

Review on the Development of Underground Shopping Mall in China

YU Ronghua^{1,*}; CHEN Zhilong¹; YE Quanyi²

¹ Underground Space Research Center of PLA University of Science and Technology, Nanjing 210007, China.

² Southeast University, Nanjing 210007, China.

* Corresponding author.

Supported by Science Fund for Creative Research Group of the National Natural Science Foundation of China (No.51021001).

Received 11 November 2011, accepted 20 February 2012.

Abstract

On the recent National Congress, a hot topic on the commercial real estate is how to develop underground shopping mall. Underground shopping mall investment had the characteristic of great invest, high level of risk and high profit. It has already become a new popular investment spot. China's underground shopping mall has gradually transformed from one with a very high degree of government intervention into a more market system. Lack of effective planning and a transparent approval mechanism has led to high vacancy rate in many underground shopping centers. In order to make better use of underground space of shopping, the reform of underground shopping mall investment and operation framework is necessary. The government should change its role in managing investment rather than be Project Company. Government should establish the appropriate monitoring mechanisms to strengthen environmental management and ecological security, including creating a regulated market environment.

Key word: Present Status; Development Pattern; Sustainable Management; Underground Shopping Malls; China

YU Ronghua, CHEN Zhilong, YE Quanyi (2012). Review on the Development of Underground Shopping Mall in China. *Studies in Sociology of Science*, 3(1), 7-11. Available from: URL: <http://www.cscanada.net/index.php/sss/article/view/j.sss.1923018420120301.1990>
DOI: <http://dx.doi.org/10.3968/j.sss.1923018420120301.1990>.

INTRODUCTION

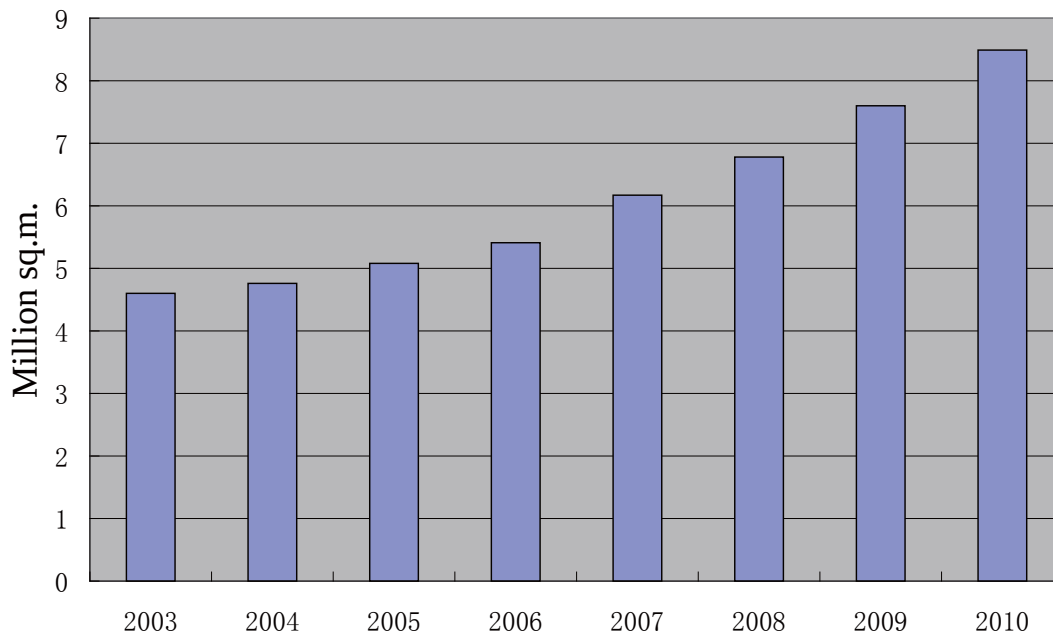
With ease of international relations and boost of comprehensive national strength, the guiding principle for utilization of underground space has taken shape to combine the demand in peace and in war, and benefit common people. In recent years, the development and utilization of urban underground space resource in China experienced the process of focusing on construction of civil defense underground projects, and is gradually moving onto the track of combining urban redevelopment and construction.

Chinese Premier Wen Jiabao recently proposed to actively promote the joint development of civil air defense construction and economic development, and adhere to the combination of civil air defense construction and the urban construction. In Beijing, Shanghai, Guangzhou and other large cities, expansion of underground space has become a hot topic for the commercial real estate developers.

China's underground shopping malls are derived from civil air defense projects, and development along with urban construction (Qian & Chen, 1997). It has gradually transformed from one with a very high degree of government intervention into a more market system. Lack of effective planning and a transparent approval mechanism has led to high vacancy rate in many underground shopping centers.

1. TOTAL SCALE OF CHINA'S UNDERGROUND SHOPPING MALLS

With the further development of urban underground space and use of underground construction, more and more underground malls appear constantly in China. In the past 30 years, the development scale of China's urban underground shopping malls is very huge. The total scale of China's underground shopping malls has increased



Source: National Bureau of Civil Air Defense

Figure 1
Total Underground Shopping Mall Areas in China

from 4.6 million square meters in 2003 to 8.49 million square meters in 2010. the annual growth rate is about 7.5%.

