

Reconstruction results of people's livelihood in the earthquake-stricken areas -- a case study of dujiangyan

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Abstract. On May 12, 2008, a large earthquake with a Richter scale of 8.3Ms occurred in Aba Prefecture Tibetan and Qiang Autonomous Prefecture of Sichuan Province. Dujiangyan, a world cultural heritage site and a national 5A tourist attraction, which is only 23 kilometers away from the epicenter, has become one of the ten worst-hit areas in this earthquake. At the present stage, there is a lack of in-depth and detailed research on post-disaster reconstruction in the hardest-hit areas. In order to provide theoretical support for people's livelihood and development after disaster, the author carried out this research. This paper selects the main disaster areas of dujiangyan city as the entry point, and makes an in-depth study on the practical recovery and development status of people's livelihood in the 10 years after the disaster. Based on the analysis of the current situation of people's livelihood development in dujiangyan, this paper summarizes the experience and strategies of the post-disaster recovery and development of people's livelihood in dujiangyan.

1. Introduction

Earthquake is one of the most threatening natural disasters to mankind ^[1].

China is one of the countries in the world that suffered the most from the earthquake disaster, which caused huge loss of life and property to the public. Since the 20th century, there have been nearly 800 earthquakes of magnitude 6 or above in China, the number of people died in the earthquake was more than 550000, accounting for 53% of the global earthquake death toll, regions around except, zhejiang provinces and outside the Hong Kong special administrative region of all provinces, autonomous regions and municipalities directly under the central government, the inundated area of 30 square kilometers, 7 million houses collapsed, earthquake and other natural disasters constitute the seriousness of one of China's basic national conditions ^[2, 3].

After the wenchuan earthquake, dujiangyan suffered great losses, people's lives were greatly affected, the reconstruction work is imperative. The state council stressed that "the post-earthquake recovery and reconstruction is related to the immediate interests of the people in the disaster area and the long-term development of the disaster area", highlighting the importance of post-earthquake reconstruction ^[2]. It is extremely important for a city to carry out post-disaster reconstruction to restore and develop people's livelihood and ensure their daily life. In this paper, dujiangyan, one of the worst-hit areas, is selected as the object of study. It is hoped that through the research on the recovery and development of people's livelihood affairs in dujiangyan in recent ten years, some experience enlightenment will be analyzed and summarized, so as to provide theoretical reference for the reconstruction of other disaster areas. In order to more objectively and accurately understand the reconstruction and development status of people's livelihood affairs in dujiangyan area after wenchuan earthquake, data were collected through questionnaires, key figures, interviews and literature review. A total of 1396 hospitalization samples were included (1336 valid samples, 60 invalid samples and 95.7% effective rate), and 5 key individuals and organizations were included. Some objective indicators and evaluation points were not found in the documents.

2. Dujiangyan disaster situation

At 14:28 on May 12, 2008, a strong earthquake of magnitude 8.0 occurred in Yingxiu Town, Wenchuan County, Sichuan Province (31.0° north latitude and 103.4° east longitude). Along the belt, 50 counties (cities) in Sichuan and parts of Gansu and Shaanxi were seriously affected, with the affected area reaching $44 \times 10^4 \text{ km}^2$ ^[4]. In this earthquake, 69,227 people were killed, 374,643 were injured and 17,923 people were missing, which was the most destructive and deadly earthquake in China's history^[5]. Dujiangyan, a historical, cultural and tourist city 23 kilometers from the epicenter of the quake, is one of the 10 worst-affected areas. According to statistics, a total of 132,487 rural houses in Dujiangyan were damaged in the earthquake, of which 75% collapsed or were damaged^[6]. More than 80 percent of the city's homes have been damaged to varying degrees.

3. Restoration and development of people's livelihood affairs in Dujiangyan

3.1 Resident income and distributive fairness, educational development level

3.1.1 The level of people's income increased significantly

After the earthquake, investment in post-disaster reconstruction was strong and there were no major disasters or infectious diseases. At the same time, Dujiangyan municipal government earnestly implemented the supporting policies to promote the development of three industries, including tax reduction and exemption policies. The government has established and improved the employment and social security service system to increase the employment of residents, and the economic and social development has resumed, driving the steady economic development of Dujiangyan and constantly increasing the residents' income.

