (1994) proposed that the government needs to withdraw timely from the market and encourage the development of enterprises, which are in line with social needs. However, some services still need to be provided by the government, which could reduce organization and operational costs and improve efficiency [10]. (2) The nature of cooperative membership and members' views on their participation in the management of cooperative organizations would affect the service effect. With a survey among 2250 Swedish farmers, the study of Österberg and Nilsson (2009) indicates differences in members' commitment and trust towards directors to be due to farm profitability, member age, and experience as directors. Farmers' perception of participation is important. Older farmers have less trust in cooperative directors [23]. Ozor et al. (2013) investigated how willing farmers would be to pay for agricultural extension services in Nigeria. Results showed that most farmers were willing to pay for it as long as the service remained relevant to their needs. The most important factors that influenced farmers' willingness to pay were states of origin, items originally paid for, major occupation, minor occupation, number of years in school, and sale of farm produce [24]. (3) There are differences in the demand for services between large-scale and decentralized peasants. The study of Kidd et al. (2000) in Turkey shows that commercial agricultural services are effective for farmers with large-scale production. This is applicable to overproduction areas [25]. Small-scale farmers are reluctant to buy commercial services unless they can benefit in the short term [26]. From the perspective of farm holders, Carrie Houston (2014) came to similar conclusions from his study of Canadian farms. Large ranches could obtain agricultural equipment at a low price, while small crofts had to reduce operating costs to increase revenue [27]. (4) Active participation of peasants could improve the quality of agricultural production services [28]. From the perspective of civil society, Zhao (2011) pointed out that peasants' voluntary participation helps co-operative movement in rural China, further promoting the improvement of service quality [22].

In general, most research on agricultural service mainly does macro analysis from the perspective of industry, paying more attention to the discovery of rules, while paying less attention to the micro individual behavior [29]. In China, with the change of study topics from "who will farm" to "choosing someone to farm" and "how to farm," academic research on farmland trusteeship is influenced by service demand and policy guidance. Most studies focus on trusteeship cases while lacking in-depth analysis of the willingness and behavior of peasants' participation. At present, the market of China's farmland trusteeship is still in its primary and rapid development stage, so it is in urgent need of theoretical and practical guidance. Whether peasants participate directly affects the trusteeship and even the process of agricultural modernization. Because of this, the paper studies the intention and behavior of peasants' participation in farmland trusteeship, which has certain guiding values.

3. Theoretical Foundation and Hypothesis

3.1. Theoretical Foundation

Currently, the theory of behavior (TPB) is relatively popular in the field of social psychology relating to individual behavior, which is mainly used to predict how the individual's behavioral attitude, subjective norms, and perceived behavioral control variables influence people's behavioral intention (variable explanations are in "3.2 Hypotheses and Conceptual model"). According to TPB, human behavior is the result of deliberate planning. When an individual's behavior attitude is more positive, the influence of subjective norms is greater, the control of perceived behavior is stronger,

his behavioral intention would be larger, and vice versa [30]. Judging value from customers' subjective feelings has been recognized by many scholars [31,32]. Individual behavior is not entirely voluntary; behavioral intention is usually affected by a variety of factors.

Actually, TPB has strict applicability. The object is individual rational behavior, excluding individual behavior in the collective [33]. Only individual behaviors with specific goals in a specific time and context can be examined [34]. It is necessary to consider the influence of specific attitudes, specific subjective norms, and specific behavioral control variables on specific behaviors [35]. These applicable conditions coincide with the requirement of studying the willingness and behavior of Chinese rural small farmers' participation in the innovative mode of farmland trusteeship in the context of Xi Jinping's new era.

Based on TPB, this paper analyzes the willingness of peasants' participation in farmland trusteeship, puts forward the hypothesis of influencing factors of peasants' participation, and tests it.

3.2. Hypotheses and Conceptual Model

3.2.1. Behavioral Attitude

Behavioral attitude refers to a persistent preconceived position of the individual in response to a particular object. It is confirmed that the stronger the individual's attitude towards a behavior, the stronger the willingness to engage in the behavior. The more positive the individual's attitude towards the behavior is, the higher the behavior intention is [36]. This leads to the following hypothesis:

Hypothesis 1 (H1). *Peasants' behavioral attitude towards farmland trusteeship has a positive impact on their willingness to participate.*

3.2.2. Subjective Norms

Subjective norms are an individual's perception of social pressure to take some particular action. According to TPB, subjective norms are the basic factors affecting individual behavior. The higher the individual's subjective norm is, the higher the individual's compliance willingness/social pressure is, and so is the behavioral intention. On the contrary, the lower the individual's subjective standard is, the lower the individual's compliance willingness/social pressure is. Thus, behavioral intention will be lower. Based on this, the second research hypothesis is established as:

Hypothesis 2 (H2). *Peasants' subjective norms have a positive impact on their willingness to participate in farmland trusteeship.*

3.2.3. Perceptual Behavioral Control

Perceived behavioral control refers to the individual's ability to control the opportunities and resources needed in certain behavior. Perceptual behavior control variables have been introduced to reflect the external/internal restrictions the individual perceived, past experience in similar behavior, and expected obstacles. When individuals believe that they have more resources/opportunities, and their previous experience is more positive, they are more willing to perform a certain behavior [37]. Hence, the following hypotheses are formulated:

Hypothesis 3 (H3). *Peasants' perceived behavioral control of participation in farmland trusteeship positively affects their willingness to participate.*

