Household' Poverty Health Crisis and Insurance Decision

——The Effect of Poverty on Household Health Risks and Isurance-Decision

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Abstract

Poverty is a vital influence factor on households' health and insurance decision-making. This paper, under a structure of poverty-health and poverty-insurance decision, through a experiential analysis, is to study the effect of household' poverty on rural household' health and insurance decision. According to the outcome of the analysis, this paper indicates that household' poverty affects households' health and insurance decision significantly, the more poor, the more likeliness to have bad health situation and negative will to join in the rural basic social insurance, such as rural endowment insurance and New-type Rural Cooperative Medical System. This paper, also, analyses the richest group of rural households, which demonstrate some particularity. This paper, according to the outcome, brings forward some ideas such as to raise peasants' income, enhance the level of rural social insurance, and to develop a variety of insurance in rural China.

Key Words: Poverty; Household; Health Risk; Insurance-Decision

1. Research background and problem posing

At present, China's rural areas are promoting the Rural Endowment Insurance and the New-Type Cooperative Medical System. These two insurance systems form up the basic social security system of rural areas. However, as we all know, health status and domestic insurance decision often depend on the household' poverty, but not depend on the use of security system. Whether the family (as a Unified economic unit) is wealth in material or not often influences the participating in the basic security system. Therefore, even if they all participate in the same endowment insurance and medical insurance, the household whose poverty levels are different, often have different decision on participating(or continuing)　the insurance.

The research on poverty and its related problems has always been an important content of academic research. Concerning to the meaning of poverty, theoretical circles have done a wide range of interpretation from different side. However, the awareness of poverty has experienced a historical process, and the understanding about poverty gradually comes close to the core and continues to expand. Early researches on poverty are limited to the lack of basic material needs, and the standard of getting rid of the poverty is to have the most basic material protection. So the understanding of poverty is limited to the ownership of means of subsistence and income, and the definition of poverty, in general, is also limited to this point. Rountree (1999) use "the minimum needs to maintain physical performance only" to define poverty. When doing research on poverty at York Town of the United Kingdom, he points out that "primary poverty, namely absolute poverty, is a poverty status lower than the minimum target to maintain the effective physical activity and the minimum target is the standards only for survival rather than the standard of living." Generally speaking, if a family's total income is not sufficient to maintain the material

needs, we can say the family is in poverty.

The family is the most basic economic and social organizational units, and is one of the basic units which take responsibility for material production and distribution. John Iraq Weyr etc. (1996) points out “They are especially important to descendant's multiplication, attendance and development, to food production, to prevention disease and absolution danger, and to ensure members’ reputation.” Household’ poverty affects household’s health and insurance decision directly. Family is an important risk dispersed mechanism, and it can comprehensively and fast disperse the impact of all types of risks. When individual family members face the impact of healthy threat, other family members can effectively disperse the risk within the family and in a long period of time by changing consumption structure and saving structure, and smoothing consumption expenditure. Dercon and Krishnan’s research (2000) finds out, the individual health risk of the family members can be effectively dispersed in most family. Zhao Hong (2006) under the Grossman’s model finds that the more family size impact on health state of family members, the better family members’ health state will be. Then when facing the certain impact (such as the impact of health risks), how does families disperse the risks? Chenyuyu and Xingweibo(2006)think, according to the life cycle-lasting income theory, when facing the economic impact from outside, families will use variety of methods to smoothing consumption in order to reduce the risk. Kochar’s research on Indian family (1999) discovers that, on the given conditions, families who disperse the risk by extension working time have achieved good results. Many economists both demostic and abroad have deeply researched on the relations between health and income. Grossman (1972) proposes the "U"-type relationship between health and income, Yaoyang and Gaomengtao also prove this point through the data analysis of the 1987-2003 National fixed observation point: high-income group’s prevalence rate in two weeks is much higher than the low-income group and middle-income group, the relations between income and prevalence shows "U"-type, and the lowest prevalence rate is middle-income group. In addition, the economic situation also affects home insurance decision-making. The empirical study of Fanhua (2003) finds that the level of wealth will have an impact on payment capacity and willingness to pay of participating in cooperative medical service.

