STAKEHOLDERS OF RURAL HOMESTEAD CIRCULATION: AN EXPLORATORY STUDY BASED ON GAME THEORY

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ABSTRACT

Based on literature review and game theory, this paper studies the allocation of land invisible spill over efficiency among stakeholders in the process of rural homestead circulation. The result shows that farmers are the disadvantageous groups in the rural homestead circulation, whose legal interests couldn't be guaranteed; ways of compensating farmers are single and social security of farmers is inadequate; the existing rural homestead system constraints the conversion of rural Homestead land, all of the above is the root of conflicts and contradiction among stakeholders. Therefore, this paper proposes several suggestions on how to alleviate the contradiction among farmers, rural local government and homestead users. First, property rights of homestead should be defined, tripartite relationship of ownerships should be reconstructed and rural homestead conversion market should established and perfected; Second, body behaviours of local governments should be standardized to ensure the dominant position of farmers and protect the interests of farmers' homestead property; Third, the leading roles of rural collective organizations should be strengthened and the collective incentive and restrained mechanisms should be established in homestead conversion. Finally, suitable homestead compensation substitutes should be selected and perfect rural social security systems should be established.

Keywords: Rural collective organization, rural homestead circulation, Game Theory, alternatives, land system.

INTRODUCTION

With the rapid development of urbanization and industrialization, the phenomenon that agricultural land becomes non-agriculturalization is becoming more and more serious. As part of rural construction land, rural homestead has become an effective way to protect cultivated land and alleviate the contradiction of supply and demand between urban and rural construction land. At the same time, it has also become the source of extra budgetary income of local governments. In the current countryside, In the process of rural homestead circulation, the contradiction between the legal system that severely restricts the circulation of rural homestead and the interests appeal of the grass-roots government and the farmers has arisen, the reason is that the difference between the "land invisible spill over benefits" (Wang, 2007) and the compensation of farmer after the rural homestead circulation, which will decline the welfare of farmers. Although many scholars have studied the obstacles of rural homestead circulation (Li & Li, 2006), circulation patterns (Qing, 2010; Zhang, 2006), circulation system innovations (Mao, 2012; Zhang, 2010; Han, 2008), and the distribution of circulation income (Wu & Ou, 2012; Yan, 2011; Chu, 2009; Ouyang, 2009), they studied the circulation from the macro-perspective, there is less literatures from the micro-perspective of the rural homestead circulation. Based on the Current status of rural homestead circulation, the game theory is used to analyse the changes of the micro-subject interests during the process of rural homestead circulation, and to evaluate the rationality of the distribution, and to put forward relevant policy recommendations.

Current Status and Benefit Allocation of Rural Homestead Circulation in China

Rural homestead is a unique term in china. It refers to the residential land and ancillary land allocated by rural collective economic organizations which meets the needs of the members of the collective economic organization and the needs of the family's side line production, which is a basic material condition for the survival and development of farmers. With the acceleration of urbanization and the large-scale population shift from rural to urban, the transfer of farmer's homesteads and their houses involves the property rights of hundreds of millions of farmers, which will affect social stability and the overall development of urban and rural areas. Many meetings of the Communist Party of China have clearly stated that it is necessary to improve the rural homestead system, strictly homestead of management, and protection of the property rights of the farmer's homestead. This decision has strong practical guidance for the circulation of rural homesteads.

In the circulation market of rural homestead, there are forms of bargain, Lease, expropriation (Zhang, 2006) or bargain, exchanged, hansel and inherited (Zhu, 2012) at present. The circulation of rural homesteads includes two aspects: one is to supplement arable land and become an indicator for local governments to obtain urban land; the other is to circulate one member to other member involving members of collective organizations (mainly members of collective organization who construct housing) and the circulation of non-collective members (such as small property houses, which is prohibited by law). As the rural homesteads have the function of property and income, the circulation has "invisible spill over benefits". Therefore, it is pivotal that farmers' compensation is whether or not reasonable.