Hypothesis 4 (H4). *Peasants' perceived behavioral control of participation in farmland trusteeship has a positive impact on their participation behavior.*

3.2.4. Behavioral Intention

Behavioral intention, as a variable of actual behavior in advance, is a measure of an individual's tendency to perform a particular behavior. It plays an important role in explaining and predicting behavior. TPB holds that the transformation intention of behavior is also influenced by other important variables. In addition to internal motivation, social psychology scholars also hold that the behavior of individuals is restricted by the social environment. When peasants have the participation motivation, the external environment they live in will play an important role in the process of transforming their willingness into behavior, especially the political and legal factors [38]. At present, such factors are mainly reflected in whether the government, enterprises, and other farmland trusteeship entities could support the farmland trusteeship organizations through the implementation of policies and regulations. Hence, two hypotheses are formulated:

Hypothesis 5 (H5). *Peasants' intention to participate in farmland trusteeship has a positive impact on their actual participation behavior.*

Hypothesis 6 (H6). *Policy support has a positive impact on the transformation from participation intention to participation behavior of peasants in farmland trusteeship.*

Consequently, the conceptual model of peasants' participation in farmland trusteeship is constructed (Figure 1).
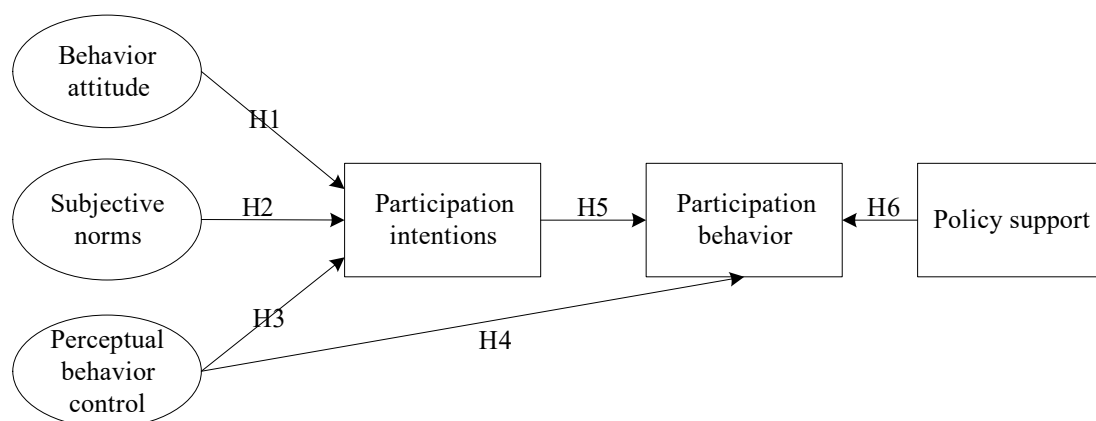

Figure 1. Conceptual model of peasants' participation in farmland trusteeship behavior.

4. Materials and Methods

4.1. Study Area

Jiangsu Province, located in southeast China as well as the lower reaches of the Yangtze River, bordering the Yellow Sea on the east, has an agricultural population of over 47 million (about half are part-time farmers), covers a farmland area of more than 45,000 square kilometers, and is playing an increasing role in implementing some national agricultural development strategies, such as farmland trusteeship trial, national agricultural sustainable development pilot demonstration area, and farmland contract reform: Separation of ownership rights, contractors' rights, and land management rights. The reason why Jiangsu is chosen as a study area is that nationwide fundamental materials cannot be obtained. Fortunately, there are typical farmland trusteeship cases in Jiangsu. Meanwhile, Jiangsu is geographically straddling the north and south of China, and its climate and vegetation have the characteristics of both the south and north—Jiangsu has all the materials required for conduct the empirical study. A higher proportion of part-time farmers and the function of grain production as

main grain-producing areas exist in Jiangsu, facilitating us to examine peasants' intention and behavior of farmland trusteeship. Locations of surveyed peasants are shown in Figure 2.
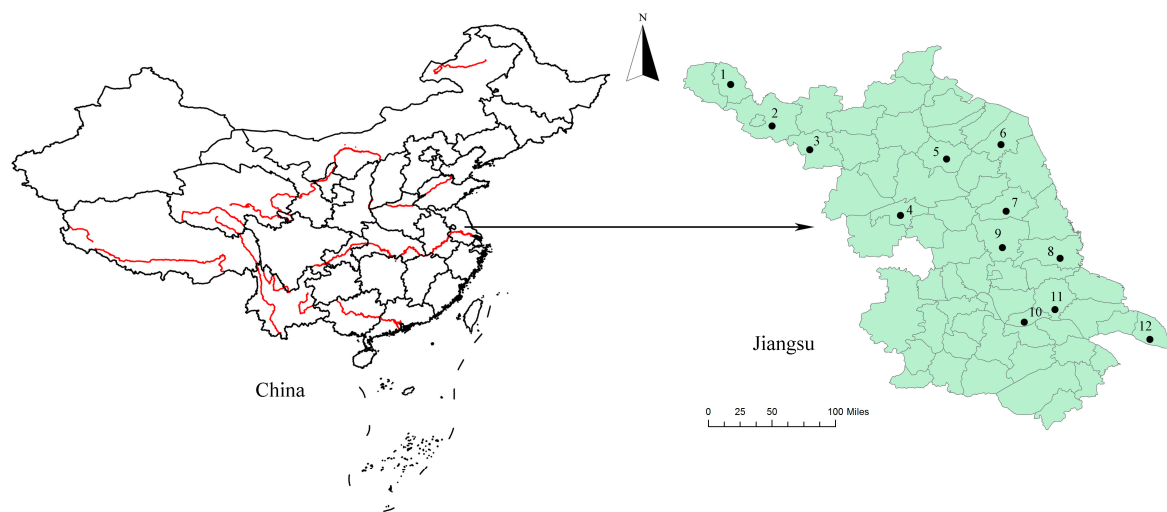

