

Why Does Villager Participate in Grass-root Election in Rural China? Perspective from Village Public Goods Demand

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Abstract: Grass-root election in rural China is the hot issue concerned by many scholars. Although most of them study the impact factors of the villagers to participate in the election, they did not answer what's the economic incentive for villagers to participate in the election, this article explains it insentively. First we propose a theoretic hypothesis regarding to grass-root election based on Tiebout's public finance theory, then introduce three variables to measure household's demand for three different public goods provided by village. Furthermore, we use the village survey data from rural China to build Logit and Probit model to test the hypothesis. The empirical results show that three coefficients are significant positive, which means the household who has more village public goods demand has more likely to take part in grass-root election. This result directly reveals the household's incentive for grass-root election and it can help us to understand the effect of election on public goods provision.

Keywords: Grass-root election, public goods demand, economic incentive

1 Introduction

China's rural household contract responsibility system (HCRS) which was introduced in 1970's promotes economic and political development of Chinese rural society and provides basis for Chinese villagers to participate in the politics. China's Constitution clearly stipulates that the village committee is rural grass-root self-governing organization in 1982, which confirmed the legal status of the village committee. Villagers' democratic rights are protected since China started a trial of grass-root election in some provinces in 1986; and then formulated revised Organic Law on Village Committees (OLVC) in 1998. As we know, China is a developing country with majority of agricultural population, the grass-root election has aroused worldwide concern of many scholars, and it has great significance for us to understand the determinants and impacts of grass-root democracy in rural China. The main purpose of this paper is to test the factors impact villagers' participation in the grass-root election from the point of view of villagers' economic incentives¹.

We can use local fiscal expenditure theory by Tiebout (1956) to investigate the factors that drive the villagers to participate in the grass-root election^[1]. According to this theory, if the villagers as consumers who have full mobility, the local government's revenue and expenditure structure will be adjusted according to them. If we apply this theory to China's grass-root election, we can regard village committee as local government, then we can infer that if villagers hope village provide public goods they needed, they have incentive to participate in grass-root election and then impact the village public goods investment by voting; on the contrary, if village can't provide the public goods they need, they may not have any incentive to participate in the grass-root election. Although the villagers have not complete liquidity because of China's household registration system (HRS), they have fully autonomous power to decide whether participate in the grass-root election or not, so they have full "mobility" to decide whether participate in or not. Therefore, from a perspective of public goods supply and demand, the villagers' economic incentive to participate in the grass-root election comes from the demand of village public goods, the higher they have the demand, the greater they have incentive to participate in the grass-root election. This paper will use the village survey data to test this hypothesis.

At present, there are many scholars studied Chinese village grass-root election from economics, sociology, political science and other fields. From an economic point of view, these studies can be

divided into two main areas, the determinate factors for villagers to participate in the grass-root election, and the economic and social effects of village grass-root election. On one hand, present literature examined the factors that impacted villagers to participate in the grass-root election. Shi (1999) shows that economic development and participation rate of grass-root elections are related in rural areas of China ^[2]. Oi and Rozelle (2000) analyzed survey data from eight China provinces to find that the industrial structure and the links with outside of the village impact the participation rate of grass-election ^[3]. There is negative relationship between the participate rate of grass-root election and village's links with the outside world (Oi, 1996) ^[4]. Additionally, the quality of the grass-root election will affect the participate rate of grass-root election, which includes not only the fairness and openness of the electoral process itself, but also whether the villagers are satisfied with the performance of elected village cadres, which leads to the political trust of villagers (Manion, 1996; Shi et al., 2004) ^{[5][6]}. In addition, the subjective awareness of the electorate, social networks will impact the villager participate in the grass-root election (Zhong et al., 2002; Hu, 2006) ^{[7][8]}. There is some literature that finds age, sex, education, personal characteristics, such as whether he is Communist Party member, can affect villager's decision of participating grass-root election (Hu, 2006) ^[8]. On the other hand, another group of evidence shows that grass-root election increase village public goods supply and reduce tax burden on the villagers, as well as decrease the income inequality. Using data of Zhejiang Province, Zhang et al. (2004) found grass-root election reduce tax burden of villagers and improve the allocation efficiency of public expenditure ^[9]. Liu (2008) found that the grass-root election raises public expenditure effectively, and it reduces administrative costs of the village with panel data from 1987 to 2000 ^[10]. Luo et al. (2006) also found grass-root election increases public investment effectively in rural areas ^[11]. Wang and Yao (2007) argue that grass-root election raises the proportion of public expenditures the in village's budget and decreases administrative expenses, as well as the share to the township government ^[12]. Yao (2006), Shen and Yao (2006) also found the grass-root election reduces the gap of income distribution ^{[13][14]}. Zhang et al (2003) found that grass-root election contributes to the increase of village revenue, which is mainly from the tax paid by enterprises, but privatization increased the difficulty for villages to collect the tax from the enterprises ^[15]. They believe real fiscal decentralization can increase the proportion of public investment in village's financial expenditure instead of grass-root election.

