AFFORDABLE HOUSING IN CHINA—A CASE STUDY IN DATONG

A CREATIVE PROJECT

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BY

XIAOFEI XUE

DR. NIHAL PERERA- ADVISOR

BALL STATE UNIVERSITY

MUNCIE, INDIANA

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Chapter One

Introduction: Housing in general

Housing is the basic need of human beings. A house is not a shelter alone; it is a space to live, a commodity, and an object that can represent the identity of the inhabitants, express their lifestyle, and preserve the history of their lineage (Adesoji, David Jiboye, 2009). In addition, Anirban Mostafa (2006) argues that housing is not only a commodity for speculation or investment rather a home where the inhabitants can exercise their rights and link themselves to the community and the community of the region in which it grows. I focus on affordable housing or housing for people who can barely house themselves.

In our contemporary societies, affordable housing is a mechanism to provide housing for low-income and mid-income families. While, most of the studies and current trends show the state and market are the major forces in housing provision system. The people’s inability to house themselves is a market related issue. However, according to the dominant ideology in contemporary capitalist and socialist societies is that it is the state’s responsibility to help the people who cannot provide their own housing to house themselves. Although, the private real estate developers have begun to step into the “affordable housing business” (Claudine Stuchell, 2008), people still think the same way. The direct provision of housing by the state is a widely accepted idea in most countries including United States of America, the United Kingdom, and China. I focus on China and the provision of housing on the state and local government standpoints.

In China, the housing provision system shift from the old welfare provision system to a
market oriented system in 1990s. This is considered a big accomplishment from many perspectives and is highly valued by many leading scholars of housing (Lan Deng 2009, Yves Zenou 2011, Lee James 2000). The most popular state response to low income people’s housing needs is either to directly provide housing, or gives some monetary assistance such as housing provident fund, rent or home purchase subsidy, or tax relaxation. In reality, however, the housing reform made housing less or not affordable in many cities. Shanghai is one such example (Mostafa, 2006). Hence, most studies focus on how to create a more reasonable formula or organize a model that could better distribute funds and houses. They consider issues such as how to allocate the houses, how to subsidize the rent, how to reduce the taxes, how to control the fund distribution and how to administer the developers.

However, the policies and actions in regards to affordable housing are dependent on a central provision system. Proponents believe that this top-down approach can solve the housing issues. It is being believed that the provision of houses can help the low income people to solve their housing problems and improve their living standards. The foremost task for government or state is to keep searching for funds, construct housing units and give these to low income people.

There is, however, a missing part, which is neglected by the mainstream: both the academics and decision makers have overlooked the possibility of encouraging people to explore housing responses by themselves. There is a Chinese saying: “Give a man a fish. He ends for a day.” In the context of low-income housing, it is better to let the need to figure out the best options for housing rather than simply to give houses. In regard to moving self-builders to public housing, John Turner (1976) criticizes the provision of housing by the
state and calls for it to be the supporter of the self-building process. In Housing by People, Turner (1976, 3) addresses that “the issue of who decides and who does what for whom is a question of how we house ourselves, how we learn, how we keep healthy.” Turner (1976) also argues that there are two ways to provide housing: through a centrally administrative system and through self-governing. The first one is a process determined by others, and the other one is a self-determined process. These processes can create different results. Housing and all other personal and locally specific services (related to housing) must be autonomous. Instead of directly providing housing, in Turner’s view, the government should support the housing processes of self-providers of housing, providing basic resources, especially legal and administrative support. Mostafa (2006) also mentions that the state intervention should focus on housing need and leave the home ownership to the housing market.

Affordable housing can also become an economic engine in some situations and lose its original mission. Government officials use it to get the voters’ support, and the real estate developers use it as part of their businesses. While, there is very little voice from the users’ standpoint. It is one of the reasons that make this paper important for future affordable housing projects. City of Datong which located west of Beijing has one of the nationally significant low-income housing projects. The shantytown reconstruction project in Datong is an Economic Cheap Housing program funded project which aims to improve the living condition of low-income families in Datong, particularly the coal miners and their families. It plans to use five years to build multi-unit walk up apartment for about 100,000 families. Affordable housing is related to people live and urban development. In addition, it is tightly related to social equity and economic development. It also views affordable housing project
as a development process instead of a final physical product alone.

Most of the research on residential satisfaction is done in the social or behavioral science fields which cover the relationship between residential satisfaction, mobility intentions, and moving behavior (Lu 1998); and residential satisfaction in scattered-site public housing (Varady and Preiser 1998). This paper, however, examines residential satisfaction not in a context of solving a social problem, but to provide suggestions for the future affordable housing project. Like Jiboye (2009), it believes, physical and structural adequacy is not sufficient to measure a public housing project. Onibokun (1973) and Oladapo (2006) observe that a dwelling that is adequate from the engineering or design standpoint may not be adequate or satisfactory from the tenants’ point of view (Burgess 1978). Therefore, good affordable housing also needs to cover social, behavioral, cultural and personal characteristic aspects (Jiboye, 2009).

This paper is based on a case study in Datong, China. The project called Datong Coal Mine Group two area redevelopment project (Datong mei kuang ji tuan liang qu gai zao gong cheng), it is one of nationally acclaimed low-income housing projects. Datong is my hometown, and this housing project is very close to my parents’ home. Therefore, I was fortunate to know some detailed info and engage with this project from its beginning back to 2006. Based on the information I have, I did a survey study in 2010. The paper is more like a follow up study; the most significant to me is to see what is there now after three years. What are the changes there, what changed, and how; what did not change, and why.

The paper organizes in the following orders: First, it will evaluate whether this project meets its own objectives. It will then assess its success from users’ standpoints. Finally, it will
develop some suggestions for future housing projects similar to this.
Chapter Two

The Background

2.1 The brief summary of China’s urban housing development history

China has a very rich history and a huge population. According to National Bureau of Statistics of China, at the end of 2012, China’s total population was 1.354 billion, with 711 million (52.6%) living in the urban areas. The urban population fraction was 36% in 2001 and 26% in 1990. However, even though China has the third largest area in the world, most of it is not suitable for people to live. About 75% of the population, therefore, lives on approximately 20% of land (Ge Meiling, Feng Zhiming 2009). Populated areas are mainly spread along the east coast, spanning from the northeast to the southeast. It is very dense in urban areas, especially in coastal cities and provincial capital cities. For instance, the coastal city like Shanghai, the population density is over 1000 people per square kilometers, while, the interior part like northwestern area and Tibet is less than 50 people per square kilometers.

Housing and land have special places in the Chinese value system. These usually represent people’s social identity and wealth status. Real estate is highly tightened in urban settings. The housing development also has a very complicated history in China. As Hong Zhong (2006), Lingfeng Wen (2010) and Yves Zenou (2011) mention several major stages of housing development:

Before 1949: Housing shortage

Before the People’s Republic of China established in 1949, most of the urban housing stock were privately owned and these owners became landlords. During World War II and China’s
civil war, many houses in urban and rural area were damaged. For example, 1949 in Hebei province, about 29.17% houses are not suitable for people to live in Tong County (Zhang Qun 2009). In addition, the existing housing stock is decreasing since 1910s, the housing supply is very low and there is rarely any new housing construction due to the war situation. For instance, in Wuhan, a big city in central China, the population grows from 900,000 to 1.2 million after the revolution, while the building amount decreased 10177 (Zhang 2009). There is a considerable gap between the population and housing supply. Physical housing units that existed after the revolution was unable to support people’s needs and the whole of China faced a severe housing shortage. The prices and rents of the remaining housing stock drastically went up.