The compensation for the circulation of rural homesteads can be divided into land compensation and compensation of objects on the ground. Land compensation includes compensation for the ownership of rural homestead and used rights of rural homestead, compensation for homestead land compensation refers to the compensation standard for cultivated land, and compensation for used rights of rural homestead is currently controversial, while the replacement price method is used for compensation of objects on the ground uses. Due to the low standard of compensation for house plots and non-standard compensation procedures, and farmers will lose the right to re-acquire homesteads after the circulation of their homesteads, especially for the circulation of rural homesteads under the government's leadership, The income ratio of government, homestead users and farmers is 5:3:2. It is even less that compensation is paid to individual farmers Therefore, the property rights of rural homesteads can't be completely guaranteed in the replacement of their rural homesteads.

ASSUMPTIONS AND ECONOMIC ANALYSIS

The Hypothesis of "Rational Economic Man"

The hypothesis of "Rational Economic Man" is the most basic assumption of Western economics. Economists define human behaviour as pursuing the maximization of economic benefits, and at the same time to collectively promote public interests. The main bodies of interest involved in the circulation of rural homesteads are government, farmers and users. Homestead, as an asset resource, manifests its asset nature through market allocation. As rational interests, so grass-roots governments, farmers and users must maximize the expected benefits from the process of rural homestead circulation. That is, farmers should aim to maintain their basic survival benefits, and local governments should maintain social stability and fiscal revenue. With the goal of maximization, homestead users are aiming to obtain the right to use the homestead at a low price and maximize commercial value (Peng, Zhang & Zhang, 2009).

Patterns in Rural Homestead Circulation

There are two patterns in the above analysis of rural homestead circulation, namely, the rural homestead circulation pattern of State-dominated and the spontaneous circulation pattern of farmers (Mao, 2012; Zhu, 2012; Zhang, 2006). The rural homestead circulation pattern of State-dominated is a monopoly market of rural homestead. The participants of the market are government, farmers and homestead users. The latter mainly occurs between farmers and the other within the collective economic organization, or flows between rural households and citizens. Participants in this pattern are farmers, collectives, and homestead users. The market of each pattern can be seen as an independent market.

The average value of residential land per unit area in the market is defined as "e", "e" is obviously a constant; the initial cost which farmers obtain is "0". The area of rural homestead of each farmer is "Q", the profit of the homestead circulation is "e*Q", the unit cost which farmer obtains the new homestead is "C", and the total cost is "C*Q".

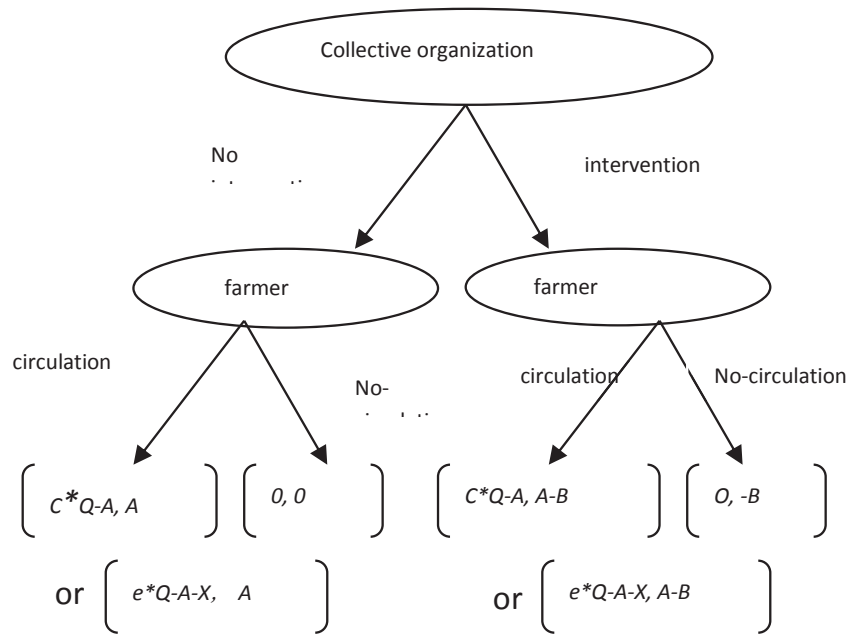## Game Analysis on the Interests of Stakeholders in the Spontaneous Circulation Pattern of Rural Homestead