Based on the background mentioned above, this research aim at inspecting whether the family poverty level will affect the health status and insurance decision, and analyze the differences in health level and insurance decision of different family whose poverty levels are different.

2. Hypothesis, data, variables and treatment methods

2.1. Assumptions and data

According to the purpose of the research and the former researches, this paper carries on the following hypotheses:

Hypothesis 1: The household’ poverty affects individual health, the more poverty a family is, the worse healthy condition the family members will have and the higher the prevalence rate is;

Hypothesis 2: The household’ poverty affects the insurance decision, the more poverty a family is, the lower possibility of participating in the pension and medical insurance will be. The higher expectation of government investment proportion is, the less possible of continuing participating in the basic insurance will be.

The data of this research originates from the Wuhan University social security research center's report, which surveyed the rural areas of 33 counties and cities of 10 provinces in the country in 2007. The report is based on stratified random sampling method, which takes on a questionnaire survey about health and medical situation in rural areas, and also involves some basic indicators, such as the farmers' families, their economic conditions and so on.

2.2. Variable selection and treatment methods

According to the needs of the study, the research carries out the operation of variables，and selects 9 variables, such as "poverty level". Meanwhile, according to the research methods, we process partial variables. This article selects "poverty level" to weigh poverty although it may enlarge the influence of individual subjective factor, the poverty level is peasants' subjective feeling, to a certain extent it can avoid the limits of defining material poverty only, and it also avoid the difficulty in defining the broad characterization of poverty. Therefore, our selection is more comprehensive subjective to weight the poverty condition.

Table 1 Selection of variables and type

Influencing variable	Family relatively wealthy degree
Influenced variables	IHS, PBS, PCH, PPREI, PPNCMS, WCPEI, EGCA, WCNCMS ,

Note：(1)IHS is Individual health status

(2)PBS is possibility of being sick in two weeks

(3)PCH is possibility of catching high-expenditure disease in six months

(4)PPREI is proportion of participating in the Rural Endowment Insurance

(5)PPNCMS is proportion of participating in the New-Type Cooperative Medical System

(6)WCPEI is willingness of continuing participating in the Endowment Insurance

(7)EGCA is expected governmental contribution amount

(8)WCNCMS is whether to continue if the New-Type Cooperative Medical System enhances 10 Yuan

After inspecting and processing the data, we use spss13.0 to analyze, and the concrete research method is Crosstabs.

3. The results and analysis

Taking "the poverty level" as influencing variable and the household health and the insurance decision as influenced variables, we carries on the Crosstabs analysis. The results are in Table 2.

1. The impact of poverty level on the individual health status. As seen in Table 2, poverty level obviously affects the leading household members' health. In the investigation, we select the head of the household or the main labor force as the investigation object. The proportion of participants from the poorest household selecting "very good" or "normal" to describe health status is higher than the richest household. But the proportion of participants from the poorest household selecting "not good" or "very bad" to describe health status is much higher than the richest household. Certainly, it is worthy noting that, the proportion of "richest" household, whose health status is "very bad", occupies 6.25%, which is higher than the richer group. It indicates that, in the current countryside, the richer a household is, the worse their physical condition will be. This is consistent with the results of YaoYang and GaoMengtao's (2007) study. YaoYang and GaoMengtao's (2007) study find out, because high-income group have basically reached a

well-off standard of living, so they may substantial increase the consumption of alcoholic drinks and tobacco which will do harm to their health. Meanwhile, the average income of the poor group just surpasses the low-income level, which will also affect the health status.

2. The impact of poverty level on the sickness status of household. As shown in Table 2, the poverty level obviously influences the sickness status of household. The possibility of poorest household to be sick in two weeks is higher than the richest family. In addition, 60.19% of "the poorest" household may catch a high-expenditure disease in half a year, and the proportion is the highest in all poor groups. At the same time, the proportion of catching high-expenditure disease in the "richest" group is 56.25%, which is only inferior to "the poorest" household. This is mainly because the richest household possibly has the chronic disease, which increases the possibility of the family member to catch a high-expenditure disease. This basically proved the hypothesis 1 accuracy.

