Compensation Method and Rational Standard of Arable Land Expropriation

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Abstract   This paper discusses the problems in determining the compensational money of arable land expropriation by using the Income Capitalization Method and Market Comparative Method during the process of arable land expropriation. It also introduces the value composition of arable land in China. Taking Chongqing City as an example, the irrationality of compensation standard in current arable land expropriation is analyzed. Result shows that the Income Capitalization Method is rational in determining the compensational money, but the current compensation standard should be further improved.
Key words   Land exploration compensation; Method; Standard; Calculation; China

China in the 21st century is in a period of rapid social transformation. Industrialization and urbanization, marketization are the inevitable trends during this period. They are the great goal during realizing a well-off society and solving the " Three Agricultural Problems" , also an inevitable process of the socialism with Chinese characteristics. However, the rapid development of large industry and big city is necessarily accompanied by a large area of occupied land. During the process of land expropriation, its efficiency and equity have inevitably become the focus of discussion once again. Under the current system background of China, the development of industrialization and the expansion of urbanization will inevitably lead to the tension of land use in industrial cities. State-owned land in urban area is far from being able to support its development, and can not achieve the goal of effective and adequate supply. More and more agricultural land needs to be changed into construction land. A large area of rural land has been expropriated, which is a common phenomenon during the development. However, because the land requisition system is still in exploration, anomie phenomenon exists in the interests demands of different interest subjects. Conflict of interest is increasing, which seriously affects the stability and development in rural areas. The existing land requisition system, especially the compensation system for land requisition, remains to be reflected and improved.

1   Problems in Income Capitalization Method and Market Comparative Method during the process of land expropriation compensation

1.1   Problems in existing Income Capitalization Method   Income Capitalization Method is also known as the Capitalization Method of Land Rents. It is a method to estimate the land price by turning the future normal annual net income (land rent) of

land to be estimated back into a certain amount of capital. People can expect the eternal land net income due to the sustainability of land. As long as the successive annual net income of land in the next several years is discounted to present value in the form of a certain degree of reduction rate, it is manifested as the price of land. And this is the basic principle of Income Capitalization Method. The 47th article of the *Land Administration Law of the Peoples Republic of China* points out that in requisitioning land, compensation should be made according to the original purposes of the land requisitioned. The land compensation fees shall be 6 – 10 times of the average output value of the three years preceding the requisition of the arable land. The resettlement fees for each agricultural person to be resettled shall be 4 –6 times of the average annual output value of the three years preceding the requisition of the arable land. All these clearly show that the compensation standard in China is based on the earning power of agricultural land according to the multiple output method. It is in fact the concrete application of income discount. This method calculates output as the land income according to the land Income Capitalization Method. The idea of estimating land price by its original use is correct. However, there are many obstacles in determining the amount of land compensation by using the multiple output method, which are mainly shown in the following aspects.

1.1.1   Multiple output method ignores the peasants' option right of land. At present, the land contract period of peasants in China is 30 years. That is to say, peasants can reasonably arrange their own agricultural production in 30 years according to their needs. They can reasonably adjust the planting structure in accordance with the market situation. Therefore, auditing output only by the original use of existing land is inappropriate. Especially in the most developed coastal cities and the suburbs in china, agriculture production has not been the main source of local peasants' income for a long time. And land abandonment has become a serious problem. At the same time, compensation by multiple output method will greatly damage the interests of peasants.

1.1.2 Annual output value of the land is difficult to be determined. The *Land Administration Law* points out that compensation should be made according to the original purposes of the land requisitioned. Concrete calculation of the annual output value of cultivated land requisitioned is a very complex process, and many related factors should be taken into account. Standard for measuring the annual production value of arable land is neither the land price nor the rent, but a planting economic estimation on the original purposes of the arable land. Factors should be considered are crop type, cultivation system, productivity levels, market position, measurement on market conditions and so on. The Ministry of Land and Resources released the *Guiding Opinion about the Improvement of Compensation System for Land Acquisition* on November 12, 2004. It regulates that the land and resources departments of provincial level jointly with the relevant departments should make the minimum standards of a unified annual output value for arable land in counties (cities) within provincial area. They shall be announced the implementation after the provincial government's approval. When developing a unified annual output value standard for arable land, departments should take into account the type and quality of arable land, the peasants' input in land, the prices of agricultural products, the grade of agricultural land and so on. However, the specific methods and techniques routes of the standard for evaluating the above factors still need further discussion.