Figure 2. Location of surveyed peasants in Jiangsu province, China. [1] (Pei county), [2] (Tongshan county), [3] (Suining county), [4] (Hongze county), [5] (Lianshui county), [6] (Bianhai county), [7] (Yandu county), [8] (Dongtai county), [9] (Xinghua city), [10] (Jingjiang city), [11] (Rugao city), [12] (Qidong city).

4.2. Variable Selection

The design of the questionnaire is based on the theoretical hypothesis, which aims to investigate peasants' willingness to participate in farmland trusteeship and analyze the drivers of peasants' participation in farmland trusteeship. The survey subjects are the permanent residents of the sample villages. The survey contents include: (1) Basic information of peasants including gender, age, family population, education level, monthly family income, and the proportion of family income from farming; (2) the planned behavior hypothesis variables, including (i) peasants' behavior attitude variables (BA), involving six observational variables—farmland trusteeship can help farming better (FB); improve their economic benefits (EB); in line with the new trend of sustainable development of the farmland (SDF); make up for a lack of family labor (MUFLL); government strengthening of farmland trusteeship propaganda is needed (GS); farmland trusteeship ensures peasants are free to work outside (WO); (ii) the subjective normative variable of the interviewed peasants (SN), involving two observational variables—they are the influence of the decisions of relatives and friends (DRF), and the influence the opinions of the village committee (OVC). (iii) The perceptual behavior control variable (PBC), including three observational variables—the technical maturity of the farmland trusteeship organization (TM), the size of the farmland trusteeship organization (OS), and the complexity of the participating process in the farmland trusteeship (CPP).

Based on the above theory, hypotheses, and variables selected, the research model of peasants' participation in farmland trusteeship is constructed (Figure 3).
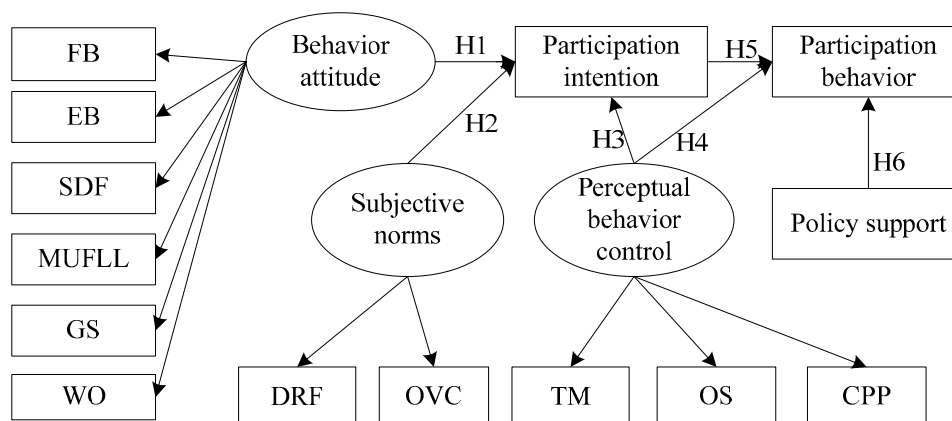
Figure 3. The structural equation model of peasants' participation in farmland trusteeship. Abbreviations: FB, farming better; EB, economic benefits; SDF, sustainable development of farmland; MUFLL, make up family labor lack; GS, government strengthening (of trusteeship propaganda); WO, work outside; DRF, decisions of relatives and friends; OVC, opinions of village committee; TM, technical maturity; OS, organization size; CPP, complexity of participating process.

4.3. Empirical Approach

The structural equation model (SEM) method is employed to investigate the relationships between peasants' perception of farmland trusteeship, policy support, and participation intention as well as their behaviors. In view of the advantages of the structural equation model in the analysis of multiple causal relationships, this paper uses this method to empirically test the intention and behavior of peasants' participation in farmland trusteeship. As a priori statistical technique, the SEM first constructs a hypothesized model of the structural relationships among variables based on existing knowledge and theory, the rationality of which is particularly emphasized in advance (Section 3.2); then we test the efficiency of the model against the covariance matrix of the observational data. Meanwhile, we conducted reliability and validity analysis of the questionnaire designed (Section 5.2), which could guarantee the reliability of data collected. Exploratory factor analysis is applied to verify the correspondence between observational variables and latent variables (Section 5.3) [39]. Based on the conceptual model (Figure 1) and original data, we perform the correspondence canonical analysis to test the model and hypothesis [40].