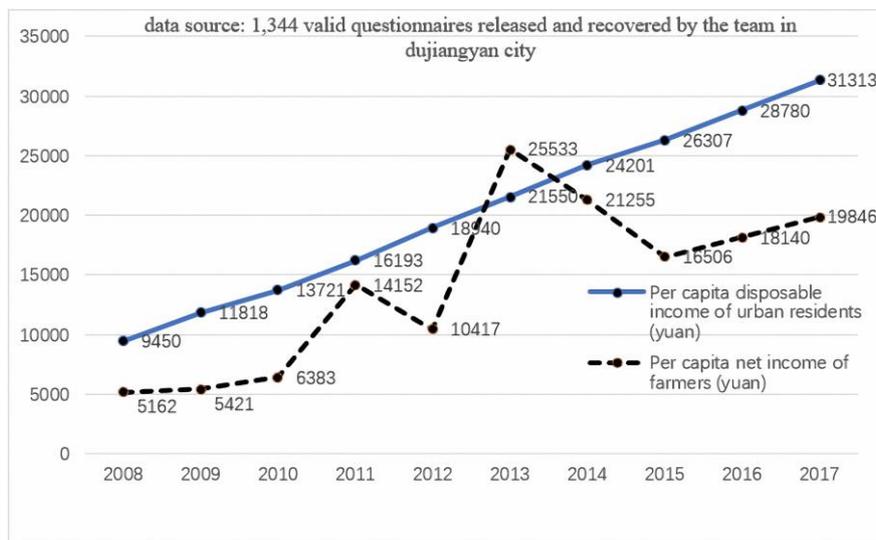


Fig. 1 Statistical chart of residents' income in Dujiangyan city from 2008 to 2017

3.1.2 Housing security is guaranteed

In the process of post-earthquake reconstruction and development, the Dujiangyan government attaches great importance to and supports the urban and rural housing reconstruction. Over the past decade, the Dujiangyan municipal government has ensured the housing safety of the people through poverty alleviation and development in 21 poor communities and targeted poverty alleviation for 951 relatively poor households^[7]. Statistical results, the average family housing area 106.12 m^2 , personal average living area reached 34 m^2 , has reached a considerable results.

3.1.3 Housing security is guaranteed

In the past ten years, the Dujiangyan municipal government has fully implemented the funding guarantee mechanism for compulsory education and special education, and deepened the implementation of the "three exemptions and one subsidy" policy for urban and rural compulsory education. In 2017, Dujiangyan waived tuition and miscellaneous fees for 45,030 students in

compulsory education schools and provided free textbooks and exercise books. We implemented various policies to subsidize education and expanded the scope of subsidizing free accommodation for secondary vocational students. We will actively support the construction and operation of public welfare kindergartens. Support the introduction of famous schools such as Jiayang primary school, Longjiang Road primary school and Wanhui University to improve the quality of education service [8].

3.1.4 Cultural centers and libraries will bring into play higher social benefits

According to the report "dujiangyan city's financial budget implementation (2017)", the government has arranged to invest 116.7 million yuan in cultural, sports and media undertakings [8]. We will support the publicity of international tourist cities and the free opening of public cultural facilities such as libraries and cultural centers. According to the statistical results, most residents of dujiangyan hold the attitude of "agree" or "strongly agree" that "cultural centers and libraries bring higher social benefits", while few residents of dujiangyan "strongly disagree". It can be seen that residents of dujiangyan have higher overall satisfaction with cultural construction.

3.2 Social security level

3.2.1 The quality of medical and health services is high

"Medical and health project" is one of the "top ten livelihood projects" in dujiangyan city. According to the report "dujiangyan financial budget implementation (2017)", 311.7 million yuan has been invested in "medical and health project" to ensure basic medical needs and improve the construction of grassroots medical and health system [8]. Due to the post-disaster epidemic and disease prone, the dujiangyan municipal government paid special attention to medical and health care, and medical and health institutions gradually improved and upgraded the infrastructure with the aid of relief funds and policy support [9].

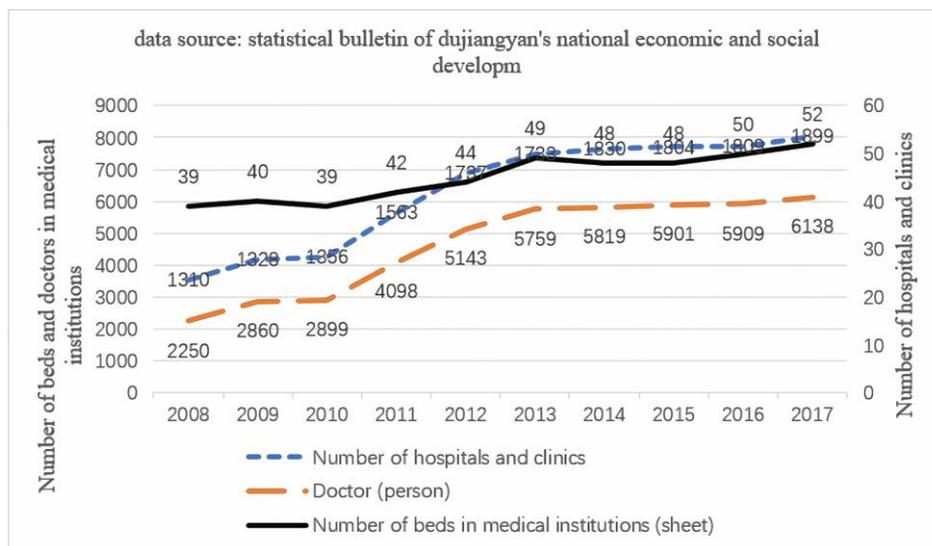


Fig. 2 number of hospitals and health centers in dujiangyan city from 2008 to 2017 Chart of the number of beds and the number of doctors in medical institutions