1949 to 1979: The socialist era

The new socialist state which was established after the revolution of 1949 took over almost all the housing units through several acts and announcements. The Land Reform Act of 1950 announced that land in urban areas could not be freely traded. In addition, as Yokshiu F.Lee (1988) mentions, the Communist government made substantial reductions in the rents charged for two reasons: the newly formed government desired to establish its legitimacy among the people and the leaders of the Chinese Communist Party (CCP) believed that housing should be part of the social welfare package that is provided by the state at no or nominal charge. These became major positions underpinning housing development, especially for the poor.
During this period, 1956-1966 called socialist transformation era, the state and local governments began to own almost all the urban housing units and reallocate these to government officials and state owned work units (danwei). Housing thus became a part of the social welfare provision by the state in urban areas instead of a commodity. According to a survey conducted by the State Council, by 1980, about 90 percent of the urban housing owned by the state-owned institutions or danweis; the governments owned 10 percent while danweis owned 80 percent.

Danwei is a very unique institution in China. It is a territorial form of the municipal life in Chinese cities (Chai Yan Wei 2007). In China, danwei is a social organization which usually explained as the work unit. However, work unit is inadequate to describe the rich meaning of danwei. As current scholar studies, it can be tracked back to traditional Confucian conceptions for social space, but also inspired by European socialist utopian project of collective life, soviet functionalism, and even the science of urban planning initiated by George Eugene Haussmann’s Paris regeneration((Bray,2005). The state also adopted a hukou system in 1958; the purpose of this is to regulate internal migration and stabilize the working population. This led to the big problem for the urban poor who really need an affordable housing after the China’s 1978 economic reforms. As Yok-shiu F. Lee (1988) argues, a large urban poor living in cities are migrants without a local hukou and that affects the distribution of public housing and access to mortgages and other social services such as education, medical care, social welfare, etc.

Another major issue during this period is the government categorizing of housing as part of the “non- productive” sector. So the state did not put much investment into housing. There
is a popular saying at that time: “production first, living conditions later”. As Lee (1988) shows (see Table 2.1), only 9.1 percent of capital construction investment funds were allocated to urban housing from 1953-1957. At the same time, the government charged extremely low rents and the collected rent were insufficient to cover the expenses.

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1953-57</td>
<td>9.1</td>
</tr>
<tr>
<td>1958-61</td>
<td>4.1</td>
</tr>
<tr>
<td>1962-65</td>
<td>6.9</td>
</tr>
<tr>
<td>1966-70</td>
<td>4.0</td>
</tr>
<tr>
<td>1970 alone</td>
<td>2.6</td>
</tr>
<tr>
<td>1971-75</td>
<td>5.7</td>
</tr>
<tr>
<td>1976</td>
<td>6.1</td>
</tr>
<tr>
<td>1977</td>
<td>6.9</td>
</tr>
<tr>
<td>1978</td>
<td>7.8</td>
</tr>
<tr>
<td>1979</td>
<td>14.8</td>
</tr>
</tbody>
</table>

Table 2.1 Percentage of Capital Construction Investment Funds Allocated to Urban Housing

Source by: Lee (1988)

Besides these, military and government institutions illegally occupy the urban housing is another important factor cause housing shortage. For example, the government institutions, groups, and schools occupied 7088 buildings in Wuhan which is about 12.7 percent of total
housing in Wuhan.

In short, biased investment, unreasonably low rent, and illegal occupy are the major factors that led to low pace housing development. Therefore, the housing stock remained very small compared to the people’s needs.

1980 to 2006: Urban housing reform era

Under Deng Xiaoping’s leadership, in 1979, Chinese government initiated economic reforms, more freely openings its market to trade with other countries. Domestically, the planned economy was infused with aspects of the market economy. Housing was affected by these political and economic reforms, but not the basic idea. Within the new economic system, the government of 1980, once again, made housing a part of the welfare provision system: while the government undertook a huge burden, housing remained fare for the poor. Before the reform, within the old housing provision system and the extremely low rents, not only the growth of the urban housing stock had been slow, but the quality of the stock had also deteriorated. As Rongxia Li (1998) demonstrates, the per capital living space in urban area dropped from 4.5 square meters in the early 1950s to 3.6 square meters in the late 1970s.

There is another reason that caused the housing shortage, which is the biased investment policy. It left little money for housing investment and improvement, causing a slow growth of the housing stock (Deng 2009). The extremely low rent collected during this period of time did not even cover the cost of basic maintenance. According to Lee (1988), whose research was conducted in 1980, the total rental revenue collected by the China’s central government was 450 million Yuan, while the repair and maintenance cost 1.1 billion Yuan. There is a huge
deficit that had to be subsidized by the central government. That left no money for new housing development. The growth of the housing stock was therefore very slow.

According to Yaping Wang and Alan Murie (2000), several experiments have been done by the central government in selected areas to assess the feasibility of various public housing reform measures such as the rent adjustment and privatization of the existing housing stock. In 1979, Xi’an and Nanning conducted the first phase housing reform experiment, and these cities sold new houses to urban residents at the construction cost. That action expanded to more than 60 cities and towns. Later, another phase of the reform experiment was implemented in four cities: Zheng Zhou, Chang Zhou, Si Ping, and Sha Shi; this experiment was expanded to more than 160 cities and 300 towns by 1985. The second phase allowed individual buyers to pay one third of the total housing cost; the rest was paid by the buyer’s employers which usually a danwei (Zhong Hong 2006).

In 1988, the central government took another significant step: the State Council of People’s Republic of China issued an important document called “Implementation Plan for a Gradual Housing System Reform in Cities and Towns,” and since then the housing reform spread to most parts of the country. At the practical level, the housing which belongs to the government and state owned enterprises (danwei) was to be sold to their tenants at a heavily discounted prices.

Although the government is trying to reduce its housing burden, Deng (2009) points out that danweis, particularly, the state owned danweis, still consider housing provision as their core obligation. By using the new fiscal freedom resulting from the economic reform, many danweis significantly expanded the housing production for their employees. Consequently,
housing continued to be considered welfare good rather than a commodity to be exchanged in the market. The government’s original goal to create a market based housing provision system was not materialized.

This situation changed in 1994 when the central government issued The Decision on Deepening the Urban Housing Reform, which is a comprehensive framework for addressing both supply and demand sides of housing to facilitate the development of a housing market. On the supply side, the policy aims to build a multi-layered housing provision system for a range income groups. According to the State Council, Economical Comfortable Housing (ECH) program targets the middle and low income families who would purchase subsidized affordable housing units, while the high income families would purchase housing at regular market prices. On the demand side, a dual housing finance system was established to utilize both social saving and private saving (Wang and Murie 2000). The Housing Provident Fund (HPF) was established to subsidize potential house buyers’ mortgages loans and to work out commercial mortgages from financial institutions.

The central government also made significant changes to the property rights in regard to the existing housing stock. Zenou (2011) sees housing privatization as the main element of these reforms. The State Council in 1994, allowed families who pay the market price for their dwelling units to get full property right, the right to resell their units in the secondary market. The families which pay subsidized prices would only have partial ownership and have restrictions regarding reselling. By 2002, 80 percent of public housing has been sold to their occupiers.

At the same time, Zenou (2011) also highlights that, due to economic reforms carried out
at the national scale, the “market economy” concept became widely accepted at the danwei level. The welfare services including free education, health care, pensions, housing subsidy are substantially reduced by the danweis in order to improve their profit efficiency. The old housing provision system started to be replaced by the modern market system and housing supports.

