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Issues concerning Citizenization Cost Sharing of the Population Transferred from Agriculture: A Case Study of Chongqing

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Abstract The citizenization of the population transferred from agriculture is an inevitable process for Chinese social transformation, and one of the core issues in the course of new urbanization. The core problem in citizenization of the population transferred from agriculture lies in cost. Taking Chongqing as an example, this paper calculates the total citizenization cost to be 125038.7 yuan for the population transferred from agriculture. Through field survey and research, this paper analyzes the current situation of citizenization cost sharing of the population transferred from agriculture in Chongqing, points out some problems in cost sharing such as inadequate governmental financial capacity, absence of business and lack of personal affordability, and finally brings forward the corresponding policy recommendations.

Key words The population transferred from agriculture, Citizenization, Cost sharing

1 Introduction

Urban-rural dual structure is a major obstacle to the integration of urban and rural development, and there is an urgent need to promote the citizenization of the population transferred from agriculture, gradually shift the qualified population transferred from agriculture to urban residents, and link the financial transfer payment with the citizenization of the population transferred from agriculture. Chongqing is the only municipality directly under the Central Government in the central and western regions, with dominant features of "big city" and "big village", and has an important strategic position in the China's new urbanization construction. As of the end of 2013, the city's permanent population reached 29.7 million, and the urbanization rate reached 58.34%, but the urbanization rate of registered population was only 40.02%, lower than the national average. The difficulty in the citizenization of the population transferred from agriculture in Chongqing represents a national dilemma. In *National Comprehensive Pilot Program on New Urbanization* published at the end of 2014, the nine districts of Chongqing were listed as national comprehensive new urbanization pilot areas. In this paper, we measure the total citizenization cost of the population transferred from agriculture in Chongqing, and analyze the problems in cost sharing, in order to clearly understand the difficulties and trends concerning the citizenization cost sharing mechanism of the population transferred from agriculture, and provide a reference for improving the citizenization of the population transferred from agriculture.

2 Calculation of citizenization cost of the population transferred from agriculture in Chongqing

The citizenization cost of the population transferred from agriculture being talked in this paper is the minimum money that these people must invest in shifting their identity, status, ideology, social rights, production and lifestyle to keep abreast with their urban counterparts and successfully integrate into urban society (Zhou Xiangdong, 2012). In this paper, from the perspective of social cost, we study the citizenization cost of the population transferred from agriculture. To learn from the research methods of China Development Research Foundation (2010), Zhou Xiangdong (2012), Shen Bing (2012), Ouyang Lisheng (2013), Feng Qiaobin (2014), Li Yihua *et al.* (2015) and Sui Haixia *et al.* (2015), the citizenization cost of the population transferred from agriculture includes the following parts: the cost of living increased after the population transferred from agriculture changes into urban population; the cost of housing for the population transferred from agriculture in city; the cost of infrastructure investment increased due to the urban population increase brought about by citizenization; the cost of social security increased after the population transferred from agriculture changes into urban population; the cost of education increased brought about by citizenization (Fig. 1). Therefore, the citizenization cost model of migrant workers can be expressed as:

$$C(\text{total cost}) = C_1(\text{cost of living}) + C_2(\text{cost of housing}) + C_3(\text{cost of infrastructure investment}) + C_4(\text{cost of social security}) + C_5(\text{cost of education}).$$

Thus, the citizenization cost of the population transferred from agriculture is divided into C_{personal} (personal cost) and C_{public} (public cost).

Personal cost includes cost of living and cost of housing; public cost includes cost of infrastructure investment, cost of social security and cost of education.

2.1 Cost of living (C_1) The cost of living means the daily living expense in city after the citizenization of the population transferred from agriculture, including the per capita consumer

spending on water, electricity, gas, transportation, communication and other aspects in city (Zhang Guosheng, 2009). In fact, the cost of living after the citizenization of the population transferred from agriculture measures the consumption gap between the population transferred from agriculture and urban population. Due to the availability of data and computational convenience, here we substitute the consumption level of farmers for the consumption level of the population transferred from agriculture, and get $C_1 = C_{\text{urban}} - C_{\text{rural}}$. Based on the data from *Chongqing Statistical Yearbook* (2011-2014), the citizenization cost of the population transferred from agriculture is calculated to be 10823.54 yuan.