3.2.2 Residents trust medical insurance and endowment insurance

In the process of post-disaster reconstruction, dujiangyan municipal government implemented the basic medical insurance and basic old-age insurance subsidy policies for urban and rural residents. Data shows that the government support to carry out the urban and rural residents and landless peasants to participate in the social security pension and medical insurance subsidy policy, support the implementation of the 6990 urban and rural areas severely disabled ginseng and 4691 severely disabled care subsidy policy, such as support the implementation of the 112721 people of subsistence allowances for urban and rural subsistence allowances objects, support the implementation of the medical treatment subsidy policy 24314 difficult people.

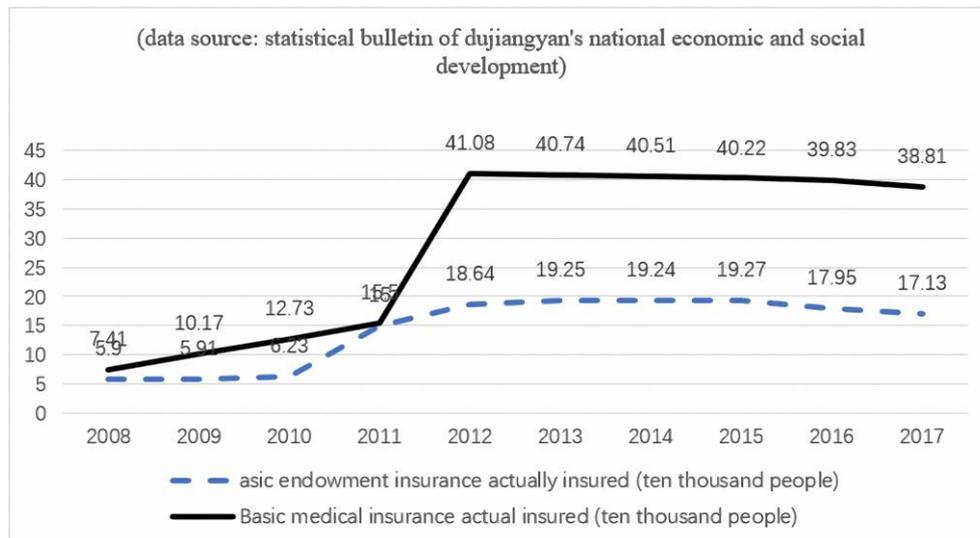


Fig. 3 statistics of the number of people participating in basic old-age pension and medical insurance from 2008 to 2017

3.2.3 the registered urban unemployment rate has been stable in recent years

"5.12 wenchuan earthquake, the CPC central committee and state council attaches great importance to the employment and improve social security work, the restoration and reconstruction and expanding employment as an important measures to promote the development of the region economy, according to the state council about support for restoration and reconstruction after wenchuan earthquake's opinions on policies and measures, lost as a result of cultivated land, forest land, such as production of agricultural labourers, unable to return to the original settlement as a result of agricultural labourers, etc., as an employment difficult personnel into the scope of employment assistance, and to ensure the disaster area zero-employment families at least one person employment [10].

3.3 Public transport service system

In the past decade, the reconstruction of public transportation service system has achieved good results, and the urban transportation network has been constantly improved, bringing great convenience to the life of local residents. According to the data, in 2017, the government arranged 1320.45 million yuan to support the urban intelligent transportation, the improvement of back streets and alleys, the construction and maintenance of urban and rural roads, the main project of jinma river gate and dam, the construction of municipal roads and green water landscape in binjiang new area, and the demolition of "two-violation" buildings and other urban and rural infrastructure construction [8].

4. The reconstruction of people's livelihood affairs in dujiangyan city has made remarkable achievements in recovery and development.

Ten years after the earthquake, the project of people's livelihood of dujiangyan municipal government has been progressing smoothly and achieved remarkable results. It is mainly reflected in the improvement of residents' quality of life, equity in education, restoration of residential buildings, optimization of medical and health systems, and improvement of public transport services. In the process of implementing the livelihood practical projects, dujiangyan municipal government is well organized and strongly promoted, which promotes the solid and effective advancement of the livelihood practical projects of the government in the past decade and improves the sense of gain and happiness of the people. At the same time, in the future work, we should constantly clarify the scope of government functions in the reconstruction of people's livelihood. Prevent "absence and offside", ensure the scientific, efficient and sustainable reconstruction of people's livelihood after the earthquake [11], and continuously improve people's living standard and happiness.

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