For the analysis, two models are considered: The measurement model analyzes the relationship between observed variables and latent variables, and the structural model analyzes the relationship between latent variables. In this paper, the hypothesis test of the proposed research model is carried out in combination with discussion of peasants' behavior, policy support, impact factors of willingness to participate in farmland trusteeship, and corresponding observational variables. The relationship between variables is expressed by the following three matrix equations:

Measurement model equations are

$$X = \Lambda_X \xi + \delta \tag{1}$$

$$Y = \Lambda_Y \eta + \varepsilon \tag{2}$$

Structural model equation is

$$\eta = B\eta + \Gamma\xi + \zeta \tag{3}$$

ξ and η represents latent variables (BA, SN, PBC). X and Y represents observational variables (FB, EB, SDF, MUFLL, GS, WO, DRF, OVC, TM, OS, CPP). Goodness-of-fit tests are employed to estimate the overall fit of the hypothesized models. The chi-square (CMIN) is a primary measurement of model performance, which compares the covariance matrix in the model with the covariance matrix of the observed data [41]. For the test, the null hypothesis is that no differences exist between the correlation

coefficients matrix and the null matrix. The *p* values < 0.05 is therefore the widely used criterion for the rejection of the null hypothesis, with more than 500 samples. In addition, several incremental and absolute fit indices are advocated to be applied as alternatives to the chi-square (Table 1). Absolute fitness index such as root mean square residual (RMR), root mean squared error of approximation (RMSEA), the comparative fit index (CFI) and the adjusted goodness-of-fit (AGFI), value-added fitness index such as incremental fit index (IFI), Tucker–Lewis index (TLI) and comparative fit index (CFI), simplicity fitness index such as parsimony-adjusted normed fit index (PNFI), parsimony goodness-fit index (PGFI), and the ratio of chi-squared to degrees of freedom (CMIN/DF) are commonly used [42,43].

Table 1. Test of the fitting degree of modified structural equation model.

	Absolute Fitness Index				Value-added Fitness Index			Simplicity Fitness Index		
Verification Index	**CMIN**	**RMR**	**RMSEA**	**AGFI**	**IFI**	**TLI**	**CFI**	**CMIN/DF**	**PNFI**	**PGFI**
Inspection data	76.451 (0.102)	0.021	0.021	0.966	0.996	0.993	0.996	1.233	0.666	0.578
Fitting critical value	$p > 0.05$	<0.05	<0.05	>0.08	>0.9	>0.9	>0.9	1 < NC < 3	>0.05	>0.05

Abbreviations: CMIN, chi-square value; RMR, root mean square residual; RMSEA, root mean square error of approximation; AGFI, adjusted goodness-of-fit index; IFI, incremental fit index; TLI, Tucker–Lewis index; CFI, comparative fit index; PNFI, parsimony-adjusted normed fit index; PGFI, parsimony goodness-fit index; CMIN/DF, the ratio of chi-squared to degrees of freedom.

Λ_X and Λ_Y are component matrixes for observational variables on latent variables, through which the linear combination relationship between a single latent variable and its observational indicators can be obtained. We use the coefficient matrix Γ to analyze how peasants' farmland trusteeship participation intention would be influenced by BA, SN, and PBC; how their participation behavior is influenced by PBC, participation intention, and policy support. δ, ε, and ζ are the measurement error terms. Standardized coefficients are used to facilitate the interpretation of the relationships among variables. They describe the corresponding single response for a dependent variable when a given independent variable receives a single increased standard deviation [42,44]. The maximum likelihood regression-based approach is employed to obtain the estimation results.

4.4. Data Source

The data used in the following empirical study is peasants' survey data from 600 villagers in China's main grain-producing area Jiangsu Province, in which the farmland trusteeship area has been increasing recently. From May to August in 2019, 12 counties were selected to conduct a survey, and 517 valid questionnaires from peasants were collected.

Then the effective data collection is sorted out to obtain the preliminary statistical information. The reliability and internal consistency of the samples were tested by the reliability test. Applicability of the samples to the research object was judged. Confirmatory factor analysis (CFA) was used to test the aggregate validity of the scale and the structural validity of the research model.

Five-point Likert scale was used to measure the theoretical variables of planned behavior and the willingness of peasants. The value of the policy support variable is 0/1; 0 means no relevant policy support, 1 means relevant policy support. The value of the behavioral variable of peasants' participation is 0/1; 0 means no participation in farmland trusteeship, 1 means have participation in farmland trusteeship.

5. Results

5.1. Description Statistics

Table 2 shows that there are slightly more males, accounting for 54.6%, which is related to the characteristics of decision-makers in rural families. The proportion of those aged 30–40 years and 41–50 years was 37.5% and 30.3%, respectively; 11.7% were under 30 years and 20.5% were over 50 years. Peasants of primary school level and below are the most represented, accounting for 61.6%, followed by high school level accounting for 26.9%. Samples of family size between three and six

accounted for 78.9%. The proportion of households whose agricultural income in total is less than 15% is 29.1%, the proportion between 15–25% accounts for 20.5%, the proportion between 25–35% accounts for 20%. On the whole, there is a certain amount of non-agricultural income in each household.

Table 2. Preliminary statistics of the sample.