In the spontaneous circulation market of rural homestead, the stakeholders are farmers, homestead users and collective organizations. In this circulation pattern, the rural homestead is mainly used for building housings, and it is not to change the use of the rural homestead. There is only a game of interests between collective organizations, farmers and homestead users (Mao, 2012; Ouyang, Cai & Cheng, 2009).

Game Analysis on the Interests between Collective Organization and Farmers in the Spontaneous Circulation Pattern

There are two strategies for farmers to choose from: circulation and non-circulation (Zhang, 2009; Li, 2003; Zhang, 1997). If there is circulation, homestead users are members of the collective or external citizens, institutional arrangements has a greater impact on it. Assuming that the probability of internal circulation of rural homesteads in the collective is "P", the profit of internal circulation of farmers is "$C*Q-A$", and the profit of external circulation is "$e*Q-A-X$", "X" must pay institutional fees (such as rent, management fees, etc.) for farmers in the external circulation. The adjustment fee of circulation is "A", and the intervention cost of collective is "B". The profits which farmers expect to circulate rural homestead:

$$E(p)= P(C*Q-A) + (1-P)(e*Q-A-X) = P(C*Q-e*Q +X) + (e*Q-A-X)$$

The game strategy of collective organization is intervention and non-intervention. According to the previous assumption, it shows that this is a complete information dynamic game between collective organizations (first) and farmers (followed) as shown in Figure1:

(Source: Zhang, 2009; Li, 2003; Zhang, 1997)

Figure 1: Game Analysis of Stakeholders in the Spontaneous Circulation of Rural Homestead

In figure 1, it is expected that profit from farmers indicates whether the rural homestead is circulated or not, whether the circulation is internal or external. It depends on the comparison of $(C*Q-A)$ and $(e*Q-A-X)$, and especially on the level of cost *"X"* associated with the Institutional rules. From the previous analysis of the game, the collective organization will choose "no intervention" and farmers will choose "circulation", that is, a balanced strategy which the two sides choose is (no intervention, circulation). In the spontaneous circulation pattern, due to the existence of various institutional constraints, it is a completely informational but imperfect dynamic game. Although the "invisible hand" is playing a role, farmers will get a certain amount of income from the circulation of their homestead, and they may circulate the homestead as soon as possible. It is impossible for the farmer to obtain the expected benefits from the gains, and the prices will often be lower than the real price of rural homestead. So the assets of farmer's homestead will be damaged.

Game Analysis on the Interests between Homestead Users and Farmers in the Spontaneous Circulation Pattern

There are two strategies for farmers: transfer and non-circulation. The income for homestead circulation is "$C*Q-A$" or "$e*Q-A-X$". There are two strategies for homestead users: acceptance and not-acceptance (Zhang, 2009; Li, 2003; Zhang, 1997). If they are members of a collective organization, they may pay "$C*Q$". Of the cost, if they are a member outside the collective organization, the cost is "$e*Q$". The payment matrix between farmers and homestead users is shown in Table 1 where "$e*Q$" must be greater than "$C*Q$".