However, Wang and Murie (1996) note that most of the housing units of the employees were purchased by danweis themselves in the market and not by individual families; the danweis then resold the housing units at a highly discounted prices to their own employees. In hits, the houses are subsidized by the danweis. Deng (2009) also finds that, as many of the danweis were state owned and have less budget limitations, their purchase behaviors highly interrupted the emerging housing market.

This practice changed again in 1998: the China’s Central government decided to relieve danweis from housing provision (Deng. Et al. 2009). It issued A notification from the State Council on Further Deepening the Reform of the Urban Housing System and Accelerating Housing Construction. This notice clearly prohibited danveis to build or buy new housing units for their employees. Instead, it allows the danweis offer monetary subsidies to their employees and encourage them to buy housing units in the market. Although, it seems only one step forward compares to danwei directly buying houses, it helps to form the housing market.

Beyond the housing issue itself, this policy was a response to the special economic situation at that time: the Chinese economy was severely affected by the Asian Financial Crisis in 1997. The Economist (1998) noted the slipping of the economic growth rate in
China from 8.8 percent in 1997 to 7.2 in the first quarter of 1998. The declined exporting industry implicated in the above figure caused the layoff of millions of state-owned enterprise’ workers. The Chinese economy needed a new engine to stimulate domestic demand for economic growth. As it is widely related to other industries, the housing industry was chosen as the new engine (Lee and Zhu 2006). In this way, both housing production and housing consumption were incorporated into the market mechanism.

Deng (2009) observes that it is very normal nowadays for Chinese households to deal with the private housing market. It caused two major effects: from 2000 to 2004, China’s annual investment in real estate accounted for almost seven percent of the nation’s GDP (Ye, Wu, and Wu 2006). It reproduced the continuous economic growth of China. The second is that the floor space per capita increased from 18.7 square meters in 1998 to 24.97 square meters in 2004. This is a huge change compared to the change from 4.5 square meters in the early 1950s to 3.6 square meters in the late 1970s. As Feng Wang (2003) argues, the home ownership rate in China reached 80 percent in 2004. This is another significant transformation since the government and state-owned enterprises used to own 90 percent of the urban housing in 1970s.

2007-present Macro policy adjustment era

Before 2007, the Chinese housing policy lacked holistic strategies. In 2007, the central government passed Notice 24, which provided a comprehensive framework requiring local governments to make affordable housing development plans themselves, and undertook to provide funds to implement these plans. For example, the cash subsidy for the eastern part of
China is 200 Yuan per square meters, for the middle part is 300 Yuan, and the western part is 400 Yuan (Wen 2010). The central government also shifted its affordable housing goal from encouraging home ownership to provide a place for low income people to live, which could be reached through rent or own. Not encourage home ownership anymore.

In conclusion, after several significant reforms, the previous housing provision systems were replaced by market based housings and a housing support system. The government or state-owned enterprises no longer directly provide housing for their employees; instead, the central government practices a housing monetary allocation that encourages home buyer to purchase houses from the housing market. After that, the housing industry started to boom. While, the housing for low income people is still at a low level in terms of accommodation, it slowly changed compared to market price housing.

2.2 The affordable housing development in China

According to Youqing Huang (2012), several changes to the housing policy in China, discussed above, have affected the affordable housing policy (see Table 2.2).
Table 2.2 China’s housing policy history

Source: Youqing Huang 2012

The housing market is based on profit and it targets middle and high income families. Low income families have been marginalized in this process. Therefore, in practice, the stock of social housing or public housing is very small, and developed at a slow pace compared to market price housing. According to Lincoln Land Institute (2010), in the year of 2007, affordable housing investment was only 12 percent of all residential investment, while during the same year; the number in the United States of America was 40 percent. In addition, new construction buildings and completed buildings are all decreased compared to 1999. In China, affordable housing accounts for only 10.9 percent of the overall housing stock.

According to Zenou (2011), the commodification of housing has caused housing prices to soar in cities and the gap between the rich and poor has widened. Deng (2009) points out
that, although danweis no longer directly provide housing for their employees, they continue to play an important role in their employees housing through the provision of cash subsidies and/or contribution to the Housing Provident Fund (HPF). This has, in fact, increased inequality within China’s housing system. Because, the state owned enterprise usually provides more cash subsidies to their employee compare to collectively owned enterprise and a private company. In addition, there are many enterprises did not provide HPF fund for their employees. Different types of subsidy schemes have been used to increase the home ownership rate specially the Housing Provident Fund (HPF) scheme, but the lower and middle income groups still facing low affordability. This scheme is similar to the Central Provident Fund (CPF) of Singapore, to which both employers and employees are forced to contribute. In Singapore, the main objective of government is to create a home owning society and the policy objectives are rather political than economic or social demand for being a home owner. It has two functions: first, it is a way of bringing stability to a largely recent immigrant; second, it helped to create a sense of national identify (Ooi, 1994; Doling, 1999). If the selection criteria for HPF in Shanghai depend on the amount of savings of each employee, the high and highest income groups would benefit more from the HPF than the medium and low income groups. So there exist inequalities across income groups and the need will be unable to obtain the housing benefits offered by the government. The inequality problem exists between high income enterprise and low income enterprise. The market price is not within the affordable level of less skilled employees who depend upon their work units to execute their housing need. Heavy subsidy and direct housing supply by work units was the main factor to increase the home ownership rate in Shanghai as well as in other cities in
China. The potential buyers in the housing market were profitable work units who had purchased housing units on behalf of their workers but most of the medium and low income groups work with less profitable work units. At present the direct housing supply from the work units has been cancelled, but the lower and middle income group market price is not at all affordable.

The housing policies of 1998 predicted that the number of low-income urban families that would rent social housing (lian zu fang) from the municipal government would drop to about 5 percent of the total households (Zenou, 2011). However, both Deng (2009) and Zenou (2011) observe, that progress towards this goal is very slow because the central government has adopted the decentralized approach in which the central government only lays out the framework of housing reform and the local governments have to implement specific programs. Simply, the central government leaves the burden to provide affordable housing to the local governments. Each local government has to set up their own goals to provide affordable housing for their cities and to find the fund by themselves. The local governments may ask for some fund from the central government, but besides the special project, the fund which provides by the central government usually cannot cover the cost of the project. Therefore, the local governments need to find their own. According to Wang (2005), the central government usually commits very limited resources and has left the local government to pay for most of the costs required to carry out this reform. The local government has less desire to build affordable housing. As Table 2.3 shows below, the ECH construction is reducing from 2004 to 2006.
Historically, within the existing urban structure, the city bureau of real estate management, the state owned danweis, collective danweis and private work units are all treated very differently by the central government in regard to getting funds. The state owned danweis are the enterprise owned by the state, their salary and benefits usually higher than the other two. The collective danweis means the enterprise belongs to all the employees, they share the risk and benefit of the danweis. Private work units are usually owned by single or few individuals. For instance, Yok-shiu F.Lee (1988) emphasizes that housing inequalities do exist in China and this is partly due to the distribution of country’s urban housing investment.