3. The impact of poverty level on decision of participating in insurance. As shown in Table 2, the household poverty level obviously affects their participating in the Rural Endowment Insurance; the possibility that a richer family have already participated in the Rural Endowment Insurance is relatively high. Certainly, it is noteworthy that, household's poverty level does not affect the participating in the New-Type Cooperative Medical System (P=0.320). The result is in line with the truth, and it's mainly because the New-Type Cooperative Medical System is forced by government. Through propaganda, encouragement and subsidy, the government enables its coverage fraction to achieve 80% in only 5 years. The policy also weakens the poverty level's influence on decision-making of participating in the New-Type Cooperative Medical System. So we can safely draw the conclusion that the hypothesis 2 is reasonable.

4. The impact of poverty level on decision of whether continues participating in insurance. As known by Table 2, the household poverty level obviously affects the decision of whether continue participating in insurance, the richer a household is, the higher possibility to continue participating in the Rural Endowment Insurance and the New-Type Cooperative Medical System, which is also a tendency. However, the same as the preamble discovery, the "richest" group shows its particularity once more, their wish of continuing participating in the two systems is lowest in all group, which is contradict with the hypothesis 2. The possible explanation of the above phenomenon is that the richest group's consumption level and insurance settlement ability are both high, but the standard of the Rural Endowment Insurance and the New-Type Cooperative Medical System is low, and it cannot meet the richest group's need, therefore the richest group does not show enthusiasm in the two insurance system, and their willingness of continuing participating in the insurance is low. This is also corresponding to our research conclusion.

5. The impact of poverty level on expected governmental contribution amount. We have set a question in the questionnaire, that under an ideal condition, contribution amount of the rural cooperatives medical service already achieved the desired scale, namely it can meet the households' general medical service needs, what is the expected governmental contribution amount of the rural peasants? To find the answer, we governmental contribution amount quarterly, and do a Crosstabs of the expected governmental contribution amount with the comparative poverty level. The analysis outcome shows that there is a inverse-U type relation between the family relatively wealthy degree and the expected governmental contribution amount, namely the poorest and richest group have the higher expected government investment proportion than the middle-class group, and the poorest household is more willing the government to enhance

contribution amount. Limited by economic factor, the poor families are still struggled for dressing warmly and eating their fill, so they depend more on governmental contribution on the cooperative medical service. This outcome conforms to the hypothesis 2. However, what confused us is why the richest group also has the high expected governmental contribution amount? Combined with the interview detail, we find that the current rural endowment and medical insurance compensation level can't meet the demand of the richest group of rural household, so they hope that the government takes a bigger responsibility in two insurance systems, the Rural Endowment Insurance and the New-Type Cooperative Medical System, and raises the compensation level.

Table 2 Crosstabs analysis result of family relatively wealthy degrees, households' health, and insurance decision-making

Influenced variables	Value	wealthiest	wealthier	normal	poor	poorest	Total	
IHS	Very good	62.50	63.74	52.69	40.11	29.63	50.19	N=2062 X^2=70.895 P=0.000
	Normal	18.75	29.82	40.92	39.57	43.52	39.72	
	Not good	12.50	5.85	5.96	18.45	18.52	8.92	
	Very bad	6.25	0.58	0.43	1.87	8.33	1.16	
PBS	Yes	12. 50	24. 40	23. 64	35. 15	41. 35	26. 60	N=2034 X^2=33.556 P=0.000
	No	87. 50	75. 60	76. 36	64. 85	58. 65	73. 40	
PCH	No	43. 75	49. 13	53. 74	44. 53	39. 81	50. 89	N=2075 X^2=16.470 P=0.002
	Yes	56. 25	50. 87	46. 26	55. 47	60. 19	49. 11	
PPREI	No	81. 25	74. 57	83. 43	95. 20	96. 30	85. 47	N=2072 X^2=60.280 P=0.000
	Yes	18. 75	25. 43	16. 57	4. 80	3. 70	14. 53	
PPNCMS	No	31. 25	15. 61	14. 98	13. 90	18. 52	15. 15	N=2073□ X^2=4.692 P=0.320
	Yes	68. 75	84. 39	85. 02	86. 10	81. 48	84. 85	
WCPEI	Willingness	31. 25	63. 95	65. 66	52. 43	46. 73	61. 89	N=2057 □ X^2=35.529 P=0.000
	Unwillingness	68. 75	36. 05	34. 34	47. 57	53. 27	38. 11	
EGCA	30%below	6. 25	5. 99	6. 13	3. 63	1. 92	5. 45	N=1999□ X^2=54.217 P=0.000
	30%-50%	25. 00	11. 38	16. 69	12. 01	5. 77	14. 91	
	50%-70%	12. 50	29. 94	33. 90	26. 54	22. 12	31. 47	
	70%above	56. 25	52. 69	43. 28	57. 82	70. 19	48. 17	
WCNCMS	Yes	46. 67	78. 79	77. 65	64. 07	52. 88	73. 79	N=1999 □ X^2=59.355 P=0.000
	No	53. 33	21. 21	22. 35	35. 93	47. 12	26. 21	