However, we can find that they only concern about villagers' personal characteristics and the economic environment they are facing, they cannot answer an important question, Why do the villagers participate in the grass-root election? While the purpose of this paper is to study the impact factors of villagers' decision whether to participate in the grass-root election from the perspective of economic incentive. We all know that village committee plays an important role of providing public goods in rural areas, such as schools, clinics, water facilities, roads, public peace and so forth^①. And whether the village leadership was elected will impact the supply of village public goods. We can infer that, if village cannot provide public goods which needed by villagers, they will have little economic incentive to participate in grass-root elections. For example, a family whose children have been out of school or graduated from primary school will not concern about the construction of village schools; while a family whose most of members are healthy and do not need any doctors will not pay attention to the investment of village clinics; and a family whose most of members go out to work will not pay attention to village water conservancy facilities. So these households may not have any economic incentive to participate in the grass-root election. Thus, we can speculate that different demands to village public goods will generate different incentives for villagers to take part in grass-root election, the more demand for village public goods, the greater the incentive for villagers to participate in grass-root election, because the villagers only can express their wishes through his way and impact elected village leaders behavior and then promote them make better village public goods to meet their needs.

^① This paper will analyze three village public goods demand, which includes village schools, clinics and water facilities. In this paper, village schools means the pre-school and primary school which can be provided by village; village clinics includes clinic, hospital or any other medical institution which can be provided by village; village water facilities means water facilities which can be provided by village.

Based on the above analysis, we can focus on measuring villagers' demand for three different kinds of village public goods, which includes schools, clinics and water facilities. The measurement methods are as follows: we use per capita agricultural income in the household last year to measure the household's demand for village public goods of water facilities. Because the more agricultural production in the household, the more demand for village public water facilities services they have, otherwise, if the household mainly engage in non-agricultural production, whether village provide water conservancy facilities may not impact them. Oi and Rozelle (2000) found that the villagers have more enthusiasm to take part in the grass-root election in the villages where few villagers go out to do non-agricultural work and most villagers get income from agricultural production^[3]. It's a good support for our measurement and the hypothesis. Just because the proportion of migrant workers is low, and mainly get income from land, the household have more demand for village public goods, such as water conservancy facilities, so they have more enthusiasm to participate in the grass-root election. We use the amount of medical expenditure in the household last year to measure the household's demand for village public goods of clinic (or medical) facilities. The reason for this measure method is the more medical expenses the more diseased members in the household, and the higher demand of village public clinic (or medical) facilities of the household. On the contrary, the household may not concern whether village provide public goods of clinic if the family members are very healthy. Third, we use the number of children under the age of 13 in the household to measure the demand of village schools. Because most of preschools and primary schools are invested by village in rural China, if there are children going to primary school, the household will hope the village invest in primary schools, such as maintain the classroom, and improve the payment of private teachers to make them work hard or attract better teachers to village schools. Otherwise, if there are no school-age children in the household, they may not care about whether the village provides investment of primary school. For these above reasons, different households have different demands for different village public goods, and different needs can generate different behaviors about the participation in grass-root election.

So we can propose the hypothesis of this paper based on above economic mechanisms: the more demand of above three village public goods for the households, the more incentive for the households to participate in village grass-root election; on the contrary, the less demand of above three village public goods for the households, the less incentive for the households to participate in village grass-root election. Then we will use the village survey data of rural China to test this hypothesis.