Table 2.3  2003—2008 Construction status of Economic Comfortable Housing

<table>
<thead>
<tr>
<th>Year</th>
<th>Finished Investment (0.1 billion Yuan)</th>
<th>New construction area (10,000 sq.m)</th>
<th>Under construction area (10,000 sq.m)</th>
<th>Completed construction area (10,000 sq.m)</th>
<th>Number of completed units</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>621.98</td>
<td>5330.6</td>
<td>10139.54</td>
<td>4538.51</td>
<td>447678</td>
</tr>
<tr>
<td>2004</td>
<td>606.39</td>
<td>4257.5</td>
<td>8987.08</td>
<td>3325.69</td>
<td>497501</td>
</tr>
<tr>
<td>2005</td>
<td>519.18</td>
<td>3513.46</td>
<td>8115.72</td>
<td>3212.79</td>
<td>287311</td>
</tr>
<tr>
<td>2006</td>
<td>696.84</td>
<td>4379.03</td>
<td>--</td>
<td>--</td>
<td>338040</td>
</tr>
<tr>
<td>2007</td>
<td>834.11</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2008</td>
<td>982.64</td>
<td>9000</td>
<td></td>
<td>6000</td>
<td></td>
</tr>
</tbody>
</table>

and partly due to the distribution structure of rent subsidies in the municipal sector. Further, Lee (1988) demonstrates that, in 1982, the state owned enterprises received most of the state housing investments. As evident in Table 2.4, the state-owned enterprises received five times more funds from the state than collectively owned enterprises. In addition, the state contributed 83 percent of the state-owned enterprises’ housing expenses while collectively owned and private enterprises received substantially less (or even no) housing support from the state government. Zenou (2011) also argues that, in fact, most social housing has been sold than rented; these were often sold to non-poor households. These past policies continue to maintain the inequalities in urban sector housing. That is a strong contributor to the gap between the rich and the poor in urban areas.

<table>
<thead>
<tr>
<th>Housing Ownership Types</th>
<th>Total Housing Investment (in billion Yuan)</th>
<th>Total Number of Workers (in million)</th>
<th>Housing Investment per Capita (in Yuan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>State-owned enterprises</td>
<td>17.0</td>
<td>86.30</td>
<td>197</td>
</tr>
<tr>
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<td>Privately-owned</td>
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Table 2.4 National Urban Housing Investment in 1982

Source: Yok-shiu F. Lee (1988)
The new comers (rural-urban migrants) faced even worse challenges. Most of the current affordable housing programs which include the Economical and Comfortable Housing (ECH) Program, and Cheap Rental Housing (CRH) Program are not available to people who do not have an urban hukou. Hukou is very unique to China: it is a household registration system which regulates internal migration. Hukou is tightly connected to public benefits, access to good quality housing, schools, health care and attractive employment opportunities (Zenou 2011, Kam 2010, and Wang 2004). It is hard to change the hukou status from rural hukou to urban hukou. Yet, as Zenou (2011) observes, a large proportion of poor people living in cities are migrants who do not hold an urban hukou, and have no access to formal sector such as mortgage support and other services. They end up in the informal sector, in urban villages, or “shantytowns” or so called “slum.” Zenou (2011) concludes that the recent urban housing reforms have overlooked the needs of migrants who are economically weak and lack of public service access. That enhances the inequality of housing and other services.

2.3 Major affordable housing programs in China

Currently, there are three major housing programs in China that work to improve housing affordability. They are the Economical and Comfortable Housing (ECH) Program, the Housing Provident Fund (HPF) Program, and the Cheap Rental Housing (CRH) Program. The Economical and Comfortable Housing (ECH) Program was established with the 1994 housing reforms (Deng 2009; Huang 2012). The target group for this program is the low-middle and middle income families who are unable to buy housing at market price. The program requires the local governments to provide local government owned land with a price
subsidy to developers involved in related projects, and the developers are supposed to sell completed housings at a discounted price to home buyers who meet accepted criteria, especially the household type and income (Logan, Fang, Zhang 2009). In this, the construction of housing projects and the sale prices is also regulated by the local government. Local governments are allowed a profit margin of up to 3 percent. Nationwide, the ECH are 15 to 20 percent cheaper than market price units (Liu and Xie 2000).

Housing Provide Funds (HPF) was first experimented in Shanghai in 1991 and later in 1994. It became a part of the national housing program. It was inspired by Singapore’s Central Provident Fund (Deng 2009). It combines a 401(k) - like savings and retirement account with subsidized mortgage rates and price discounts to provide a mechanism to help home buyers purchase houses (Buttimer, Gu and Yang 2004). In HPF, both employers and employees contribute a certain percentage of the salaries to China Construction Bank, a state owned bank. In return, employees get low interest mortgage loans from the HPF for their home purchase. HPF works very closely with the ECH program to increase home ownership in China. Nevertheless, HPF does not support urban self-built houses, due to property rights and the right to ownership of land is still an issue in urban area. Rapid urbanization also increases land prices and self-built houses are very rare in urban areas. The HPF is more focused on how to encourage people to buy housing units from the market, particularly, from developers.

Cheap Rental Housing (CRH) is different than the other two; ECH and HPF focus on helping low and middle income people to buy housing units, while the CRH is a social rental housing program. It targets low-income people and helps them to achieve rented housing.
Targeted groups include seniors, people with disabilities, and extremely low-income households. (Ye Et.al 2006). Through this program, the government provides huge subsidies to assist rental payments. In Beijing, a low income family needs to pay only 5 percent of their income as their rent. For instance, a nearby market rate is 35 Yuan per square meters per month, while the CRH unit is 25 Yuan per square meter per month.

2.4 Conclusion

On one hand, through the housing reforms in the past 30 years, China made huge progress in terms of making a new market oriented housing provision system. Currently, most of the urban households can purchase houses from the housing market to meet their needs. They select what they want and pay what they can afford. Thousands of developers provide millions of choices for their target customers. Even the affordable housing project which is for the low income people also creates a huge market impact on local housing stock and market. On the other hand, as John Turner (1976) shares that there are two ways to provide housing: through a centrally administrative system and through self-governing. The first one is a process determined by others, and the other one is a self-determined process. These processes can create different results. When we go back to take a look at the above opinions, we can notice that almost all the scholars, practitioners, and decision makers believe through mega housing project can solve housing issues for low income families. It seems the only thing they need to do is looking for a substantial piece of land and searching for funds to construct a huge housing project and move people in and then start another one. They strongly believe this is the best approach for these low income people to solve their housing
issues. However, all of these are belong to one way: a centrally administrative system. There is still another way which is rarely talked by the mainstream scholars and decision makers, provide housing through self-governing or self-builders. It could be a supplementary to current housing policies.