Table 1 Difference in the consumption level of urban and rural residents in Chongqing

Unit: yuan			
Year	Consumer spending of urban residents	Consumer spending of rural residents	Consumption gap
2010	12874.35	3624.62	9249.73
2011	14974.49	4502.06	1 0472.43
2012	16573.14	5018.64	1 1554.50
2013	17813.86	5796.36	1 2017.50
The average consumption cost increased amid citizenization of migrant workers			10823.54

Data source: *Chongqing Statistical Yearbook* (2011-2014).

2.2 Cost of housing (C_2) Zhou Xiangdong (2012) believes that the cost of housing is the minimum capital investment to ensure that the population transferred from agriculture can settle down happily in city after citizenization, and it is an important part of migrant workers' citizenization cost. The cost of housing for migrant workers in Chongqing can be denoted by the product of urban per capita housing area and urban construction cost per unit area of housing. It is expressed by the formula: $C_2 = M \times V$. According to the data published by Chongqing Municipal Bureau of Statistics, the urban residents' per capita housing area in Chongqing was 33.59 m² in 2013, but *Notice about the Issues con-*

Table 3 Cost of infrastructure for citizenization of the population transferred from agriculture in Chongqing

Items	Year	2010	2011	2012	2013
Urban fixed asset investment //10 ⁴ yuan		47227262	50839287	59536848	6 7762 193
Urban population//10 ⁴		1107.00	1277.64	1317.25	1 344.05
Urban per capita fixed assets investment//yuan		42662.39	39791.56	45197.83	50 416.42
Per capita fixed assets investment//yuan		44517.05	—	—	—

Data source: *Chongqing Statistical Yearbook* (2011-2014).

2.4 Cost of social security (C_4) The cost of social security for the citizenization of the population transferred from agriculture includes personal spending, business spending and government spending, but government spending occurs after retirement of the population transferred from agriculture, so it does not constitute a present obligation of government. Therefore, this paper does not use discounted method to calculate the present value of government's future spending in order to avoid the expansion of citizenization cost of the population transferred from agriculture. Based on the total fees of all the above social security items paid by

cerning Strengthening the Management of Affordable Housing Project Land promulgated by the Ministry of Land and Resources required that the construction area of public rental housing should be controlled in less than 60 m² (generally 40 m²), so here the per capita construction area of urban housing for migrant workers after citizenization is lowered to 20 m². Thus the cost of housing for the population transferred from agriculture is calculated to be 53980 yuan.

2.3 Cost of infrastructure (C_3) The cost of urban infrastructure means the minimum capital needed for meeting urban material production and residents' normal life. Given that the population transferred from agriculture has long lived in city and has enjoyed the part of the urban infrastructure, the urban infrastructure in this paper is narrowly focused on engineering infrastructure (Zhou Xiangdong, 2012). In view of the availability of data, this paper considers the annual fixed assets investment in Chongqing after deducting housing investment as the infrastructure investment in citizenization of migrant workers in Chongqing. It is expressed by the formula:

$$C_4 = K/P.$$

Table 2 Per capita cost of urban housing in Chongqing

Year	Per capita housing area m ²	Construction cost of housing per unit area yuan/m ²	Per capita housing cost // yuan
2010		2340	46800
2011		2662	53240
2012	20	2768	55360
2013		3026	60520
The cost of urban housing for migrant workers amid citizenization			53980

Data source: *Chongqing Statistical Yearbook* (2011-2014).

Chongqing's urban workers and companies during 2012-2013, as well as the corresponding number of insured workers by the end of term, we calculate the corresponding per capita social security cost to be 7793.38 yuan, 8934.69 yuan, 11113.35 yuan, and 11767.04 yuan, respectively, and then calculate the annual per capita cost of social security for citizenization of the population transferred from agriculture to be 9902.11 yuan.

2.5 Cost of education (C_5) Currently, about 90% of migrant workers in Chongqing are from Chongqing's rural areas. In the transfer process, the cost of education for the migrant workers'

children also includes government's expenditure on new school construction for migrant workers' children, and this part of expenditure can not be ignored. The married female migrant workers give birth to 1.71 children on the average, the married migrant workers account for 58.2%, and the trailing children account for a large proportion. Along with the citizenization of the population transferred from agriculture, the trailing children all go through the transition, and the per capita dependency ratio of children for the population transferred from agriculture is about 0.5 (Wang Zhiyan *et al.*, 2015). The ratio of trailing children at stage of primary school to the trailing children at stage of junior high school is close to 2:1. According to *Urban and Rural Public Service Facili-*

ties Plan Guidelines in Chongqing (Trial) (2007), the per capita school construction area is 7.5 m² for primary school students, and 8.5 m² for junior high school students. According to Chongqing Statistical Yearbook (2010-2013), it can be found that the average cost of construction project per square meter is 1458 yuan. It is expressed by the following formula:

$$\text{school construction cost} = \text{school construction area per student} \times \text{average construction cost per m}^2.$$

It can be calculated from the above data that $C_5 = (7.5 \times 2/3 + 8.5 \times 1/3) \times 0.5 \times 1485 = 5816$ yuan, so $C_{\text{total}} = C_1 + C_2 + C_3 + C_4 + C_5 = 10823.54 + 53980 + 44517.05 + 9902.11 + 5816 = 125038.7$ yuan.