1.1.3 Reasonable compensation multiple is difficult to be determined. The *Land Administration Law of the People's Republic of China* imposes the implementation of land compensation fee for arable land, which is 6 – 10 times of the average output value of the three years preceding the requisition of the cultivated land. When and compensation fee is calculated in accordance with the multiple of output, we can see that there is no serious study on the reduction rate of arable land income. According to the provisions of the *Land Administration Law*, the reduction rate of arable land income is 10.0% – 16.7%, which is clearly incompatible with the actual agricultural input / output. Professor Liu Ei-dong in Zhejiang University, an expert engaged in the land evaluation and planning in China, has carried out a lot of researches on this problem[1]. He has consulted to the reduction rate of the arable land income and the reality's maximum utilization benefit of the expropriated arable land in foreign countries, in order to determine the price of arable land in China. It is sure that only a land compensation fee should be equivalent to 30 times of annual land income, and should be more than 16 times of the annual land income in the minimum. Compensation standard of 6 – 10 times in China is too low, and is not a just compensation for peasants' property losses.

1.2   Problems in Market Comparative Method praised by the academic circles   Market Comparative Method in this paper is different from the Market Comparative Method in land price evaluation. But the methods and basis points of the two have certain consistency. Based on the practice-based reflexion and criticism of existing Income Capitalization Method, many scholars suggest using the Market Comparative Method

during the land expropriation compensation in order to compensate the arable land expropriated. At present, many scholars studying on land and law argue that we should adopt the principle of " complete compensation" during the process of land expropriation compensation. There should have positive advocates of the individual rights and the protection of private property. Scholars point out that we should strictly follow the law of market, carry out civil tort compensation to the property rights of land-expropriated peasants according to the market price, and make up for the property losses of land-expropriated peasants in a maximum extent[2]. However, I believe that it is unscientific to use the market mechanism based on " complete compensation" to solve the current social contradictions caused by land compensation standard based on " Income Capitalization Method" .

(1) It is inconsistent with the basic national conditions of China, and is not conducive to the rapid development of industrialization and urbanization. The level of land acquisition compensation fee not only has close relation with the property interests of land-lost peasants, but also influences the pace and level of the development of industrialization and urbanization. Excessive compensation for expropriation will greatly increase the costs of industrial restructuring, and will also reduce the country's macro-control ability of the whole national economy by using land-the most basic means of production. Excessive compensation goes against the rational transfer of rural labor force, and the intensive management of rural land.

(2) It is incompatible with social justice, and might lead to greater social contradictions when solving the existing contradictions. The most important features of land-the basic means of agricultural production-are scarcity and fixity. Therefore, land parcel and location has become a decisive factor to measure the land price. However, there are historical reasons for the land area and location of peasants. Market prices of land owned by peasants in suburbs and remote areas are greatly different. And even the land market prices in different blocks of the same area are different due to some extremely complex factors (such as traffic and pollution source). If we carry out transaction according to market price, it is bound to result in great unfairness of the whole society, not to mention the psychological impact on urban residents who do not have any land.

In a word, I believe that under the existing social and institutional background, it is feasible and reasonable for government to use " Income Capitalization Method" to compensate the arable land expropriation. But the current standard of compensation still needs to be further improved.