2 Data and Descriptive Analysis

This article uses data from China General Social Survey (CGSS) in 2005 collected by the Department of Sociology, Renmin University of China and Division of Social Science, Hong Kong University of Science and Technology. The survey was taken by multi-stage stratified sampling method in 26 provinces (or municipalities) of China. They chose 10,000 households randomly in more than 100 districts (or counties), and then selected an adult as respondent in each household. This paper uses 4,000 rural household samples in this survey, and the corresponding village information which comes from the 400 village cadres' survey data. We will use household level data to test the hypothesis. So we have 2,780 effective samples in the following empirical study after the data cleaning[®].

Because explained variable is a binary classified variable, which means whether the respondents took part in village grass-root election, we can use nonlinear model, such as Logit model or Probit model, to test the hypothesis. We use three village level public goods demand of each household as independent variables, which include village schools, clinics and water facilities. In addition, we control the other two categories of variables, one stands for personal characteristics of respondents, including age, gender, education attainment, marital status, whether is member of Chinese Communist Party (CCP); the other one stands for village's characters of economic and geographical environment, including per capita income in the village level, distance between village to township, and distance between village to county town, taxes and fees that household handed in the last year, and region where the village lies in

[®] We delete the missing values of each variable.

(eastern, central, or western area). Because the taxes and fees is an important part of revenue of villages which can be used to invest the public goods, and the amount of them will direct impact on whether the villagers participate in grass-root election, so we should control this variable in the model.

According to the above estimation strategy and variable introduction, we can get the descriptive statistics of all variables used in Logit and Probit model as follows.

Table 1 Descriptive Statistics of Variables

Variables	Mean	S.D.	Min	Max
Dependent variable				
Whether participate in grass-root election(1=yes; 0=no)	0.70	0.46	0	1
Public goods demand variables				
Demand for village schools	0.62	0.80	0	5
Demand for village clinics	1,761.51	4,285.24	0	78,000
Demand for village water facilities	2,820.99	3,619.56	0	60,000
Control variables				
Age of respondent	45	13.65	18	93
Gender of respondent(1=male; 0=female)	0.48	0.50	0	1
Education attainment of respondent	5.5	3.77	0	15
Marital status of respondent(1=married; 0=not married)	0.95	0.22	0	1
Whether respondent is member of CCP(1=yes; 0=no)	0.06	0.24	0	1
Taxes and fees household handed in last year(¥)	126.59	227.03	0	6,130
Distance to township(Km)	29.71	21.82	0	115
Distance to county town(Km)	5.81	5.30	0	38
Village per capita income(¥)	1,883.39	1,196.22	50	7,400
Eastern area(1=yes; 0=no)	0.37	0.48	0	1
Central area(1=yes; 0=no)	0.34	0.47	0	1

Note: 1 RMB Yuan (¥) equals to 0.1463 US Dollar (\$), according to current exchange rate.

From table 1 we can find that, in the survey year, 70% of respondents participated in the last round of village grass-root election. There is one child under 13 years old in the household on average, and the average medical expenditure of household in last year is 1,761.51 RMB Yuan, the average agricultural income of household in last year is 2,820.99 RMB Yuan. The respondents' average age is 45 years old, their average education attainment is about 5.5 years, 48% of respondents in the sample are male, 95% of respondents were married, and only 6% of respondents are members of CCP. In addition, the average taxes and fees is 126.59 RMB Yuan, the average distance is 29.71 Km from village to township, and 5.81Km to county town, the average village per capita income is 1,883.39 RMB Yuan. 37% village lie in eastern area and 34% village lie in central area.

3 Econometric Results

As the analysis above, because explained variable is a binary classified variable, which means whether the respondents took part in village grass-root election, we can use nonlinear model, such as Logit model or Probit model, to fit it. While since the requirement of normal distribution of residuals in the Probit model may not be satisfied, we also use the Logit model to compare the stability of the regression results. After introduction of the dependent and independent variables above, we can show the regression results of different models in following table. And it is noteworthy that all of the value variables are taken natural logarithm in the model.