This paper is focusing on the “shantytown reconstruction project” a state oriented low income housing project in Datong. It is one of the largest affordable housing or shantytown reconstruction project in China which draws national attentions. Since this project is a mainly ECH Program funded project, we will concentrate on ECH programs. As the government officials claimed, in many ways, it is a successful project. It meets its objectives: moved coal miners and their families from endangered houses along the coal mine mountains or hills to the safe and newly constructed modernized residential housing units. However, I would like also to hear the voice from the users’, and to evaluate the project through its objectives, and finally explore how to add some additional factors to consummate the project in order to better serve the low income families.
Chapter Three

The study area

3.1 City of Datong

The city of Datong is located 378 kilometers west of Beijing. It is the second largest city in Shanxi province. It has 3.3 million people within 2080 square kilometers; about half of the population lives in the urban area (1,047 square kilometers). [1] It has two nicknames: the Phoenix City and the coal mining capital of China. The first nickname comes from the city structure, overlooking the city from the air, it looks like a phoenix. The second nickname shows the major industry of the city. It also has a very long and rich history: It was once the capital of ancient China from 398 AD until 494 AD. With its history and remaining structures, Datong is a tourist city. However, the economic base of the city is coal mining. The study site is located on the southwestern side of Datong, 10 kilometers away to the city center.
Figure 3.1 Location of Datong in China (A is Datong, B is Beijing)

Source: Google Maps

[1]. In China, municipality area includes rural area.
3.2 The housing project

After the establishment of People’s Republic of China, in order to develop its own heavy industries, the communist government built many new cities or parts of cities across China. One type of these cities was built to exploit natural resources: Datong (coal), Daqing (petroleum), Panzhihua (iron). These cities extracted natural resources to support the industrial development of the country. Datong Coal Mining Group (DCMG), a state owned enterprise, has been the dominant industrial actor in Datong’s economy for almost half century. It is the third largest coal-mining enterprise in China.
The establishment of the coal mining city also attracted thousands of migrants to the city who became industrial workers. They also brought their families from rural areas, but there were hardly any infrastructures, no sufficient amenities for these families to live. The national political climate was not helpful either. The national leaders believed that: “production first, living condition later”. The coal miners and their families therefore occupied vacant land and built their own houses. They mainly built along the mountains and coal mines. These self-builders created their individual houses based on the plot of land and the local building materials they can have. Many of them have lived in these dwellings for almost fifty years. (See Figure 3.3)

With time, the foundations of these houses are affected by mining activities and the damages to houses occurred frequently. Parts of houses have begun to fall down and the heavy rainfall threatens to sink whole houses.
DCMG has made some efforts to improve its employees’ living condition, for example, it built some walk-up multi-unit buildings (Figure 5). However, most of the coal mine workers and their families still live in their self-built settlements. There are 72 shanty towns within DCMG, about 40,000 families live there. (Tang 2006) The new affordable housing project which began in 2002 contains four stages: preparation, plan making, assessment and approval, and construction. In 2002, the central government passed coal mining subsidence special
investment compensation policy in order to support these natural resources cities. According to the policy, based on its own coal mining subsidence condition, Datong city government investigates the condition of the affected area, provides detailed reports such as Datong Coal Mining Area Coal Mining subsidence investigation report, ground damage report, and comprehensive management programs. After that, Datong city government is looking for funds from the central government. It also established an office to take charge of the entire project under the collaboration with DCMG and related county governments. The office provides macro level guidelines, policy and plans and supervises construction; while the DCMG and district (county) governments are responsible for implementation. (Datong shi cai mei chen xian qu zong he zhi li gong zuo jin zhan qing kuang de hui bao 2008/07/28) The city’s Develop and Reform committee (fa zhan he gai ge wei yuan hui) is the major player in this project. The DCMG also creates an office take charge of the funding allocation, project management, select construction partner and housing distributions.

3.3 The redevelop plan

The China International Engineering Consulting Corporation (CIECC) is the consultant company to provide pre-investigation, resettlement plan and redevelopment suggestions. According to Datong City Master Plan 2001-2020, CIECC suggested particular land use changes and made the residential plan. Most of the newly constructed apartment buildings are six to seven floor walk-ups, without elevators. The educational facilities in the original plan (2005) consisted of 11 new elementary schools, 5 middle schools, and 19 primary schools; it also includes public amenities such as hospitals. It contains 16 new residential districts, and a
housing cluster. The target family units are 48,402, about 157,865 people; the total planned land area is 281.25 ha (about 700 acres); the overall construction area is 3.15 million square meters which contains 2.90 million square meters of residential space and 0.24 million for public infrastructure. The total investment is 3.04 billion Yuan. Fifteen percent of house types are one bedroom (about 45 square meters) units, 70 percent are two-bedroom (about 60 square meters) units, and 15 percent are three-bedroom (75 square meters).

The local government is the first body who is responsible for the whole project, and it established two offices Develop and Reform committee (fa zhan he gai ge wei yuan hui) and “Housing Authority” to provide macro supervision of the housing project. The DCMP is the implement body of the project. As the major body responsible for the improvement of living conditions for its employees, DCMG began the reconstruction project: DCMG two area redevelopment project (Datong mei kuang ji tuan liang qu gai zao gong cheng). The project consists two parts: DCMG shantytown reconstruction project (Datong kuang qu peng hu qu gai zao gong cheng) and DCMG coal mining subsidence resettlement project (Datong mei kuang ji tuan chen xian qu gai zao gong cheng). These two projects provide 8.1 million square meters (about 95 million square feet) for around 100,000 families, equivalent to around 300,000 residents. The total investment is 9.74 billion Yuan (1.57 billion USD). The land area is 873 ha. The total construction area is 5.11 million square meters (55 million square feet) and this is used for three purposes: the shantytown resettlement land, the coal mining subsidence resettlement land, and the original resident’s resettlement land. The project is constructed in three phases and began in 2006 and finished in 2012.
Besides the size, it was also a prestigious project that drew national attention. Both the former Prime Minister Wen Jiabao and former Deputy Prime Minister Li keqiang (the current Prime Minister) visited the project site during the construction. They praise this project as a model for other low-income housing project, and urban shantytown renewal project because the project completed in a very short time but in a very good quality. The central government holds a national meeting in Datong in 2009 about city and state owned mining shantytown redevelopment (quang guo cheng shi he guo you gong kuang peng hu qu gai zao hui yi). Central governments also put a lot of effort into this project. According to the documents from the project management body resettlement administration office (liang qu zhi hui bu), the central government pays 50 percent of the total housing cost of the coal mining subsidence resettlement; the province government pays 15 percent, the city pays 5 percent, the district and county governments pay 5 percent, Datong Coal Mine Group pays 17.8 percent and the residents pay only 7.2 percent. While, for the shantytown resettlement part, there is no direct funding from central government, the provincial government pays 20 percent; the city government pay 10 percent, DCMG 30 percent, and households need to pay 40 percent of the total housing cost. (see Table 3.1)
Table 3.1 Funding sources comparison

Source: Resettlement administrative office
Figure 3.5 Location Map of the old shelters (blue circle are the old shelter site)

Source: Google Maps
Figure 3.6 Location Map of the new construction site

Source: Google Maps
Under the support from Shanxi provincial government, the DCMG selected the new construction site located on the southwest of the city center, and south of the mining district (see Figure 3.6). The site was previously used by a dairy factory and adjacent farmland was owned by local farmers. The eastern boundary is near the railway track. Dayun Road, Tongtai Road, and to the west side is the city bypass (expressway).

The project reduces the housing cost for the individual; the most is 40 percent. The
market price for such project was about 2000 Yuan per square meters, but for this project, for both shantytown resettlement and coal mining subsidence resettlement, the central government constrains the sales price and expenditure through a special fund. Generally, residents pay 1000 Yuan per square meter. It is much lower than the market rate. One thing need to know is these government subsidized houses, dwellers only have partly ownership, and these houses cannot be traded in the secondary market. The government also subsidized the households based on their previous living conditions.

Physically, it is hard to clearly separate the shantytown area and coal mining subsidence area; they have some overlap. The shantytown means the housing condition is below national standards, especially lacking a sanitation system. The coal mining subsidence houses are directly affected by coal mine activities, especially pollution. They both are relocated in the same housing project; so, there is no difference in construction cost, quality of new housing, or location. The difference is in the subsidy: the coal mining subsidence resettlement households get more financial aid from the government than the shantytown resettlement households. Their difference is huge: the coal mining subsidence resettlement households pay 7.2 percent while the shantytown households pay 40 percent of the total housing cost. (See Table 3.1)

There was, however, an issue of categorizing some households. The shantytown and subsidence co-existed and were mixed. On the surface, the whole settlement is a shantytown and most of them are affected by mining activities. There is a conflict between the residents and the project staffs in regard to identifying which houses belong to the shantytown and which ones are in the coal mining subsidence area. This is highly significant for the residents
because it will determine how much government aid they can get.