Table 1: Game Matrix of Payment between Farmers and Homestead Users

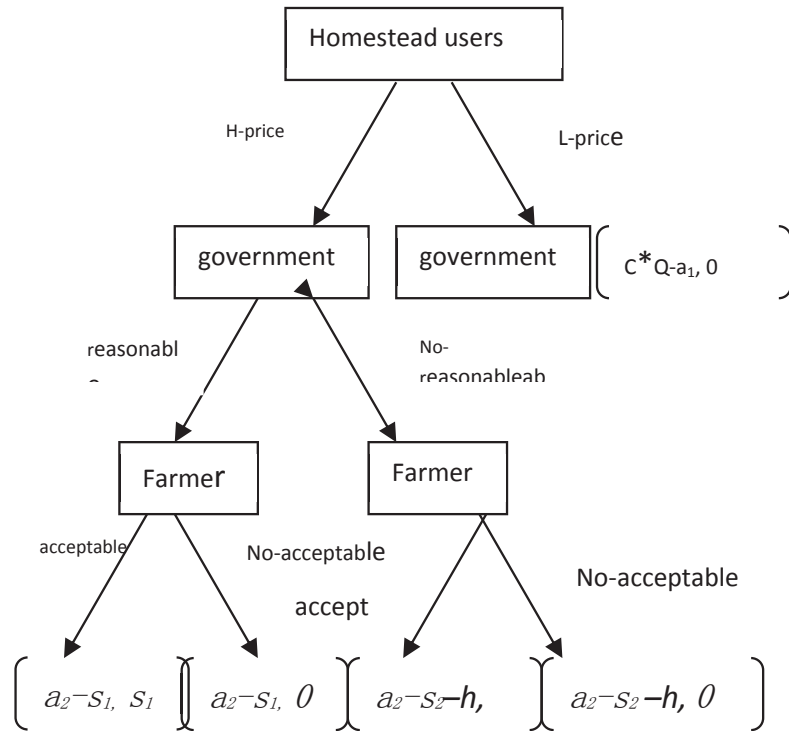|		Homestead Users			
		Acceptable		*Not Acceptable*	
	Circulation	$C*Q$ - A or $C*Q$ or $e*Q$		- A or 0	
Farmers		$e*Q$ - A - X		- A - X	
	Non-circulation	0	0	0	0

In the game of interests between farmers and homestead users, it can be seen that if "$e*Q$" is greater than "$C*Q$" and "X" tends to "0", the farmers will always try to circulate the rural homestead outside the collective organization. Therefore, regardless of the strategies employed by the farmers, homestead users will adopt acceptance strategies. In this game, Nash Equilibrium is the circulation acceptance (Zhang, 2009; Li, 2003; Zhang, 1997). On the other hand, it can also be seen that the institutions have a great influence on the circulation of rural homesteads of farmers. If *($C*Q$-A)* is greater than *($e*Q$-A-X)*, the farmers eventually choose to circulate their rural homesteads within the collective to reduce the use of cultivated land and to protect the arable land.

Game Analysis on the Interests of Stakeholders in the Rural Homestead Circulation Pattern under Government Leading

The stakeholders involve grass-roots government, farmers and homestead users in the rural homestead circulation pattern under government leading (Mao, 2012; Zhu, 2010). Homestead users have two strategies: Obtaining rural homesteads at high or low price. It is determined the compensation and social security for farmers is reasonable or unreasonable the grass-roots government implements the circulation of farmer's homestead. Therefore, there are two strategic options for homestead circulation: reasonable or unreasonable that the compensation and social security of farmers are. The farmers have two strategic choices according to the government' strategies: Satisfied or dissatisfied with the compensation and guarantees. If they are satisfied, they will agree to transfer their homesteads otherwise they will refuse (Figure 2 shows the Game Analysis of the grass-roots government, farmers and homestead users the circulation of rural homestead under government leading).

Assuming that the low price for homestead users is "a_1" and the high price is "a_2". The compensation and guarantee expenses for farmers that the government provides are "s" where "s_1" is a reasonable compensation and irrational compensation is "s_2". The circulation cost which government pays for mandatory measures on rural homesteads under unreasonable conditions is "h".