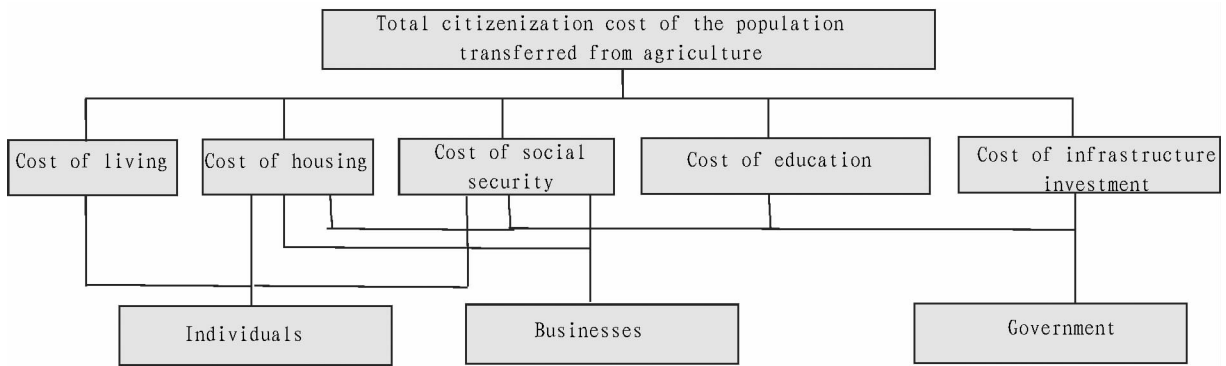


Fig.1 Citizenization cost sharing of the population transferred from agriculture in Chongqing

3 Problems in citizenization cost sharing

3.1 Inadequate governmental financial capacity Government bears a large portion of cost of infrastructure construction, trailing child's education, social security and housing, that is, it shares the majority of citizenization cost of the population transferred from agriculture. *Views of Chongqing Municipal People's Government on Coordinating the Reform of Rural Household Registration System* points out that Chongqing shall strive to transfer 800000-900000 people annually during 2012-2020. It is calculated that Chongqing government's annual spending on the citizenization of the population transferred from agriculture needs to reach at least 48 billion yuan, accounting for 28% of public budget revenue in 2013. The governmental financial capacity is slightly inadequate in the citizenization of the population transferred from agriculture.

3.2 Absence of business In the survey, it is found that many companies only attach importance to the immediate interests, and are absent from sharing the citizenization cost of the population transferred from agriculture. From Table 4, it can be found that among many reasons for migrant workers' nonparticipation in social insurance, businesses' nonbuying behavior accounts for 40.3%. The absence of business makes a large population transferred from agriculture fail to enjoy pension, medical insurance and work injury insurance, which has become a marked problem in citizenization cost sharing.

3.3 Lack of personal affordability According to data in Table 5, it can be found that only 23.3% of respondents are fully able to bear the cost of living, and there are still 19.3% of people

who can partially afford or totally fail to afford the cost; more than 30% of migrant workers can partially afford or totally fail to afford the cost of social security, and only 45.4% of respondents said they barely can afford; 13.1% of respondents are completely unable to bear the cost of housing continuing to skyrocket in recent years, and 45.2% of respondents can partially afford. 56.1% of respondents' self-affordability is at a moderate level, while 21.7% and 22.2% of respondents' affordability is weak and strong, respectively. Overall, the personal affordability of the population transferred from agriculture is mostly at or below the middle level, and the personal cost affordability is inadequate.