Variables	Types	Sample Size	Ratio (%)	Variables	Types	Sample Size	Ratio (%)
Gender	male	290	54.6	Monthly household income (CNY)	Below 5000	162	30.5
	female	241	45.4		5000–8000	211	39.7
Age	20–30	62	11.7		8000–15,000	94	17.7
	31–40	199	37.5		Above 15,000	64	12.1
	41–50	161	30.3	Proportion of farming income	Below 15%	155	29.1
	51–65	100	18.9		15–25%	109	20.5
	Above 65	9	1.6		25–35%	106	20
Education level	Below primary school	109	20.5		35–45%	86	16.2
					Above 45%	75	14.2
	Primary school	218	41.1	Family population	2 and below	10	1.9
	Junior school	143	26.9		3–4	228	42.9
	Senior school	43	8.1		5–6	191	36
	Above college	18	3.4		7–8	80	15.1
					Above 9	22	4.1

Preliminary statistics of peasants' farmland trusteeship participation willingness show that half of the peasants take a neutral stance and hold a "wait-and-see" attitude; 25.4% of them are willing to participate, while more than 10% of them are not; only 5.3% of them have strong participation willingness. That means peasants' participation enthusiasm needs to be improved. From the survey, most people think that there are risks to information asymmetry, immature farmland trusteeship technology, and imperfect trusteeship systems, although they wish there were better ways of farming.

A total of 41.7% of the farmland trusteeship participants are aged from 30 to 40, and 27.1% are 40–50 years, who are considered young and middle-aged on the whole. Due to the shortage of labor force in their home, they are more inclined to farmland trusteeship. Among farmland trusteeship participants, 80% have a junior high school education or above. Some 72% of households have a population of less than six. Farm incomes of 57% of participants households accounted for 25% or less of total household income.

Table 3 shows the preliminary statistics of the observational variables.

Table 3. Preliminary statistics of the variables.

Variables	Types	Frequency	Percent (%)	Cumulative Percent (%)	Variables	Types	Frequency	Percent (%)	Cumulative Percent (%)
FB	5	32	6.2	6.2	DRF	5	16	3.1	3.1
	4	220	42.6	48.7		4	136	26.3	29.4
	3	216	41.8	90.5		3	235	45.5	74.9
	2	32	6.2	96.7		2	90	17.4	92.3
	1	17	3.3	100.0		1	40	7.7	100.0
EB	5	40	7.7	7.7	OVC	5	14	2.7	2.7
	4	180	34.8	42.6		4	142	27.5	30.2
	3	245	47.4	89.9		3	237	45.8	76.0
	2	31	6.0	95.9		2	100	19.3	95.4
	1	21	4.1	100.0		1	24	4.6	100.0
SDF	5	43	8.3	8.3	TM	5	5	1	1.0
	4	230	44.5	52.8		4	51	9.9	10.8
	3	200	38.7	91.5		3	286	55.3	66.2
	2	27	5.2	96.7		2	157	30.4	96.5
	1	17	3.3	100.0		1	18	3.5	100.0

Table 3. *Cont.*

Variables	Types	Frequency	Percent (%)	Cumulative Percent (%)	Variables	Types	Frequency	Percent (%)	Cumulative Percent (%)
MUFLL	5	41.0	7.9	7.9	OS	5	9	1.7	1.7
	4	256.0	49.5	57.4		4	50	9.7	11.4
	3	166.0	32.1	89.6		3	253	48.9	60.3
	2	34.0	6.6	96.1		2	181	35.0	95.4
	1	20.0	3.9	100.0		1	24	4.6	100.0
GS	5	51.0	9.9	9.9	CPP	5	6	1.2	1.2
	4	221.0	42.7	52.6		4	45	8.7	9.9
	3	203.0	39.3	91.9		3	346	66.9	76.8
	2	19.0	3.7	95.6		2	108	20.9	97.7
	1	23.0	4.4	100.0		1	12	2.3	100.0
WO	5	50.0	9.7	9.7					
	4	249.0	48.2	57.8					
	3	181.0	35.0	92.8					
	2	16.0	3.1	95.9					
	1	21.0	4.1	100.0					

Abbreviations: FB, farming better; EB, economic benefits; SDF, sustainable development of farmland; MUFLL, make up family labor lack; GS, government strengthening (trusteeship propaganda); WO, work outside; DRF, decisions of relatives and friends; OVC, opinions of village committee; TM, technical maturity; OS, organization size; CPP, complexity of participating process.

5.2. Test of Validity and Reliability

Using SPSS23.0 indicators for KMO and Bartlett test of the theoretical assumptions, the results are that: KMO values 0.852, which is greater than the critical value of 0.8, Bartlett ball test statistics observed values 2724.991, chi-square value significant probability *p* is close to 0. So, the null hypothesis is rejected; that is the correlation coefficient matrix is significantly different from the unit matrix. Such results show that the questionnaire has good reliability and validity of structure and is suitable for further factor analysis.

Using Cronbach's alpha coefficients to respectively measure the factor level and total table of internal consistency and stability, the results showed that: The behavioral attitude, subjective norm, perceived behavior control subscales Cronbach's alpha coefficients were 0.9, 0.816, 0.746; the total table Cronbach's alpha coefficient is 0.846, higher than the critical threshold value of 0.7; the total table and table's reliability are better; it is concluded that the credibility of observation scale about theoretical assumptions is good (Table 4).

Table 4. Scale reliability test.

Total Scale		Behavioral Attitude Variables		Subjective Norm Variables		Perceptual Behavior Control Variables	
Cronbach's α	Number of Items	Cronbach's α	Number of Items	Cronbach's α	Number of Items	Cronbach's α	Number of Items
0.846	11	0.900	6	0.816	2	0.746	3

5.3. Confirmatory Factor Analysis

The principal component analysis was used to test the main factors affecting peasants' willingness to participate in the farmland trusteeship proposed by the theoretical hypothesis. The output of three factors and their measurement items are consistent with the former study design. The factor cumulative variance interpretation rate was 70.963%. It can be seen from the factor load matrix after rotation that the measure term has a high load on its own factor and a low load on other factors, which shows that the sample data has good validity. Factor variables assumed according to the planned behavior theory of peasants' willingness to participate in farmland trusteeship has passed the test (Table 5).