(Source: Zhang, 2009; Li, 2003; Zhang, 1997)

Figure 2: Game Analysis of Stakeholders in the Circulation of Rural Homestead under Government Leading

Homestead users want to obtain rural homesteads at a low price, and as a "rational stakeholder", the government will not force farmers to circulate their rural homesteads (Zhang & Hsang, 2010). Because the government must meet the corresponding compensation for farmers, if the government increases financial burden by subsidizing farmers in order to promote circulation, the government will not do it unless there is rent-seeking behaviour. Therefore, homestead users can only obtain homesteads at high prices on the premise of a certain interest space. Under the premise of obtaining high price guarantees, it is core the government compensates farmers for their rural homesteads. In order to develop the local economy and obtain extra-budgetary fiscal revenue, the government will compensate farmers for their rural homesteads as far as possible (Yan, 2011; Li & Li, 2006). So maximizing the benefits of homestead circulation and obtaining the corresponding fiscal revenue. As far as possible to reduce the compensation for farmers to promote the circulation of rural homesteads, the government will adopt appropriate policies and measures to damage the legal rights of farmers' homestead.

Game Analysis on the Interests between Government and Farmers in the Rural Homestead Circulation Pattern under Government Leading

According to the previous assumptions, there are strategies for the grass-roots government: (reasonable compensation, unreasonable compensation); there are strategies for farmers: (acceptable, not-acceptable). The profit of no-circulation for farmers is 0, the profit is "s_1" under reasonable conditions, and is "s_1"under unreasonable conditions; the profit for basic governments is "$a_2\text{-}s_1$" under rational conditions and is "$a_2\text{-}s_2$" or "$a_2\text{-}s_2\text{–}h$" under irrational conditions (Zhang, 2009; Li, 2003; Zhang, 1997). The profit matrix between local government and farmers is shown in Table 2.

Table 2: Game Matrix of Payment between Local Governments and Farmers

		Farmers	
		Acceptable	*Not Acceptable*
	Reasonable	$a_2\text{-}s_1$, s_1	$a_2\text{-}s_1$, 0
Local Governments			
	Unreasonable	$a_2\text{-}s_2\text{-}h$, s_2	$a_2\text{-}s_2\text{-}h$, 0

The Nash equilibrium of the previous game is "(reasonable, acceptable)", that is "($a_2\text{-}s_1$, s_1)". However, the equilibrium has a basic premise that the legitimate rights and interests of rural homesteads for farmers are fully protected by the law, and the grass-roots government must resolve the homestead issue by negotiation. However, the grass-roots government has a mandatory expropriation right; the circulation of rural homesteads can be achieved through unreasonable compensation and social security. In the case of forced circulation, the equilibrium state can be changed from "($a_2\text{-}s_1$, s_1)" to "($a_2\text{-}s_2\text{-}h$, s_2)", that is irrational and acceptable. If the equilibrium state is unreasonable and unacceptable, farmers may adopt radical measures such as "confrontation" to refuse the circulation of their rural homestead. This balanced state achieved by the mandatory means by the government not only leads to escalate the confrontation, deepen contradictions between farmers and the government, but also will ultimately cause the resettlement system and social security to be invalid measures (Zhang, 2009; Li, 2003; Zhang, 1997). In this game, the government must make "s_1"greater than "s_2" and make "s_1" greater than "($s_2\text{+}h$)" in order to obtain maximum benefits. Otherwise, the government will choose a satisfactory equilibrium between the two sides, namely, reasonably and acceptance.

Game Analysis on the Interests between Government and Homestead Users in the Circulation of Rural Homestead under Government Leading

It can be seen from Figure 2 (in page 30), in the game between the government and homestead users, there is strategy for the homestead user: low price, high price; the grass-root government has a strategy: acceptable, not acceptable. As a "rational" decision-maker, the grass-root government will have a heavy financial burden due to the low-cost circulation of rural homesteads, and its profit will be "$-s$", they will deny circulating rural homesteads to homestead users at a low prices. So Homestead users may only obtain homesteads at high prices. The profit matrix between the grass-root government and homestead users is shown in Table 3.