Table 4 Reasons for nonparticipation in social insurance

Basic characteristics	Classification	Number of people	Percentage
Reasons for nonparticipation	Hard up	174	14.40%
	Do not understand the relevant information	219	18.20%
	Businesses do not buy	486	40.30%
	Considered unnecessary	153	12.70%
	Job insecurity	138	11.40%

4 Causes of the citizenization cost sharing problems

4.1 Government has not fully mobilized social resources

The government uses revenues to be actively involved in child's compulsory education, social security and housing construction for the population transferred from agriculture, but it is still unable to do as well as it would wish. At the same time, as China's economy continues to develop, the idle capital in society is increasing. In

promoting the citizenization of the population transferred from agriculture, government seldom absorbs social capital, and makes no

good use of social resources. Thus, in the context of adequate social capital, governmental financial capacity is inadequate.

Table 5 The citizenization cost affordability

Basic characteristics	Classification	Number of people	Percentage // %
Ability to afford the cost of living	Completely unable to afford	37	2.7
	Partially unable to afford	224	16.6
	Barely able to afford	777	57.4
	Completely able to afford	315	23.3
Ability to afford the cost of social security	Completely unable to afford	51	3.8
	Partially unable to afford	444	32.8
	Barely able to afford	615	45.4
	Completely able to afford	243	18.0
Ability to afford the cost of housing	Completely unable to afford	177	13.1
	Partially unable to afford	612	45.2
	Barely able to afford	396	29.3
	Completely able to afford	168	12.4
	Weak affordability	294	21.7
Comprehensive evaluation of citizenization cost affordability	Moderate affordability	759	56.1
	Strong affordability	300	22.2

4.2 Business awareness is weak During the citizenization of the population transferred from agriculture, the main problem for business is absence, because business has weak awareness on social security cost sharing, and does not take its responsibility. From the data in Table 6, it is found that about 42.4% of migrant workers do not sign employment contract, and businesses' employment of migrant workers is out of profits, and they do not want to sign a formal labor contract with migrant workers and pay social insurance for migrant workers.

Table 6 Basic situation of the population transferred from agriculture

Basic characteristics of samples	Classification	Number of people	Percentage
Whether to sign an employment contract	Yes	780	57.6%
	No	573	42.4%

Data source: Survey questionnaire.

4.3 Personal education level is low and employment training is short The insufficient personal cost affordability of the population transferred from agriculture is mainly due to low education level and inadequate employment training. According to the survey data in Table 7, the education level of the population transferred

Table 7 Education level of the population transferred from agriculture

Basic characteristics of samples	Classification	Number of people	Percentage
Education level	Primary school and below	159	11.8%
	Junior high school	375	27.7%
	Senior high school and technical school	463	34.2%
	Junior college and above	356	26.3%

Data source: Survey and research.

5 Policy recommendations

5.1 Government: breaking barriers to accelerate the improvement of security system (i) Innovating upon the financial investment mechanism, and promoting the active participation

of social resources. It is necessary to innovate upon the financial transfer payment system, use new investment and financing mechanism, give play to the leveraging effect of fiscal funds, promote social resource input through the platform mechanism, and play a

mediating role of social organizations to undertake the government's social welfare function. (ii) Developing characteristic industries, promoting in-situ urbanization and reducing transfer cost. Based on the characteristics of some counties and towns, there is a need to develop the corresponding characteristic industries, which can not only solve the problem of employment, but also solve the problem of limited carrying capacity of main city through in-situ urbanization. (iii) Strengthening public service equalization construction, and improving social security coverage. The urban social security system has not fully covered the population transferred from agriculture. We can make use of the opportunity of basic public service equalization, and focus on improving

Table 8 The vocational training participation of the population transferred from agriculture

Basic characteristics	Classification	Number of people	Percentage %	Basic characteristics	Classification	Number of people	Percentage %
Whether to participate in vocational training	Yes	714	52.8	Reasons for nonparticipation	No opportunity	417	65.3
	No	639	47.2		No time	129	20.1
Vocational training methods	Free training organized by government	60	8.4	Whether they are willing to receive vocational training	Unwillingness	93	14.6
	Training at one's own expense	186	26.1				
	No	441	32.6				
	Training provided by employing unit	414	57.9		Yes	912	67.4
	Others	54	7.6		-	-	-

Data source: Survey and research.

Table 9 Employment situation of the population transferred from agriculture

Basic characteristics of samples	Classification	Number of people	Percentage // %
Industry	Farming, forestry, animal husbandry and fishery	78	5.8
	Construction	348	25.7
	Services	267	19.7
	Processing and manufacturing	135	10.0
	Transportation industry	117	8.6
	Others	408	30.2

Data source: Survey questionnaire.