Table 5. Factor analysis results of variables.

Planned Behavior Variable	Observational Variable	1	2	3
	FB	0.848	0.197	0.053
	EB	0.810	0.112	0.176
BA	SDF	0.839	0.025	0.185
	MUFLL	0.828	0.131	0.162
	GS	0.744	−0.015	0.164
	WO	0.749	−0.088	0.150
SN	DRF	0.205	0.090	0.895
	OVC	0.266	0.116	0.868
	TM	0.006	0.844	0.085
PBC	OS	0.198	0.750	0.062
	CPP	−0.027	0.829	0.061
Eigenvalue		4.003	2.061	1.712
Percentage of variance		36.664	18.738	15.564
Cumulative explanatory power		36.664	55.402	70.963

Abbreviations: BA, behavior attitude; SN, subjective norms; PBC, perceptual behavior control; FB, farming better; EB, economic benefits; SDF, sustainable development of farmland; MUFLL, make up family labor lack; GS, government strengthening; WO, work outside; DRF, decisions of relatives and friends; OVC, opinions of village committee; TM, technical maturity; OS, organization size; CPP, complexity of participating process.

5.4. Model Test

Using AMOS23.0, the maximum likelihood estimation method is used to estimate the parameters of the model. Results of the initial model fitness test show that the chi-square value is 351.955, and the significance probability value *p* is 0, which is less than 0.05, reaching the significance level. The null hypothesis is rejected, which means that the hypothesis that the variance covariance matrix derived from the observational data is equal to the variance covariance matrix derived from the hypothesis model cannot be supported. That is, the hypothesis model cannot fit with the observational data. RMSEA (root mean square error of approximation) value is 0.085, which is higher than 0.08, indicating that the hypothesis model does not fit with the observed data. According to modification indices, the model needs to be modified by increasing the covariance relationship between residuals.

According to the test results of the overall fitting degree of the modified model (Table 1), the chi-square value is 76.451, which is not significant at the level of 0.05. Both the RMR value and RMSEA value reach the critical standard of less than 0.05. AGFI value is greater than 0.8, which is close to the ideal value of 1, indicating that the model's absolute fitting effect conforms to the standard. Values of the model's goodness of fit index IFI, TLI, and CFI are all greater than 0.9, reaching the critical value of fitting, which indicates that the model's goodness of fit is good. Parsimony index shows that the CMIN/DF value is 1.233, which falls within the range of 1 < NC < 3 and the values of PNFI and PGFI are both greater than 0.05, reaching the critical value standard of fitting, indicating that the simplicity of fit is better.

The main measurement indexes of the basic fitting standard test of the modified model include whether the measurement error is positive, whether the factor loads reached significant levels between 0.50 and 0.95, whether the value of critical ratio (C.R.) is greater than 1.96, and whether the standard deviation of parameter estimation is positive. The results of parameter estimation of the modified measurement model (Table 6) show that the standardized estimated values of all observational variables are between 0.5 and 0.95, passing the significance test at the level of 0.01. C.R. test values were all greater than 1.96. The standard deviation of parameter estimation is positive. The combined reliability of the latent variables (BA, SN, and PBC) was larger than 0.6. The extraction quantities of the variance of equality were larger than 0.5. That is, the percentage of variation in the construction interpretation of the latent variables of the indicator variables was large, and the relative measurement error was small, indicating the ideal intrinsic quality of the model. The influence parameters of observed variables

on latent variables are shown in the sixth column of Table 6. The latent variable can be explained by observational variables well (column "normalized parameter" in Table 6).

Table 6. Revised the parameter estimation of the measurement model.

Latent Variable	Observational Variable	Unnormalized Parameter	Standard Error	C.R. Value	Normalized Parameter	Composite Reliability	Mean Variance Extraction
BA	GS	1.000	-	-	0.716	0.910	0.616
	WO	0.931 ***	0.062	15.048	0.688		
	FB	1.058 ***	0.059	18.021	0.817		
	SDF	1.099 ***	0.06	18.177	0.831		
	MUFLL	1.143 ***	0.071	16.014	0.830		
	EB	1.094 ***	0.061	18.007	0.813		
SN	OVC	1.000	-	-	0.890	0.820	0.692
	DRF	0.929 ***	0.073	12.741	0.769		
PBC	TM	1.000	-	-	0.735	0.750	0.502
	OS	0.730 ***	0.064	11.461	0.601		
	CPP	1.148 ***	0.090	12.797	0.777		

*** $p < 0.01$. Abbreviations: BA, behavior attitude; SN, subjective norms; PBC, perceptual behavior control; FB, farming better; EB, economic benefits; SDF, sustainable development of farmland; MUFLL, make up family labor lack; GS, government strengthening; WO, work outside; DRF, decisions of relatives and friends; OVC, opinions of village committee; TM, technical maturity; OS, organization size; CPP, complexity of participating process; C.R., critical ratio.