Table 3: Game Matrix of Interest Gambling Payment between the Grass-root Government and Homestead Users in Homestead Circulation

		Homestead Users		
		High Price		*Low Price*
	Acceptable	a_2-s_1 or a_2-s_2-h, $C*Q-a_2$		$-s$, $C*Q-a_1$
Grass-roots Government				
	Not Acceptable	*0,*	*0*	*0,* $C*Q-a_1$

Known from the previous game analysis, in this game, there is only one equilibrium achieved (high price, acceptable), which means that homestead users can obtain rural homesteads at high price (Zhang, 2009; Li, 2003; Zhang, 1997). However, based on the maximization of the market interests, homestead users can be reached agreement with the grass-root government if "$C*Q$" is greater than "a_2". Therefore, under the premise of maximizing the benefits for homestead users and obtaining high returns for grass-roots governments, rural homesteads will be circulated. However, farmers are vulnerable groups, if their homestead property rights cannot be protected and they cannot enjoy the value-added of the circulation of their rural homesteads, the relationship between officials and farmers are intense, and the contradictions between officials and farmers are deepened.

Analysis of the Final Game Equilibrium of the Circulation of Rural Homestead under Government Leading

In the process of the circulation of rural homesteads under government leading, the choice of strategy for grassroots governments, farmers and homestead users has a great influence on the final equilibrium. According to the hypothesis of "rational economic man" and under the premise of maximizing their respective interests, the final Nash equilibrium of the three-party game is "high price (homestead users)-acceptance (government)-reasonable (grassroots government)-circulation (farmers)" (Mao, 2012; Zhu, 2010; Peng, Zhang &

Zhang, 2009). However, in the process of implementing the circulation of rural homesteads, the choice of often manifests itself by "high price (homestead users)-acceptance (government)-unreasonable (grassroots government)-circulation (farmers)". In the process of upgrading urbanization level in China, there are some rent-seeking behaviors, so that the circulation of rural homesteads at low price will cause severely losses to farmers for land rights and interests. To a certain extent, it also shows to maximize the benefits among the three parts that farmers are allowed to participate in the market and directly trade with homestead users (Chu, Qu & Sun, 2009; Han, 2008; Li & Li, 2006).

CONCLUSIONS AND SUGGESTION

The circulation of rural homesteads can achieve the optimal allocation of land resources and redistribution of land benefits through a series of property rights adjustments and trading activities. Based on the game theory, it shows that there are conflicts of interest for the maximization of their respective interests among rural collectives, farmers, homestead users and local governments; it is "land invisible spillover efficiency". Its essential causes lie in the inherent defects of property design and governance structure of the rural collective homestead. As a representative of land ownership, the rural grass-roots governments (Collective organization and local governments) are liable to expropriate or circulate rural homesteads by means of compulsory. Although farmers have the use rights of rural homesteads, the definition of the subjects of property rights is ambiguous, and there are many drawbacks in the distribution of benefits. In the circulation of rural homesteads, due to the lack of corresponding institution or the existence of rent-seeking behaviors and the assets of rural homesteads for farmers are vulnerable to damage as a vulnerable group. Under the premise of ensuring the profit of farmers in the circulation of the rural homesteads, the government should take effective measures to ease the contradiction between rural households and rural grass-roots governments and homestead users so as to promote the effective circulation of rural homesteads. Based on the results of the game analysis, the following four suggestions are proposed.

