



Research on Promoting Growth and Benefiting People's Livelihood Effect of Rural Dilapidated Housing Reform

Du zhixiu*¹ Du jinzhu²

(1. School of Statistics and mathematics, Inner Mongolia University of Finance and Economics, duzhixiu-2008@163.com; 2. Inner Mongolia University of Finance and Economics, Hohhot 010070, China)
 Abstract: In this paper, we construct the regional dynamic computable general equilibrium model by compiling the interregional social accounting Matrix, and study the function of promoting growth and promoting people's livelihood in rural dilapidated housing renovation. The research results show that: first, the increase of financial subsidies in the central and western regions within a certain range of changes, the Eastern, northeastern, Western and central four regions of the economic stimulus have little effect. Second, the farmer's self-financed loan policy has an impact on the welfare of the whole society, rural residents in various regions, and urban residents. Third, compared with the five European countries, the transformation of dilapidated rural housing has played a positive role in narrowing the gap between the rich and the poor in urban and rural areas and promoting social equity. Keywords: The renovation of dilapidated houses; Interregional SAM; Regional DCGE;

I Introduction

With the high-quality development of China's economy, profound changes have taken place in rural society and people's living standards have gradually improved. From the perspective of housing, there are the beneficiaries of the round after round of building campaigns for the sake of getting rich, but also the beneficiaries of the government's transformation of rural dilapidated housing from the perspective of people's livelihood. At present, the latter has spread to the whole country and achieved certain results. In 2009, the scope of renovation of dilapidated houses in rural areas gradually expanded. With about 800,000 rural dilapidated houses completed, it mainly involves land border counties, autonomous administrative territorial entity of China counties in the western region, key counties in the National Poverty Alleviation and development work, all counties in Guizhou Province and the Xinjiang Production and Construction Corps. In 2012, the renovation of dilapidated houses in rural areas shifted from pilot projects to full implementation, and expanded to the whole country. As of 2018, about 27 million rural dilapidated houses have been renovated nationwide.

II Methodology for Measuring Promoting Growth and Benefiting People's Livelihood Effect

A. Literature review

Matthew Corder (2008) studied the impact of housing investment on the British economy and showed that housing investment (including housing construction and residential renovation and transformation) contributes a lot to the British GDP. From 2002 to 2007, improvements in existing housing (defined as major renovations or renovations) accounted for an increase in the percentage of total housing, but it was lower than the increase in new housing. Peter Grist (2010) Housing plays an important role in the growth of the US economy, promoting gross domestic product (GDP) through housing construction (residential fixed investment) and services provided by existing housing (personal consumption expenditure). Frick et al. (2010) studied the housing security policies of five European countries, including Belgium, Germany, Greece, Italy and the United Kingdom, and the results showed that housing security policies can reduce income inequality. Anna(2019) provides a detailed case study on institutional prerequisites and political strategies to

increase affordable housing supply.

In 1931, Mr. Liang Sicheng, an expert in architecture, began to carry out theoretical and practical research on the restoration of traditional Chinese architecture. In the restoration of Confucius temple in Qufu, Shandong Province, for the first time, he creatively put forward the theory of "repairing old buildings as before". In recent years, there has been an increasing number of studies on the reconstruction of dilapidated houses in rural areas. Lu Jia (2006) made an analysis and summary of the rural settlement of Russia reconstruction strategies that have been implemented or are being implemented in Beijing, Shanghai and other places, the implementation strategy of the new rural settlement of Russia is put forward. Zhu Mingfen (2011) from the perspective of performance evaluation analysis of the rural poor home renovation policy. Zhang Jian et al (2016) through the supervision, Inspection and investigation of the rural dilapidated housing reconstruction and poverty alleviation in Shandong and Henan provinces during the 13th five-year plan period, this paper systematically analyzes the main problems existing in the rural dilapidated housing reconstruction, and analyzes the reasons, put forward the corresponding policy suggestion. Zheng Zeping and others (2019) studied the transformation of dilapidated houses in rural areas in Zhaoqing under the vision of precision poverty alleviation, and put forward policy recommendations such as focusing on the financing difficulties.

With reference to previous experience, This paper examines in detail the effects of dilapidated building renovation on economic growth and improvement of people's livelihood by considering the regional dynamic computable general equilibrium model by compiling the interregional social accounting Matrix.