According to the estimation results of model parameters (Table 7), all the hypotheses except hypothesis H4 passed the test (Y stands for passing the hypothesis test, N stands for failing the hypothesis test). Specifically, the behavioral attitude, subjective norms, and perceived behavioral control factors of peasants' participation in farmland trusteeship directly affect peasants' willingness of participation, with action coefficients of 0.501, 0.163, and 0.319, respectively. These three factors indirectly affect peasants' participation behavior by influencing their willingness. The direct influence coefficient of PBC (H4) on the peasants' actual participation behavior was 0.014, but it was not significant. The willingness of peasants' participation in the farmland trusteeship directly affects their behavior, and the effect coefficient is 0.355. The policy support of relevant government departments on farmland trusteeship has a direct and significant impact on the actual participation behavior of peasants, with effect coefficient 0.1. Figure 4 shows the model results.
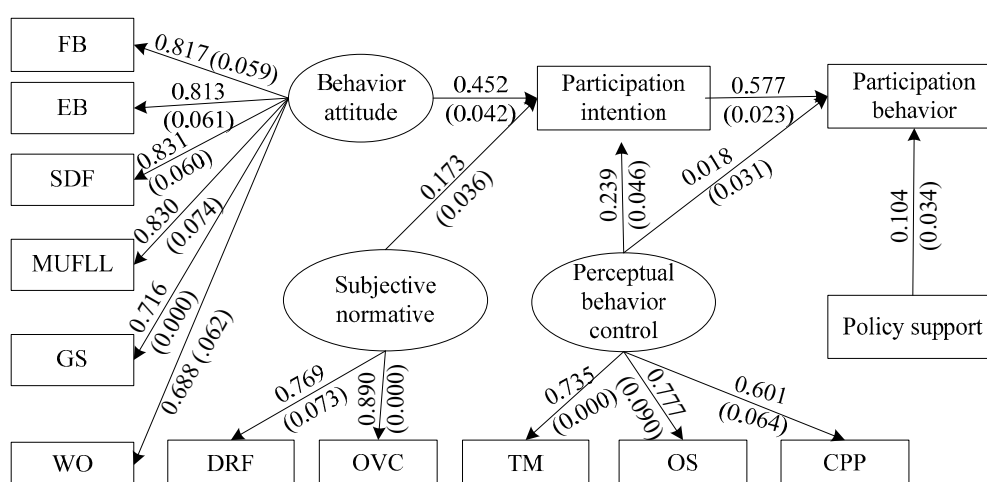
Figure 4. Structure and performance of the final modes for describing factors influencing peasants' participation intention and behavior. Abbreviations: FB, farming better; EB, economic benefits; SDF, sustainable development of farmland; MUFLL, make up family labor lack; GS, government strengthening; WO, work outside; DRF, decisions of relatives and friends; OVC, opinions of village committee; TM, technical maturity; OS, organization size; CPP, complexity of participating process.

Table 7. Parameter estimation of structural equation model.

Route	Estimated Value	SE	C.R.	*p*	Standardized Estimation	Hypothesis	Inspection Result
Participation intentions—BA	0.501	0.042	12.001	***	0.452	H1	Y
Participation intentions—SN	0.163	0.036	4.555	***	0.173	H2	Y
Participation intentions—PBC	0.319	0.046	6.906	***	0.239	H3	Y
Participative behavior—PBC	0.014	0.031	0.465	0.642	0.018	H4	N
Participative behavior—Participation intentions	0.355	0.023	15.221	***	0.577	H5	Y
Participative behavior—Policy support	0.100	0.034	2.908	0.004	0.104	H6	Y

*** $p < 0.01$, Abbreviations: SE, standard error; C.R., critical ratio; BA, behavior attitude; SN, subjective normative; PBC, perceptual behavior control.

6. Discussion and Conclusions

6.1. Theory of Planned Behavior (TPB) Drivers Affecting Peasants' Participation Intention and Behavior

Peasants' behavioral attitudes toward farmland trusteeship directly affect their participation intentions, and indirectly affect their participation behaviors. Some peasants have realized the advantages of farmland trusteeship and endorsed such agricultural production trends. These results are in line with relevant studies that peasants' behavior attitudes such as cognition, trust to partners, and performance perception have certain promoting effects on peasants' behavioral willingness to participate in order-based agriculture [45,46]. Because comparative returns on agricultural production are low, most peasants no longer rely solely on agricultural production for their livelihood. However, farmland is also considered by peasants as a livelihood guarantee. They do not want to lose farmland. Farmland trusteeship helps peasants save time to do non-farm work to increase family income without agricultural income decrease. Furthermore, the scientific and standardized planting of farmland trusteeship organizations gives peasants confidence that their farmland could be managed better. Thus, if the advantages of farmland trusteeship are understood by peasants, more and more of them would hold positive attitudes and the farmland trusteeship area would be constantly expanding.

Peasants' participation intentions will be significantly affected by subjective norm variables, referring to the social pressure the individual perceived when he does or does not perform a certain behavior, and then affects participation behaviors. Such pressure comes from the environment, including interpersonal relationships such as opinions of friends, family, experts, virtual community, and external resources such as TV, newspaper, laws and regulations, market system, and organization system [47]. For most peasants, the specific behavioral willingness is encouraged or restrained by the approval or opposition of families, neighbors, government, and related organizations. Opinions of surrounding people have a great impact on the purchase intention of peasants. Their production decision will also be influenced by the opinions of neighbors and the public [48], especially when peasants do not know much about farmland trusteeship. If peasants can obtain information of farmland trusteeship from various channels easily, they are more likely to distinguish the merits of various organizations and make decisions with more confidence. Thus, farmland trusteeship will be put forward more smoothly.