(1)   Establishing and improving the circulation market of rural homesteads, defining the property rights of rural homestead and reconstructing the relationship of the tripartite property rights. The rural homestead, which is freely used as a collective allocation to farmers, has a function of welfare protection and is also an important asset of farmers. In the process of industrialization and urbanization, Building a house in the rural areas has great pressure on the protection of arable land, where there are strange phenomena about occupying arable land and abandoning rural homesteads. As revealed by Han (2008), the way to optimize the allocation of resources the circulation of rural homesteads can realize the usufruct of rural homestead of farmers. Therefore, in order to ultimately realize the rationalized return of rural homesteads, the property rights of rural homesteads are defined, farmers are granted full property rights and the property rights are registered, confirmed and the relationship of property rights is determined between the government, collective organizations and rural households. Establishing the circulation market of rural homesteads, the circulation of rural homesteads will be carried out on the basis of voluntarism and fairness. The government must change its role to strengthen the macro-control, guidance and management of the circulation of rural homesteads in order to ensure the maximization of

the interests of stakeholders by the means of land planning, rural planning and the control of land use.

(2)   Standardizing administrative behaviors of grass-roots government, ensuring the principal status of farmers and protecting the property rights of farmers. Most of the circulations of the rural homesteads are government-led, with a strong administrative colour. The grass-roots government has become a special subject for the circulation of rural homesteads. There are shortcomings in the homestead property rights system, the corresponding supervision mechanism and the competition in the subjects of the property are lack in the process of circulation. Finally, the rights and interests of farmer homestead assets are severely damaged. It can effectively reduce hidden costs, protect the interests of farmers and promote circulation by regulating the administrative behavior of grass-roots government. It is core to standardize the administrative behavior of government that the functions of governments are changed, markets for production factors are cultivated and established, assessments of rural homesteads are established public organizations and institutions for public organizations are improved, so that rural homesteads can be circulated to satisfy the main stakeholders under the arrangement of the institutional.

(3)   Strengthening the leading role of rural collective organizations in the circulation of rural homesteads and formulating incentive and restraint mechanisms for the circulation of rural homesteads. To achieve the optimal allocation of resources, it is bound to infringe the interests of related stakeholders. In the circulation process of rural homesteads, in the game of interests between the collective organization and the farmers, the related expenses causes the income of farmers to decrease "($C*Q\text{-}A$ and $e*Q\text{-}A\text{-}X)$". The effect of collective organizations has a great guiding role in the circulation of rural homesteads, such as intervention and institutional constraints. At present, the rural homestead is not allowed to illegally circulate in the existing homestead system. As a collective organization of homestead ownership, collective organizations play a minor role in the process of circulation. However, there is a lack of appropriate incentive and restraint mechanisms for the circulation of rural homesteads, and there are the phenomena of the "invisible" market and "illegal trading activities." Hence, the management role of collective organizations in the circulation of rural homesteads should be strengthened. Taking the collective organizations as a platform guiding and regulating the circulation of rural homesteads, mastering the circulation flow of rural homesteads, and the collective organizations provide circulation information for farmers in a timely manner; the collective organizations should formulate the circulation incentive and restraint mechanisms (such as reducing the corresponding fees or raising incentives, etc.) of rural homesteads according to relevant laws and regulations to ensure that the circulation interest of farmers be maximized, and to guide homestead lawful circulation, and to reduce rural homesteads idleness and absurdity.

(4)   Choosing suitable compensation alternatives to rural homesteads and establishing a perfect and effective rural social security system. The construction of the rural social security system includes the minimum living guarantee, rural pension insurance, medical security, and housing projects. It is important to choose a substitute for the circulation compensation of rural homesteads to realize the circulation of rural homesteads. There is housing, social security or currency that is substitute for the circulation compensation of rural homesteads. When farmers lose their rural homesteads, on one hand, they are no longer

purely peasants; on the other hand, they cannot be acceptable by the city and become marginalized groups in the city, and do not have the same minimum living security as urban residents (Zhang, 2009). It is necessary to do a good job in the circulation of rural homesteads and make them "home ownership"; it is necessary to establish corresponding rural minimum living security system, rural pension insurance and medical security system and other remedial mechanisms to reduce the dependence on land pension and make farmers live in peace of mind and confidence. Therefore, the local government must establish a social security system including residence, old-age care, and medical care to ensure social stability after the circulation of farmer's homesteads, and provide strong guarantees for the long-term livelihood and health of farmers, and the problems (life, pensions, medical care and other issues) of the circulation of farmer's homesteads are fundamentally solved.