B. Construction of measurement model

i. Four-area rural dilapidated housing reconstruction-economic-social Accounting Matrix

In order to reflect the effect of the transformation of dilapidated houses in rural areas accurately, the transformation of dilapidated houses is defined as an industry sector. According to the relevance to the dilapidated building renovation activities, the Chinese industry sectors are classified into 14 sectors, namely activities, commodities, labor factors, capital factors, dilapidated house subsidies, dilapidated house loans, capital, rural households, urban households, government, enterprises, banks, and regions Outside and abroad. The 31 provinces of the country are divided into four major economic regions in accordance with the rules of China's economic regions, namely the northeast region, the eastern region, the western region and the central region. Activities, commodities, factors, dilapidated housing subsidies and dilapidated housing loan accounts are split into regional accounts, and the remaining accounts remain the same as the overall account.

This paper uses the National Accounts System as the standard, draws on the experience of the Development Research Center of the State Council and the United States and other developed countries in the compilation of multi-regional social accounting matrices. On the basis of the input-output table of China's four regions in 2016, further compile and complete the 2016 China's four-region social accounting matrix. The inter-area account structure is shown in Table 1.

ii. Measures of People's Livelihood and Welfare

This article's measurement of people's livelihood and welfare mainly starts from the micro and macro aspects. At the micro level, it focuses on the welfare of residents and measures the impact of rural dilapidated house renovation policies on the individual welfare of residents. On the macro level, it is mainly considered from the overall social level, that is, to examine the impact and role of the rural dilapidated house renovation government on social equity. Resident Welfare measure and

Keeny Coefficient, as shown in formulas (1) and (2).

$$EV_{h,k,t} = [U_{h,k,t}(QH1, HSAV1) - U_{h,k,t}(QH0, HSAV0)] \cdot \prod_i^n \left(\frac{P_{k,i,t}^{A0}}{\alpha_i} \right)^{\alpha_i} \cdot \left(CPI_t^0 / \left(1 - \sum_{i=1}^n \alpha_i \right) \right)^{1 - \sum_{i=1}^n \alpha_i} \quad (1)$$

Where, α_i is the current consumption share of resident h in each commodity, a is the parameter. EV is the change of equivalence, and $U(\cdot)$ is the utility function.

$$G = P_1^2 \frac{u_1}{u} G_1 + P_2^2 \frac{u_2}{u} G_2 + P_1 P_2 \left| \frac{u_2 - u_1}{u} \right| \quad (2)$$

Among them, u , u_1 and u_2 are the average income of the whole population, the average income of the first group and the average income of the second group. G , G_1 and G_2 are the Gini Coefficient, the Keeny Coefficient of the first group and the Keeny Coefficient of the second group, respectively. P_1 and P_2 are the population proportions of the first group and the second group, respectively.

iii. Construction of FR-DCGE model

In this part, 10 kinds of production activities and commodities are set up, which can be used to analyze the impact of policy on each industry and reflect the economic growth effect. It is convenient to investigate the impact of the renovation of dilapidated houses on the income and welfare of urban and rural residents, and then divide the household sector into urban and rural households. The investment sector is divided into finance sector and fixed assets sector. The financial products are loans for the renovation of dilapidated houses. Taking 2016 as the base year, a Four-Region Dynamic CGE (FR-DCGE) model is constructed to simulate the equilibrium value of each period from 2016 to 2020, using the four-region social accounting matrix of China divided by economic belt as the basic data.

III Results

First, the reconstruction of dilapidated housing has a certain contribution to economic growth, but the role of promoting growth is relatively small. The increase and change of central and local financial subsidies received in the central and western regions within a certain range has little effect on the economic stimulation of the Eastern, northeastern, western and central regions. However, the changes in loans to poor farmers will have an impact on the value-added and intermediate inputs of some industries in the four regions. The increase in loans to farmers has directly led to an increase in the demand for raw materials for building rehabilitation, which in turn has led to an increase in the value added of local industries and related industries in other raw material producing areas.