Perceptual behavior control variables such as size, technical maturity and participating procedures' complexity of farmland trusteeship organizations have an obvious effect on peasants' participation intentions. These results are consistent with relevant research conclusions, showing that peasants' willingness to participate in order-agriculture is affected by the threshold of cooperation between peasants and enterprises, the complexity of contract setting procedures, and the arrangement of free access [49]. When participating in farmland trusteeship, peasants will evaluate the risks and opportunities. If the risks can be borne and the opportunities outweigh the risks, their willingness to participate is high. The direct influence of perceptual behavior control variables on participation behavior is not significant. In this regard, the research corollary is that, although specific operation modes of farmland trusteeship among regions are different, trusteeship mode within the same area or

even within the same county is essentially the same, presently. This is also a manifestation of the early stage of farmland trusteeship. When it comes to the coexistence of various organizations, peasants have to choose among them, perceptual behavior control variables will significantly affect the evolution from peasants' participation intentions to behaviors.

6.2. Peasants' Participation Intention, Behavior, and Policy Support

The willingness of peasants' participation in farmland trusteeship activities expresses their tendency and willpower to participate in farmland trusteeship. The stronger the willingness of peasants' participation, the greater the possibility of their participation behaviors, and the continued involvement in participation. Policy support is the catalyst from peasants' participation willingness to behavior.

From the experiences of agricultural developed countries, although there is some controversy, the consensus is that: (1) The stage of agricultural service is closely related to the level of economic and social development of a country [50]. (2) Government-led services are gradually reduced when the market matures. Enterprise-led services show vitality. With market competition, a few large enterprises will play a more important role [51]. (3) In market transactions with enterprises, it is difficult to protect the rights and interests of peasants, so non-profit service organizations such as cooperatives were developed and became an indispensable element [52,53].

In developing countries, with the development of the service market, the role of the government was gradually weakened, but the lack of sensitivity of other service organizations to policy and market information would lead to market chaos [54]. The market regulation function of the government cannot be ignored [55]. In fact, government-led agricultural services are effective for developing countries [56], since private enterprises mainly pursue market value, peasants must spend a high price if they want to obtain good services, which are not suitable for the sustainable development of agriculture [57].

In China, with the implementation of the agricultural services of farmland trusteeship by the government, enterprises and non-profit organizations are involved in at the same time—but both are in the initial and exploratory stage. The problem faced with the promotion of farmland trusteeship by the state is to make clear different organizations' functions, which help them perform effectively, to improve the recognition and participation of farmers.

6.3. Implications for Policymakers and Sustainable Agricultural Production

Obviously, farmland trusteeship has shown superiority and adaptability as a sustainable agricultural production mode in the process of Chinese agricultural modernization. But the imperfect farmland trusteeship system, chaotic trust market, and uneven trusteeship organization make it impossible for peasants to determine whether they can maintain land fertility, grain output, and income, which also accounts for why peasants wait-and-see rather than participate [38]. A broad range of direct implications are thus generated for Chinese policymakers:

First, developing typical farmland trusteeship organizations and strengthening positive publicity for them could help peasants to feel the benefits of farmland trusteeship participation. Organizations with good system construction and standardized operation can be pilots to gradually spread successful experience, distinguishing different crops and different agricultural resource endowments. Second, it is helpful to improve peasants' recognition and trust in farmland trusteeship organizations. Government departments could provide support for strengthening peasants' education and training to help them understand the trusteeship system, operation mechanism, and obtain the ability of service acquisition and utilization. Third, to explore reasonable farmland trusteeship policies and regulations, such as the model text of farmland trust service contract but not mandatory executive orders, continually, to improve support policies and to increase the scope and precision of policy benefits. Governments should protect the farmland trusteeship market environment to ensure the legitimate rights and interests of peasants when farmers' organizations are imperfect, and ensure that preferential fiscal, financial, and tax policies are implemented and improved for farmland trusteeship organization development [36].

Since China leads the developing world in terms of the agricultural population, per capita arable land, and the process of agricultural developing rate, there is no doubt that the so-called Chinese story discussed in this article also provides lessons for other developing countries, especially given that the vast majority of African countries are on their way to agricultural modernization, and during which period both sustainable agricultural production service mode and corresponding behaviors of peasants is common [58,59]. This study confirms that agricultural production service is needed. It also reminds the policymakers to recognize the development stage of agricultural modernization and choose appropriate agricultural production service mode, to support and improve agricultural sustainable production service organizations in accordance with the agricultural development stage, and to increase peasants' recognition and participation of the service.

6.4. Method Limitations

This study, to the best of our knowledge, is academically novel by providing a new perspective to learn farmland trusteeship and constructing an improved model with policy support variable, which not only brings a fresh case into the horizon of TPB, but also adds a new explanation for sustainable agricultural production. Despite these innovations, it is still limited, mainly reflecting on the data and methods. First, the lack of national official data limits the study area to a single province using survey data, which may diminish the general significance of the conclusions. Second, although the drivers identified in this paper are infinitely close to the current situation, there is still room for improvement following the direction of using an individual farmland trusteeship case or single crop as the case of analysis. Third, one more variable, which the countries of central and eastern Europe explain, is the reluctance of farmers to lease land. In the research of Satoła et al. 2018, the importance of transaction costs and rent seeking in exiting from farming processes are discussed. Research shows that with a small acreage, the propensity of farmers to sell and lease land is low. Transaction costs and costs of lost benefits are higher than potential revenues/profits [60]. It is expected that this will be a topic of ongoing research in the future.

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