In short, regardless of the spontaneous circulation of farmers or government-led, the real subject in the circulation market of rural homesteads should be farmers themselves. Under the conditions of market economy, as micro-economic entities, farmers only maximize their own interests under the conditions of property rights determination. However, under the current status of circulation, to protect the rights and interests of farmers, suitable alternatives for circulation compensation should be chosen, the rural social security system should be established and improved, the legitimate rights and livelihood security of farmers should be protected; on the other hand, the circulation market of rural homesteads should be standardized to realize the property income of farmers' homesteads. By reforming the rural homestead system and the household registration system, the gap between urban and rural areas should be narrowed down, and a land market with "the same land, the same rights and same price" should be established; at the same time, the functions of grass-roots organizations in the circulation of rural homesteads should be strengthened in order to achieve the conversion from implementing agencies and control departments to service departments to eliminate various rent-seeking behaviors during the process of circulation. Under the guidance and management of grassroots organizations, corresponding incentive and restraint mechanisms should be formulated to ensure the direction of the circulation of rural homesteads and realization of the property right of the farmer's homestead.

REFRENCES

Chu, P., Qu, F.T. & Sun, W.D. (2009). Analysis on the fairness and efficiency of the circulation of right to use rural residential land. *China Land Science, 9*(5), 26-29.

Han, K. (2008). Launching the marketization reform of rural residential land in China. *Journal of National School of Administration*, *4*, 4-7.

Li, J. & Li, H.Y. (2006). Research on the value of the right to use the house site in rural areas. *Economy Forum, 18*, 13-15.

Li, X. (2003). The Game Analysis of the rural land using right exchange. *Issues in Agricultural Economy, 12*, 4-7.

Mao, W. (2012). Research on rural housing and homestead transferring system. *Legal Forum, 27*(4), 102-108.

Ni, J., Yang, Q.Y. & Lu, Y.C. (2010). Analysis of the income distribution of rural homestead in Jiangjin District of Chongqing City. *Journal of Southwest University, 12*, 150-153.

Ouyang, A.J., Cai, F.M. & Cheng, L.D. (2009). Research on establishing the exit mechanism of rural homestead. *China Land Science, 10*, 26-30.

Peng, K.L, Zhang, P. & Zhang, A.L. (2009). Study on welfare balance of different interest groups during rural-urban land conversion. *China Population, Resources and Environment, 2*,137-142.

Qing, H. & Wang, H.J. (2010). On the limitation of market machinery in the transferring of right of using ground of house. *Economic Issues, 6*, 75-78.

Wang, Z.A. (2007). *The survival issues of landless peasants in the remote areas of Chinese cities*. Beijing: Economic science press.

Wu, M.F. & Ou, M.H. (2012). An empirical study on the influencing factors of rural households' behaviors in housing land transfer. *Journal of Guangdong Ocean University, 32*(2), 63-69.

Yan, J.H. (2011). Research on conflict of land interests and innovation of property rights system in rural homestead. *Issues in Agricultural Economy, 7*, 46-53.

Zhang, H.X. & Hsang, T.Z. (2010). Protecting the interests of farmers and improving the transaction mechanism. *Issues in Agricultural Economy, 5*, 10-15.

Zhang, B., Tang, J. & Huang, X.J. (2006). Research on problems of rural housing land transition in developed regions. *China Land Science, 2*, 34-38.

Zhang, S.L. (2009). Research and suggestions on the current situation of rural residential land in China. *Agricultural Economy, 5*, 64-65.

Zhang, W.Y. (1997). *The Game Theory and information economics*. Shanghai: Shanghai People's Publishing House.

Zhu, S.Y. (2010). Perfection of legal system of circulation of rural residential land use rights in underdeveloped areas. *Seeker, 1*, 146-147.