Another issue is, when it was investigated before the construction, some houses may only belong to shantytown, it was not affected by the coal mining activities, but during the state respond process, the coal mining activities cause some damage to these; hence, technically, they could be classified in subsidence category. However, central government aid only based on the previous investigation.

Third, the amount of funding was determined on the basis of the local process of building materials and construction at the time. The estimators have assumed that the construction costs will remain the same. However, since this is a big project and it has a significant impact on the local construction material price such as cement concretes, steels and labor cost, the original funding could not completely cover the cost of the project as it is planned. We will return to this issue later.

3.4 The 2010 housing survey

In order to determine whether the project accomplished its stated goals, especially in helping coal miners and their families improve their living conditions. I conducted a survey in 2010. The survey contains six components, covering both physical and social aspects of housing. It approaches the satisfaction from the users’ standpoint. Survey interviews 198 residents in the new resettlement site.

The objective of the resettlement project, according to the government statements is to improve the housing condition for coal mine workers and their families. It especially targets to replace the damaged houses for the victims and help low-income people who live in
shantytowns to improve their living conditions. Most of the houses in the coal mine subsidence area are damaged, and people are suffering from carbon monoxide which is a dangerous gas.

The project is part of the ECH program, so affordability and comfort-ability are the two major goals of the project. The shantytown reconstruction or resettlement project aims to improve the families with housing difficulties. For instance, it responds to poor housing structure and lack of necessary public infrastructure such as sanitation or having leakage. The coal mining subsidence redevelopment project aims to help people whose houses are heavily damaged by coal mining activities, and those affected by carbon monoxide.

According to the media interview by Xinhua news (2012), prior this resettlement project, the coal miners usually lived in very poor conditions, defined by leaking pipes, very limited space, poor lighting and ventilation; the kitchen, bedroom, and living room sharing the same space, lack of public amenities such as sewage and sanitation, and the houses facing unpredicted collapse due to underground coal mining activities. In many ways, it is not so difficult to improve these housing conditions and new housing blocks were supposed to take care of these issues very easily.

The survey responds collected from the interviewees show over 71 percent of respondents have positive opinions about the resettlement project. In addition, it is about 95 percent of them are satisfied with the housing unit size they received. They feel that they have more space than in the past. Among the respondents, 45 percent think moving to the new multi-unit apartments makes their life more convenient. The new housing includes sewage system, natural gas, water pipe, and heating system.
In terms of housing cost, 67 percent of households spend less than 60,000 Yuan (about 10,000 USD). This is much cheaper as the typical cost of a two bedroom apartments of (about 60 square meters) was 180,000 Yuan (about 30,000 USD) in 2010. In addition, more than 80 percent of the respondents’ monthly incomes is 1000 Yuan to 3000 Yuan. Hence, 60,000 Yuan price tags make housing affordable to them.

In regard to accessibility, amenities such as daily shopping, grocery store, and restaurant facilities are conveniently located for over 80 percent of the respondents. According to the existing commercial investigation report conducted by the resettlement project administration office (liang qu zhi hui bu), there are 86 convenient store, 77 grocery stores, 193 restaurants and 49 medical stores within the resettlement project. It is convenient for the local residents to have access to get the day to day shopping.

In addition, there are various evidence shows the project is comfortable for the residents. It meets its objective in most. For example, most of the respondents mentioned that ventilation and day lighting are much better compared to the past. Structure is built of concrete steel, and is more solid and reliable, and water supply and sewage systems are also installed in the unit.

Overall, around 75 percent of the respondents are satisfied with the resettlement project. The project also meets its main goal in terms of improving housing conditions through improved building quality, increasing public infrastructure, independent room functions (kitchen, living room, bedroom are used to share the same space). In regard to these aspects, the project meets its goal to provide economical and comfortable housing for low income people.
Nevertheless, there are some concerns about community atmosphere, the quality of the building, facilities, property service management and the increased cost of living are concerns. For instance, there is only one small police station located in the southwest corner of the project. It is not sufficient to deal with the crimes in town which have 300,000 residents. There is no fire station located within the entire project. Moreover, former communities are now destroyed. Due to the construction process, residents from 15 different coal mines sites are relocated into 17 different residential areas, they all have new neighbors. Most crucially, they have lost the sense of community. They feel the coal community relationships are broken, but new ones are yet to be formed. The majority of the respondents said that they feel there are less community activities. The definitely feel the lack of the sense of community compared to the past. The old housing area had a community center which provided facilities and room for residents to entertain. In the new housing project, until 2010, only a few residential areas had community centers, while the rest were still under construction or under planning. This is highly affecting residents' life. For example, there are many children and teenagers who go to Internet cafes after school and play violent games or visit adult websites (although the government prohibits this for below 18 years).

Even though, the housing itself is cheaper than the market price, the overall cost of living has increased compared to the past; the cost of transportation, food, amenities, property management have all increased. For example, when living in their self-built houses, the residents did not to pay a property management fee, they get the water from the wells with no charge, and the heating cost was very low since they were using coal from mines for heating and cooking. After moving to the new place, they not only have to pay for their heating, water,
natural gas and property management, but mostly, do so at formal rates (the property management is very low in the region).

In regard to transportation, the resident used to walk to work. Now they have to take a shuttle bus commute from homes to work sites. Although, the coal miners get the free shuttle bus from DCMG, their families need to pay a small amount for auto rickshaws in order to get to the bus stop, which used to within walking distance. It usually costs 1 Yuan to take an auto rickshaw to travel within the whole resettlement site.

Figure 3.8: Local auto rickshaw which runs within the new resettlement project

For education and medical facilities, most of the kindergartens are privately owned. They are always located on a tiny piece of land and lack facilities; activities and facilities are below
national standards. Many parents also mentioned that, in the elementary and middle schools, some teachers do not teach well, they only cover part of the content that they are supposed to instruct and open up a private tuition class after school in order to make extra money. For medical facilities, there is no large general hospital within the project. Instead, there are some governments owned medical centers in each residential area. Because, this kind of health care policy can only be used by the government institution. These places charge 30 to 40 percent more than the regular price when the residents use their government funded health care booklet (like a health care card). The residents do not have another option if they want to use government funded health care policy program. It has become another fiscal burden for coal miners and their families.

The level of comfort did improve a lot. However, there are still some aspects that can be improved according to the residents. For instance, about 30 percent of respondents think that the apartments are well laid out. While, the rest think it can be improved. In each building, there is an area that counts as public space, such as stairs and hallways. It is common for the multi-unit apartment building. Some respondents consider that they lose 10 percent of their home space for such use. As a result, in a 45 square meter one bedroom apartments, the space available for user is about 40 square meters. The building quality is another area of major concern; about 50 percent of residents complain about the building quality. There are noise problems within the building due to poor quality building materials and poor insulation. There are also cracks on walls just a year after construction. In some cases, some electric switches were not working at the time of moving in.

The property management service is one of the major issues for the residents. Although,
the DCMG subsidy is about 40 million Yuan per year for property management, the poor service, low efficiency, poor maintenance and bad attitude of the staff affect residents’ life. The staff usually cannot help the residents to solve problems in a timely manner. In some cases, the maintenance staff asks for a service fee which it supposed to be a free service.