2   Rationalization test on the value composition of arable land and the compensation for land expropriation in China during the actual expropriation and compensation

2.1   Value composition and distribution of arable land in China   According to the land rent and price theory in land economics, the value composition of arable land in China is as

follows:

Absolute land rent   Differential rent

The value of agricultural = (Ownership value without development right + Value of use right) + Contribution of the spillover effect of external
land in China (P) | factors to the land value.
         Peasants owned (Compensation payment C) |
            State owned (D)

According to the above value composition, the composition and distribution of land value in secondary land market are obtained: $P^2 = C + (B + I + T)$, $W = I + T$, and $C = P^2 - (B + W)$, where P^2 is the competitive sell price in secondary land market after expropriation, that is the sell price of long-cultivated land; C is the land acquisition cost including the opportunity cost of arable land, peasant resettlement, social security, and cost of re-employment training; B is the land development cost, and the input in realizing the " Five-accessible and One-leveling" program; I is the socio – economic cost, that is the value interests of land brought by the whole external economic environment except B; W is the land transferring fee, that is $I + Ti$. In this equation, I is the various taxes and fees during the process of land acquisition; therefore, it should not be included with repeat during calculation. T is the huge amounts of land value-added revenue caused by the changes of land use function after agricultural land transforming into construction land.

2. 2 Rationalization test on the existing compensation standard – a case of Chongqing City

From the above analysis, it can be concluded that there are many problems and irrational places in the existing compensation standard for arable land expropriation. Therefore, Table 1, 2 and 3 use the cost backward inference method to test on the rationality of the existing compensation standard for arable land expropriation, taking Chongqing City as an example.

Table 1   Standard land price for the use right of state-owned land in Chongqing City   yuan/m²

Land grade	Commercial land	Residential land	Industrial land
1	11 953	3 503	1 499
2	9 977	3 078	1 204
3	7 499	2 206	711
4	5 957	1 777	460
5	4 822	1 237	350
6	4 334	959	286
7	3 993	841	220
8	3 109	737	185
9	2 648	660	
10	1 875	589	
11	947	444	
12	491	338	

Standard land price is the average price under the " Five-accessible and One-leveling" program of state-owned land in cities and towns. Standard land price includes land occupation fee, land development fee and land increment income (land transfer fee).

(1) Setting the verification condition. ① Arable land transfer is used as the data to be estimated of worst-grade residential land (12-grade residential land). ② Government has gained appropriate profit through taking back the land development cost. Floor area is sold according to the price of land area. This is because that the peasants have no right of spatial development, and the floor area is usually far higher than the land price. Therefore, government gains less profit when the floor area is calculated as land area. Calculations can better explain the situation.

Table 2   Transferring fee standard for the use right of state-owned land in Chongqing City   yuan/m²

Land grade	Commercial land	Residential land	Industrial land
1	840	590	440
2	660	500	300
3	530	420	170
4	450	310	150
5	380	270	130
6	330	250	120
7	290	210	90
8	260	160	80
9	240	110	
10	220	100	
11	200	90	
12	190	80	

Data in the table are the transferring fee of floor price, not including the compensated use fee for the newly expropriated construction land, the land expropriation fee, the compensation fee for removing and resettlement, and the land development cost.

Table 3   Investment price of land development infrastructure

                                                     yuan/m²

Program	Development investment	" Three-accessible and One-leveling" program	" Five-accessible and One-leveling" program
Water supply	5.48	√	√
Road	49.60	√	√
Drainage, pollution discharge	21.68		√
Power supply	8.18	√	√
Telephone	4.34		√
CATV	5.10		
Pipeline gas	26.57		
Land leveling	30.00	√	√
Total	150.95	93.26	119.28

√ stands for the item included.

(2) Test and result analysis. Government has gained appropriate profit through taking back the land development cost. After discounting the deserved land development cost, appropriate profit and huge gains of some taxes and fees of government, the remaining part is $C = 138.72 \times 10^4$ yuan/hm². And there is a big gap with the $22.50 - 30.00 \times 10^4$ yuan/hm² compensation to peasants at present. Rural collective economic organizations and peasants only have obtained 1/4 of their deserved land costs. It can be seen that government still has sufficient funds for requisition compensation, peasants' resettlement and social security, re-employment training and so on after discounting the land development cost, part of the taxes and fees, and profits in the transfer of worst-grade residential land.