Table 2 Regression Results

Variables	Probit Model	Logit Model
Demand for village schools	0.080*** (0.012)	0.133***(0.020)
Demand for village clinics	0.032***(0.012)	0.054***(0.020)
Demand for village water facilities	0.338**(-0.159)	0.575**(-0.267)

Age of respondent	-0.001***(0.000)	-0.001***(0.000)
Square of age of respondent	0.154***(0.055)	0.263***(0.093)
Gender of respondent	0.027***(0.008)	0.045***(0.013)
Education attainment of respondent	0.270*(0.141)	0.575**(0.267)
Marital status of respondent	0.270*(0.141)	0.429*(0.229)
Whether respondent is member of CCP	0.231*(0.118)	0.425**(0.212)
Taxes and fees	-0.000**(0.000)	-0.000**(0.000)
Distance to township(Km)	0.004***(0.001)	0.006***(0.002)
Distance to county town(Km)	0.002(0.005)	0.004(0.009)
Village per capita income(¥)	0.000***(0.000)	0.000***(0.000)
Eastern area	-0.262***(0.071)	-0.429***(0.120)
Central area	-0.061(0.066)	-0.103(0.111)
Constant	-2.799***(0.387)	-4.682***(0.646)
Observations	2780	2780
LR χ^2	170.80	171.70
P value	Prob> $\chi^2=0.00$	Prob> $\chi^2=0.00$
Log likelihood	-1577.53	-1577.08
Pseudo R2	0.0514	0.0516

Note: ***, ** and * indicates the 1%, 5% and 10% significance levels respectively.

We can find from table 2 that, three main independent variables are significant at least 5% level both in Probit model and Logit model. So we can tell that the villagers who have more demand for the construction of village schools, village clinics and village water facilities will be more actively participate in village grass-root election, therefore, the hypothesis proposed in this paper has been verified. In addition, the regression results of other independent variables are resemblance in these two models. First of all, the personal characteristics of respondents are significant in these models. For example, the coefficient of age is significantly negative and the coefficient of square of age is significant positive, which means the relationship between the probability of participation in grass-root election and age of the respondents is U-shaped. While since the minimum age of respondents is 18 years old, the inflection point will be under 18 years old, so this fact shows that the probability of the villagers' participation in grass-root election will increase with the increase of their age on average. Secondly, villager who is male or married, or member of CCP has higher probability of participation in grass-root election compare to villager who is female, unmarried or not member of CCP. Moreover, higher education attainment will enhance the probability of participation in grass-root election. These results are consistent with the existing results of other studies.

To sum up, we can find that, the measurements of three kinds of demand for village level public goods of villagers in this article are significant positive to their participation in grass-root election. It shows that, the higher demand for village level public goods of villagers, the greater incentive for them to participate in village grass-root election, because the villagers can impact the public goods provision behavior of village leaders through the participation in grass-root election, and promote the elected village leader to make benefit for most of the voters. So, in this paper, the analysis revealed the economic incentive of villagers to participate in grass-root election directly and clearly, it helps us to understand the determinant factors for villagers to take part in grass-root election deeply.

4 Conclusion

Although there are a lot of economics literature investigated the impact factors of Chinese grass-root election and its effect on the investment of village public goods, few studies answered the important question of "what's the economic incentives of villagers to participate in the grass-root election?", so this study is to fill this gap. First, we put forward a hypothesis base on local government fiscal expenditure theory of Tiebout (1956), which is related to the determinate factors of villagers to take part in the village grass-root election, and then introduce the measurements of three different demand of village public goods, then use the village survey data of CGSS (2005) to built Logit and Probit model to test the hypothesis ^[1]. Finally, we find that, these three kinds of demand for village public goods of

villagers are significant positive to their participation in the grass-root election. Thus, the hypothesis proposed in this paper has been verified, which shows that the demand for village public goods of villagers is an important economic incentive for them to participate in grass-root election. This result directly reveals the household's economics incentive for participation in grass-root election and it provides the empirical evidence for us to understand the determinant factors of participation in grass-root election. It also provides the basis for government to formulate the related public policies. It helps us to understand the development of grassroots democracy and economy in rural China.

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This paper only analyzes the behavior of villagers' participation in the grass-root election rather than the behavior of village leaders contest.

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