However, according to administration office of the resettlement project (liang qu zhi hui bu), the property management company Peng Cheng Property Management Service Company (Peng Cheng wu ye gong si), an off-shoot (company) of DCMP, is over burdened by the local governments. For instance, the resettlement project contains 1.8 million square meters public cleaning area. There are 14 major streets which should be maintained by the local governments. The property management company does not have sufficient capacity to look after these areas. The street lights and green spaces should also be part of the public infrastructure, and should be taken by the local government instead of the property management company. The resettlement project contains many wide roads that connect inside and outside of the project, however, there were no traffic lights and signs on the street, and there is no traffic police as in other major intersections in the city.

This created many problems for community management and for residents’ livelihood. According to Guo Xiaoyuan (2011), the Deputy Manager of the administration office of the resettlement project, the huge scale of development, it becomes a new town development project, but the amenities were planned in a small community scale. There is a conflict between these two scales and that affects the land use, funding and responsibility issues. He also mentioned that, in the original plan, there was no land for the major city roads, during the construction process, some residential lands were allotted for city road.
Also there is no planned land allocated for bus stops and social enterprise use. For example, there is no public restroom within the project and the residents need to go back to their homes to use the restroom. Even though the administration office wants to build some public restrooms now, there is no land.

Finally, the finances both material and labor costs increased in the past few years. Yet, the government still provides the same budget. Hence, there is a funding gap which also affects the outcomes of the project.

Conclusions of the survey study

Overall, the resettlement project almost meets their objective which is to improve the housing condition of the coal miners and their families. It makes their families’ lives more convenient and comfortable. It provides low cost housing with necessary housing amenities. In a physical sense, it made a significant change in their lives in a very short period of time. It also received the support of the majority of users. It is a substantial achievement for both the governments (at national and local levels) and coal miners’ families.

However, there are some parts as follows we learned from the survey study:

First, the project overlooks urban planning. Although, there are some planning methods and concerns during the plan, construction, and management stages, urban planning is not well worked here. For example, in terms of the project scale, there is a big problem, it was planned as a big residential area, while, at the end, it becomes a new town. Due to the planner or the consultants, and decision makers did not fully understand the capacity of the project. The conflict between the planned project scale and the real project scale caused many
problems on land use, funding gap, maintenance and traffic problems. It is a contemporary town now, not a regular residential area. The civic infrastructure and amenities need to be considered at a city level, not a residential neighborhood level.

Second, housing issue contains both physical and social (soft) side problems need to be addressed. It should be thought in a holistic way which covers transportation, social access, proximity to educational and health facilities, availability and proximity to employment, safety, and sense of community. The physical house cannot stand for housing, it is part of the housing; therefore, build houses only cannot better serve the housing issues. In order to achieve these goals, the issues need to be addressed in a comprehensive way. Affordability and comfort ability are the two major aspects that the project targeted. Affordable housing is only one factor that contributes to housing affordability.

Third, in this project, DCMG as a state owned enterprise took too much communal burdens which were supposed to be taken by the local government. For example, DCMG subsidized 40 million Yuan every year on the property management fees. Therefore, the role and responsibility between different stakeholders need to be divided more clearly. Here, local government, DCMG and residents should have a better platform to communicate.

3.5 Findings of 2013 study

The 2013 study is a follow up study of the 2010 research. The most significant reason to revisit the site is to learn about the changes in the past three years. Second aim is to verify the accuracy of the 2010 observations and explore the concerns surfaced during that study. Besides, infrastructure, building quality, and cost of living, there were three major concerns
raised by the 2010 study: the community green space (like community parks), community activities, and property management service. The information comes from Pengcheng Property Management Company, site visit and the internet.

The community green space issue has improved since 2010. Most of the residential districts now have a significant community green space. According to Peng Cheng Property Management Company (2012), the community green space area increased from 606,600 square meters in 2010 to 822,808 square meters in 2012. The green space is about 27 percent of the total land area (see Table 2). These efforts are satisfied by the local residents. These community green spaces also beautify the community and provide a place for people to rest.

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Table 3.2 The community green spaces in the project

Eg: 1 square meter(㎡)= 10 square foot

Figure 3.9 Corner park green spaces in District A
Community activities also improved in the past three years. First, on the physical side, most communities have established their community centers. The DCMG and its offshoot companies helped each community to construct a community plaza(square) with fitness facilities (See Table 3). Second, the property management station in each community usually organize cultural and entertainment activities such as dancing, singing, chess games, and some traditional Chinese cultural activities. Every year, on July 5th, they celebrate the visit of the former Prime Minister. They even provide some funds to encourage community activities. This enriched the sense of community. A retired resident organizes a senior Tai Chi to do some exercises every day in her community. It is very common to see the community activities in every community.

<table>
<thead>
<tr>
<th>Community</th>
<th>Number</th>
</tr>
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<tbody>
<tr>
<td>泰安里 A</td>
<td>3</td>
</tr>
<tr>
<td>泰昌里 B</td>
<td>5</td>
</tr>
<tr>
<td>泰福里 C</td>
<td>1</td>
</tr>
<tr>
<td>泰丰里 D</td>
<td>1</td>
</tr>
<tr>
<td>泰华里 E</td>
<td>1</td>
</tr>
<tr>
<td>泰乐里 F</td>
<td>4</td>
</tr>
<tr>
<td>泰荣里 G</td>
<td>2</td>
</tr>
<tr>
<td>泰庆里 H</td>
<td>2</td>
</tr>
<tr>
<td>Community Area</td>
<td>Number</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------</td>
</tr>
<tr>
<td>安庆里 I</td>
<td>4</td>
</tr>
<tr>
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<tr>
<td>安祥里 K</td>
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<tr>
<td>安福里（西）L</td>
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</tr>
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<td>安福里（东）M</td>
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<tr>
<td>安定里 N</td>
<td>1</td>
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<tr>
<td>安宁里 O</td>
<td>1</td>
</tr>
<tr>
<td><strong>合计 (total)</strong></td>
<td><strong>32</strong></td>
</tr>
</tbody>
</table>

Table 3.3 Number of Community Plaza


Figure 3.11 A community fitness plaza
In regard to the property management service, the respondents’ feedback is very positive. According to Peng Cheng Property Management Company (2012), almost 98 percent of the residents are satisfied with their work. The residents think the service is good, the company solve the problems well and efficiently. The property management company also established “community safety education center” to provide education on safety, environment protection, health eating, and transportation safety.
Figure 3.13 A senior volunteer group activities
Overall, the three major concerns from the residents have different level of improvement compare to the 2010. The community green spaces increased in the past three years both quantitatively and qualitatively, the green spaces not only beautificate the community, but also provide a comfortable environment for residents to live; community atmosphere is getting better compared to 2010, when there was rarely a community center or any activities. Now, there are various community activities organized or participated by the local residents in each community. The property service is also serving the resident well. According to a video interview (2012), most of the respondents feel happy to live in the community. They feel comfortable and convenient to live in their new community. In this way, the resettlement project is getting closer to achieve its goal to provide comfortable housing for coal miners and their families.