With the efficiency improvement of the transfer of agricultural land to construction land (reflected in the land use grade of state-owned land), financial resources dominated by government and used for the requisition compensation and social security of peasants will have a substantial increase. Taking the transfer of 6-grade residential land as an example, the rest part is $C = 589.72 \times 10^4$ yuan/hm^2 after discounting the land development cost, profits and some taxes and fees.

3　Conclusion

Based on the rationalization discussion of the two compensation methods and the calculation of the existing compensation standard for land expropriation, it is correct to take Income Capitalization Method as the basic method of compensation for land requisition. However, the current standard of compensation still needs to be further improved. Government has adequate ability to pay for the compensation of land requisition. Moreover, it has sufficient funds for the construction of peasants' social security system and re-employment training.

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农地征用补偿方法和标准的合理化探讨

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摘要　探讨了在农地征用过程中，运用收益还原法与市场比较法确定补偿金额存在的问题。收益还原法是把土地产值作为收益，按产值倍数法确定征地补偿金额，它的思路是正确的，但在具体实施中存在一些问题：产值倍数法没有考虑到农民对土地使用的选择权，会极大的损害农民的利益；土地的年产值额度难以确定，具体标准有待深入研究；合理的补偿倍数难以确定，不能公正的补偿失地农民的财产损失。市场比较法是指按照市场价格对被征地人的财产进行赔偿，以最大限度的弥补被征收入因征收造成的损失，这一方法也存在一些问题：不符合目前中国的基本国情，不得促进工业化和城市化的快速发展；不利于社会公平，在解决现有矛盾的情况下，可能会引发更大的社会矛盾。介绍了中国农地的价值构成，主要由绝对地租和级差地租构成，并进一步得出了二级土地开发市场上的土地价格构成与分配。以中国重庆市为例，采用成本反推法对现行农地征用补偿标准的不合理之处进行了探讨。研究表明：以收益还原法进行征地补偿的基本方法是正确的，但是现行的补偿标准有待于进一步完善；政府对于土地征用补偿的支付能力是足够的，并且有足够的资金用于农民福利保障体系建设和再就业培训。
关键词　征地补偿；方法；标准；测算

中国国家级自然保护区体系建设分析

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摘要　从数量和面积、类型结构两方面介绍了中国国家级自然保护区建设的现状。截止2007年底，中国共建有国家级自然保护区303个，总面积9 365.58万 hm^2，已初步形成了布局基本合理、类型比较齐全、分布相对广泛的国家级自然保护区网络体系，但中国的国家级自然保护区类型结构不尽合理。分析了中国国家级自然保护区网络体系建设中存在的一些问题：空间分布不均衡，集中分布在经济相对落后的西部地区，而东部经济发达地区的国家级自然保护区数量和面积所占比例相对较小；国家级自然保护区所占面积比例过大，加重了保护区的经费保障负担，影响了管理水平；生物多样性保护存在空缺，一些重要物种和生态系统尚未纳入到国家级自然保护区体系中；受国家重大建设工程项目影响，资源保护与开发建设的矛盾日益尖锐。提出了提升国家级自然保护区建设与管理水平的相关对策。科学论证、统筹规划，合理优化国家级自然保护区空间网络体系；控制规模、确保质量，重点加强以保护空缺生物多样性为主的国家级自然保护区建设；加快制定相关法律法规，强化涉及国家级自然保护区建设项目的环境管理；积极采取各种有效措施，切实提高国家级自然保护区的有效管理能力；继续加大科研监测力度，实现生物多样性资源信息共享与交流合作。
关键词　国家级自然保护区；建设现状；生物多样性保护；管理；发展对策