Second, the self-financing loan policy of farmers has an impact on the welfare of the whole society, rural residents and urban residents in all regions. On the one hand, from the social perspective, the renovation of dilapidated houses in rural areas has played a positive role in narrowing the gap between the rich and the poor and promoting social harmony. On the other hand, the financial subsidies for the renovation of dilapidated houses in rural areas in the central and western regions have increased by varying degrees. In the short term, the welfare of rural residents in the four areas can be improved, and the moderate increase of financial subsidies can keep the trend of increasing year by year in a certain time. The increase of loans for the reconstruction of dilapidated houses in the central and western regions has a positive effect on the welfare of rural residents in various regions, but excessive loans will offset the welfare of rural residents in the backward regions, and then will widen the social gap between the rich and the poor.

Third, from the comparison of China and five European countries, China's income distribution gap is still relatively large, after the implementation of rural dilapidated housing reform is also lower

than these countries. However, from the Longitudinal comparison of this data in China, the transformation of dilapidated houses in rural areas has played a certain role in narrowing the gap between urban and rural areas and promoting social equity.

IV Conclusion

Based on the analysis of the above results, some conclusions are drawn to further optimize the policy effect of the renovation of dilapidated buildings. First, we will intensify social assistance. Further implementation of the precise classification of aid, to promote the transformation of dilapidated housing relief funds to the very poor, particularly poor farmers tilt. Second, the development of a reasonable system of dilapidated housing loans. The implementation of accurate identification, classification of loans, in order to reduce farmers' follow-up repayment pressure; third, innovative ways of social assistance. Such as the existing rural "Hollow House base" problem, we can consider through the replacement to solve the problem of dilapidated housing transformation funds.

References

- United Nations, Eurostat. (2008). International Monetary Fund, Organization for Economic Cooperation and Development and World Bank. System of National Accounts 2008.
- Chinese National Economic Accounting System 2016. (2017). China Statistics Press.
- Corder M and N Roberts (2008). Understanding Dwellings Investment [J]. Bank of England Quarterly Bulletin.
- Peter Grist (2010). Housing and GDP [J]. Journal of Housing Economics.
- Frick J R, et al (2010). Distributional effects of imputed rents in five European countries [J]. Journal of Housing Economics.
- Anna Granath Hansson (2019). City strategies for affordable housing: the approaches of Berlin, Hamburg, Stockholm, and Gothenburg [J]. International Journal of Housing Policy.
- Lu Jia (2006). Research on the Strategy of Rural Residential Area Transformation in the Process of Urbanization in my country's Economically Developed Areas [D]. Tongji University.
- Zhu Mingfen (2011) Evaluation on the performance of the policy of renovating the dilapidated houses of the rural poor families -- a case study of Hangzhou, Zhejiang Province [J]. Journal of Gansu University of Administration.
- Zhang Jian, Sui Yanhui (2016). Research on the problems and countermeasures of poverty alleviation in the transformation of dilapidated houses in rural areas —— Based on the supervised investigation in Shandong and Henan [J]. Economic problems.
- Zheng Zeping, Hu Zichun, Chen Rongze (2019). A study on the transformation of dilapidated houses in rural areas from the perspective of precise poverty alleviation -- a case study of Huodao town in Zhaoqing [J]. Rural Economy, science, and technology.

Table1 Inter-area flow account for the reconstruction of dilapidated houses in rural areas

	Northeast (N)					East (E)					West (W)					Middle (M)				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
N	(1)	C																		
	(2)	A				B					B					B				
	(3)	D				D					D					D				
	(4)	E				E					E					E				
	(5)																			
E	(1)					C														
	(2)	B				A					B					B				
	(3)	D				D					D					D				
	(4)	E				E					E					E				
	(5)																			
W	(1)										C									
	(2)	B				B					A					B				
	(3)	D				D					D					D				
	(4)	E				E					E					E				
	(5)																			
M	(1)															C				
	(2)	B				B					B					A				
	(3)	D				D					D					D				
	(4)	E				E					E					E				
	(5)																			

Note: A represents Intraregional Intermediate Inputs; B Represents Intraregional Intermediate Inputs; C represents total regional output; D represents workers' compensation; and E represents capital income. Account Representation (1): Activities ; (2): Commodities ; (3): factor ; (4): Dilapidated Housing Allowance ; (5): Dilapidated Housing Loan.