Besides the accomplishments, we also noticed some problems need to get our attentions:

First, the plan should be more updated and realistic. For example, the planned or designed food markets (grocery market, vegetable market, fish market, meat market, etc.) are very far to the residents. It takes about over 20 minutes from the middle of the project to the designed market by walk. See Figure 3.15
They are located on the western edge of the resettlement project. However, because these designed markets are far away from most residents and charge certain fees, both the residents and street vendors did not use it. Currently, in reality, these markets space were converted to vehicle mechanical shop, a dance club, warehouse, an abandoned skating rink and a bird and fish market. While, the real market currently existed is located in between District A and C, E and G, both of these two markets located at the end of the street. See picture bellows.
Figure 3.16 and 3.17 The designed market; currently vacant. It is expected to become a temporary parking lot.

There are several reasons caused this: First, The major reason they located on these two places is because they are dead end roads, there is less go through traffic compare to other streets. Second, both District A and C are constructed and built earlier than other communities, therefore, the residents moved in earlier than other districts. In one approach, the plan for this project failed to serve the residents. The planned markets are not reachable for most residents. The plan is not grounded, it did not plan from a user standpoints. Therefore, it could be a planning mistake.
Figure 3.18 A designed seafood market has become a tea house
Figure 3.19A designed vegetables market has become a roller-skating club
Second, there is a low level of civic participation. The residents do not know the layout of the houses, the location and their rights. The only thing they know is the time to pay the house payment and pick up the key. The citizen participation level in here according to Arnstein (1969), belongs to tokenism, informing and consultation is considered to be the characteristic of this level. The information just flows from the officers to the citizen without a pathway for feedback. There is some level of consultation work. The officials stated they have invited residents to attend the meetings and get their opinions on resettlement plan and housing distribution before the housing construction. However, there is no evidence can prove this from the residents’ perspective.. For example, due to the poor design and lack of resident participation, the housing layout is not well designed. One family had to convert one
of their bedrooms into dining room because the original living room is very small and there is no room for dining. See Figure 3.21

If the project administrators, and decision makers can make the policy more transparent and got more participants to involve during the planning and construction process, these problems could have been avoided. For example, the residents have the right to know their future home. In fact, the above case could be avoid if the construction company can show the apartment layout to the residents, they might get good feedback from the residents and the later convert matter will not exist.
Figure 3.21 A bedroom converted dining room
Chapter Four

The suggestions for affordable housing project

The affordable housing project in Datong is only an example of the central provision system. Actually, it is a good project within this system. In many ways, it is a successful project which in many aspects it meets its own objectives: improve the housing condition for coal miners and their families. It provides physical housing for the coal miners at a low cost within a short period of time. However, the study conducted in 2010 and 2013 show that there are numerous problems exist during the resettlement process. Here, we try to provide some suggestions for future similar project. The suggestions contain two parts:

The first is about how to understand affordable housing or housing for low income people. This should be addressed before we take any future step. In chapter two, we noticed that the mainstream literature produced by scholars, practitioners, and policy makers considers affordable housing as a commodity instead of a dwelling for the residents. They highly valued houses’ market value over its use value for the residents. The private sector is interested in profit maximization, the government wants to maintain public order, and the bankers focus on financial issue (Rod Burgess 1978). John Turner (1976) identifies three sets of activities in housing: planning, construction and management. He adds that, there are three actors in this process: users (the residents), suppliers(private and commercial sector), and regulators (public sector or government). The original purpose is to assist low income families to get safe, clean and decent places to live or maybe just help them find some necessary resources to upgrade their living condition. This could be best reached at a small scale; not at a massive level. It could be done through a small investment not a huge spending.
In regard to this project, the state government, local governments, and DCMG spent billions Yuan on new construction and find a suitable land to fit this mega housing project. It could be solved in a low cost and require less resources way. For example, for some shantytown or urban village project, the major concern from the government perspective is the density and cleanliness and that could be fixed in a small scale with minimal cost and short term. However, even if the decision makers have very good intention, when it comes to implementation level, the person who takes charge of the project may have a different way of understanding. For this project, the major issue for the shantytown residents is it lacks of sewage system and infrastructures that could be fix in a very low cost. The governments, decision maker or project manager can provide some funds for the local residents to install the sewage system. In that way, the project cost could drop down and the outcome could be the same. Tearing down the old building and reconstructing a new one usually becomes major model for this kind of project. The reason is this model is widely used across the world.. It is also stated by the government and private developers that they can create more jobs by this method. Unfortunately, these days, affordable housing has become a business for many stakeholders; it is a new economic engine for local government, a new market for a real estate developer and a business for some people. It is used as an excuse to ask for the government funding by the local governments. It lost its original mission. Therefore, in order to make a good affordable housing project. Each party should understand their role and responsibility in order to better serve the project goal. If the related stakeholders such as governments and decision maker highly value the market value over the use value of affordable housing, it is hardly to achieve the original mission of affordable housing.
Besides this, in this project, there is an issue need to be considered. For example, the DCMG as a state owned enterprise takes too much burden for the local government. It pays for 40 million every year on the property management fee for the entire project which is supposed to be taken by residents and local governments. It affects the DCMG’s profit as a company and in the long term it is not sustainable for the project. The DCMG as an enterprise cannot and should not take duties for the government part.

Therefore, besides directly providing housing for low income people, the future affordable housing project could also provide an option for people who have more initiative to find their own ways to get a place they want to live. They might only need some small help. They might occupy a vacant land and build by themselves. In this approach, the government may not need to spend too much money on such project. While, if the method of solving housing issues for low income people stick on directly provides housing, most solutions would be how to find enough funding and sufficient land to fit these people. It requires government and project managers to look for a lot of money, land and make various regulations on how to use the money, hire many consultant companies to design or plan, and find some construction companies to build. All the problems become capital and resources related problems. For example, I was doing a study abroad program in India. When we were discussing the issue for a slum settlement, Dr.Nihal Perera mentioned if you consider self-built settlement as a slum you will consider how to reconstruct it and that will create more problems than it has, while, if you consider self-built as a solution, you only need to fix the problem they have.

There is a very good example to explain the bottom-up approach. In Small Change,
Nabeel Hamdi (2004) shared a story; one of his students helps a poor local community to rebuild their neighborhood by encouraging the locals to participate in the design and building process, which makes the project more sustainable. The project manager first gives the residents a piece of paper to ask them to draw the subdivision map for the community. Local residents put all the houses on the drawing without any space for the green space or public space. She then asks the residents whether they think there is any problem for the subdivision map. Later, residents noticed they need some green spaces and alleys in the community. The project manager asks the residents how they will fix this problem within the restricted land. The residents all agree they need to reduce the unit size of their houses. It is an example to show that even the local residents have the ability to design their community. They might need some guides and suggestions instead of providing housing for them.

Second, leave some room for the plan adjustment and citizen participation. There are many problems caused by the original plan such as the funding gap and abandoned market. The redevelopment plan for Datong did not leave room for plan adjustment, and due to the increased cost of building materials, their previous project budget cannot cover the total project cost, and that affects the delay of accomplishing the project. In addition, because the planned market is far away to the majority of the local residents, it became vacant warehouse and abandoned the site. The current market is located on the major street cause traffic problem and cleaning issues. If the impending project can leave some room to adjust the plan, it would solve the issue before it becomes a problem. It also can help in the affordable housing better serve its objectives.

Citizen participation is another issue which needs to be considered for the future project.
As Turner (1976) mentioned, let the user involvement in the planning, construction, and management stages, the project will better meet the users’ needs and the project outcomes will be different. In order to understand this, we should also view the affordable housing project as a step or process instead of a final product.
Figure 4.1 and 4.2 A aerial view of the project (taken in 2013)
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