4. Conclusion Deficiency and some Thoughts

4.1. Conclusion and Deficiency

This paper finds, throughout the Crosstabs Analysis of "Household comparative richness level" and such variables as "Individual health status", household' poverty has significant effect

on the members' health status in a household, and it validates the hypothesis 1, the poorer the household is, the poorer health status the household has. Meanwhile, the paper also validates the hypothesis 2, the poorer the household is, and the lower the household's possibility to join the health insurance plan is. Further, this paper also finds the particularity of the rich rural household. As the change of consumption model, the richest group has more possibility to catch the chronic diseases. Therefore, the richest group of rural household has poorer health status than other groups, and, may be their possibility to join the basic rural health insurance plan is the lowest. And the richest group of rural household is unsatisfied with the low compensation level, compared with their demand of the rural health insurance, they hope, just less urgent than the poorest group, the government to take over more burdens and a higher level of government contribution.

Although this paper validates these hypotheses, and the findings also explain the facts aptly, this paper also has deficiency, especially in research method. Although the Crosstabs Analysis is an important method to measure the correlativity between variables, the Crosstabs Analysis can't explain the correlativity of variables. Moreover, it can't avoid false correlativity, for it can't control the other factors effectively. However, in a regression model, avoiding the correlativity of the independent variables to explain the exact effect of the household' poverty on other variables, is the goal of our further research to realize. Of course, building up a more scientific index to completely represent household' poverty, avoiding the deficiency of the only use of money index, is also the main content of further research.

4.2. Some Thoughts

First, developing rural economy and improving rural peasants' income is the basic way to enhance rural peasants' health status and the development of basic rural insurance plan. According to the analysis result of this paper, improving the peasants' income is the basic way to enhance rural peasants' health status, and it's impossible to enhance the health status in a slow or even stagnant economy. In addition, improving the development of rural basic insurance system is not only based on the basic Rural Endowment Insurance and the New-type Rural Cooperative Medical System, but also based on improving the peasants' income.

Second, gradually improving the compensation level of the rural basic insurance plan (rural basic endowment insurance plan and rural cooperative medical system). Taking both the current state and the development tendency of the rural social development into consideration, it is necessary to gradually improve the compensation level of rural basic insurance system, which is important to meet the basic demand of rural peasants, especially to meet the urgent demand to lift the compensation level for the richest group of peasants of the rural basic insurance system.

Third, encourage the development of all kinds insurances in rural China. Although the Basic Rural Endowment Insurance and the New-type Cooperative Medical System together make up the basic rural insurance structure, the compensation level of the two insurance plans is not high enough to meet rural peasants' need, because it takes a long time to improve the compensation level only by the two basic insurances plans. Therefore, it is necessary to encourage more other kinds of insurance plans, especially encourage the commercial insurance and supplementary insurance in rural China. It can be seen that as the dramatic development of rural economy and the rapid increase of rural peasants' income, the insurance market in rural China would bring positive and abiding effect on Chinese basic insurance and commercial insurance.

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