5.2 Businesses: getting rid of the differences to actively bear responsibilities The citizenization of the population transferred from agriculture will not only bring enormous positive effects on society, but also bring great economic benefits to the enterprises. There are many changes in the population transferred from agriculture after citizenization. These will directly or indirectly bring some benefits to the enterprise, for example, the processing and manufacturing industry may produce more high-quality products due to improvement of workers' skill level, and customers' satisfaction may be increased in service industry due to improvement of workers' quality. Since businesses also gain in the citizenization of the population transferred from agriculture, businesses should give full play to their role to actively bear responsibilities.

5.3 The population transferred from agriculture: breaking the shackles of idea and strengthening skills (i) Revitalizing rural resource assets to reduce the citizenization cost pressure. The migrant workers find jobs in city, unable to take full advantage of rural homestead and farmland, resulting in a waste of resources.

social security coverage for the population transferred from agriculture. (iv) Combining market incentives with governmental regulation, and guide enterprises to take the initiative to undertake the cost of vocational training for employees and part of the social insurance and housing accumulation fund. On the one hand, the government can establish incentive mechanism to encourage enterprises to bear citizenization cost; on the other hand, the government and the market can also create enterprise assessment mechanism. In addition, we can also use market competition to compel enterprises to bear the citizenization cost of the population transferred from agriculture.

We can transfer, lease and mortgage contractual right of land and homestead usage right, and revitalize rural property, reduce the cost pressure on the population transferred from agriculture in citizenization. (ii) Improving migrant workers' employability and entrepreneurial ability, and enhancing sense of integration into the city. The population transferred from agriculture must actively participate in vocational education or skills training, and constantly enhance employability and entrepreneurial ability, to well settle in city and become qualified workers. After the migrant workers' capability is enhanced, their income will be improved accordingly, which helps them to better adapt to high citizenization cost.

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search institutions, and improve mechanism and support policies of government purchasing public welfare products. Fourthly, accelerate conversion of agricultural scientific and technological achievements. Break bounds between departments, regions, organizations and disciplines, set up research and development, conversion, and popularization platform, build large combination and cooperation system for agricultural science and technology, establish close connected achievement conversion mechanism for scientific research, education, popularization, and enterprise, and build new agricultural sci-tech innovation system focusing on modern agricultural industry development. Fifthly, strengthen construction of grass-roots agricultural technical extension system. Reinforce public welfare functional orientation of grass-roots agricultural technical extension organizations, strengthen infrastructure construction of agricultural extension system, improve working conditions, guarantee wages and working funds of public welfare service personnel, and strengthen construction of extension talent team. Also, it is recommended to develop diversified and socialized agricultural technical extension service organizations. Sixthly, make effort to cultivate new farmers. In accordance with requirements of having culture and skills and being good at operation, it is recommended to energetically implement modern agricultural reserve force cultivation plan, carry out extension and guidance training of agricultural production and operation, and strengthen basic ability of rural labors in engaging agricultural production and operation and popularizing agricultural production^[6].

4.6 Raising the level of agricultural opening to the outside and making effort to build export-oriented industrial system

It is recommended to grasp the great opportunity of "One Belt and One Road" strategy and building South Asia and Southeast Asia oriented radiation center, actively strive for policy support for agricultural policies oriented towards South Asia and Southeast Asia, raise the level of agricultural opening to the outside level, and expand the agricultural development space. On the one hand, it is recommended to strengthen the effort of introduction, bring into play comparative and competitive advantages, energetically develop promising plateau characteristic products, attract foreign fund investment, build a good many plateau characteristic agricul-

tural production bases, agricultural product processing parks, warehousing, logistics and transportation center, to drive export-oriented agricultural development and agricultural structural adjustment. On the other hand, it is recommended to actively support the "going out" strategy, strive for support projects of the national and Yunnan Province for South Asian and Southeast Asian countries to establish planting, breeding and agricultural product processing sci-tech demonstration parks. Besides, Yunnan Province should strive for the state establishing special financial fund and supporting 25 countries of Yunnan Province and 3 adjacent countries to establish trans-national characteristic agricultural industrial benefit common benefit zones. Also, Yunnan Province should strive for support of Guangdong and Guangxi, cooperate in developing and protecting Nanpan River, build Guangdong-oriented Nanpan River subtropical characteristic agricultural industrial economic belt, further bring into play functions of agricultural sci-tech demonstration parks, variety demonstration, personnel training, and technical extension works. Finally, Yunnan Province should take certain proportion of funds from hydroelectric and mining development projects to local agricultural, rural development and resource and ecological protection, and set up new image of agricultural going out.

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