Harbin, Shanghai and Guangzhou rank as the top 3 cities where underground shopping malls are mostly located. In terms of geographic extension, cities located in the North and Northeast China, such as Harbin, Beijing, Changchun, Shenyang and Dalian, are believed to be the dominant region where underground shopping malls are located. East China follows in the 2nd rank with Shanghai, Qingdao, Jinan and Nanjing being the primary areas of underground shopping centers. In South China, Mid China and Southeast China, Guangzhou has the largest number of underground malls. (Euromonitor, 2008)

2. ANALYSIS DRIVERS IN DEVELOPMENT CHINA'S UNDERGROUND SHOPPING MALLS

Economic development with GDP growth and rapid development of transportation infrastructure will boost the demand for China's underground shopping malls.

According to the experience of developed countries, when GDP per capita income is between 500 and 1000 US dollar, underground space utilization tends to occur; when GDP per capita income is between 1000 and 2000 US dollar, urban underground spaces can become relatively common place in central urban areas; and when the annual per capita income exceeds 2000 US dollar, urban underground space utilization can reach a high level (Qian,

2001; Chen and Wang, 2005). China's GDP per capita has increased to RMB27652 (approximately 4197 US dollar) in 2010. China has the economic strength to develop and use underground space on a large-scale.

The development speed of urban rail transit in China is unprecedented and ranks first in the world. It is reported that there are 22 cities in which the urban rail transit planning have been approved and the fund invested on it will exceed 0.882trillion RMB before 2020. At present; there are 79 rail lines under construction in the country. According to plan, the number of rail lines will reach 158 and the total mileage will be more than 4189 km in 2015. By 2025, up to 170 new mass transit systems will be built in China, implying better connectivity to suburban areas. It is predicted that more shopping centers will be built to serve these new suburban communities.

3. INVESTIGATE THE PERFORMANCE OF UNDERGROUND SHOPPING MALLS IN CHINA

Underground shopping malls involve a large scale of investment in terms of financial expenditure, and then result is to achieve a satisfactory rate of returns on investment for the owners and investors. To investigate the performance of the shopping centers in China, some shopping centers are successful while a lot of them are failed in term of average rental income and rental occupancy rates.

China's underground shopping malls boom in the past

years has led to growing vacancies. Take Guangzhou for example, based on historic statistic of Colliers International, under circumstances of large volume of supply in 1Q 2009, the vacancy of underground shopping

mall locations in Guangzhou rose to 14.5%. In the last quarter of 2010, vacancy rate had decreased by 3.9 percentage points but remained high at 10.6 %.(Table1)

Table1
Vacancy Rate in Selected Cities 4Q 2010

Region	City	Vacancy rate (%)
North	Beijing	12.0%
	Tianjin	16.1%
	Dalian	7.3%
	Shenyang	18.2%
	Qingdao	9.6%
East	Shanghai	6.1%
	Nanjing	3.5%
South	Guangzhou	10.6%
	Shenzhen	8.9%
Central and West	Chengdu	17.4%
	Chongqing	14.6%
	Wuhan	3.6%

Source: CBRE

4. DEVELOPMENT PATTERN UNDERGROUND SHOPPING MALLS IN CHINA

China shifted the purpose of underground space utilization from air defense projects to overall consideration of national defense and economic construction. At present, there are two mainly development pattern of underground shopping malls in China. One form is by building civil air defense shelters and using them as underground shopping centers during peace time(civil air defense underground shopping centers),the other form is real estate development pattern (underground commercial real estate).

The investor builds civil defense shelters for the government, with governmental approval and support yet at no costs to the government. As a return of favor, the investor receives a 40-year use/operation right from the government on the underground facilities, which the investor turns into underground shopping malls during peace time. However, the government does have the right to take over these facilities at times of war. It makes a profit through leasing or transfer of the operation rights of individual stores to merchants or shop owners. (Source: BOC international Fixed Income Research, 2008.10.1)

Development pattern of underground commercial real estate is same with aboveground commercial project development pattern. The investor need pay land use rights premiums and land appreciation tax for use land rights, For instance, On August 17th 2006, Nanjing

government sold 5 pieces of underground space, the overall area is forty seven thousands square meters, this is the largest area ever be sold in Nanjing. The price of Hunan Road underground shopping centre is 3407 RMB per square meter, which is seven point seven times than initial auction price.

5. ANALYSIS DEVELOPMENT UNDERGROUND SHOPPING MALLS IN CHINA

The development and operation of underground civil air defense shelters for commercial enjoy the advantages of low costs and low regulations. The development of underground civil air defense shelters for commercial use is not categorized as real estate property development under current PRC laws and regulations; the investor does not have owner ship of the civil defense facilities under Chinese laws, this kind of project does not need the investor to pay land use rights premiums and land appreciation tax.

The profit of development underground civil air defense shelters for commercial is very high. The total development cost is about RMB 8000-9000/ square meter. Because there is no cost in land use rights premiums and no land appreciation tax. The revenue generated from transfer of operation rights and lease income, the average selling price from transfer of operation rights is about RMB 33000-38000/ square meter. The annual lease

income is about RMB 900-1200/ square meter. If the investors sell 20%-30% of the operation rights of shopping center units for a one- time gain and retain the remaining 70%-80% as rentals for long- term cash income, the investment is certainly very low, and profit is very high. (<http://money.163.com/10/0320/17/6284JK9Q002526O3.html>).

For example, Renhe Commercial Holdings Company limited(1387.HK), established in 1992,it focuses on the development and operation of underground shopping centers for wholesale and retail apparel /accessories stores by building civil air defense shelters in China. In 2009, its gross margin was 74.6%, much higher than the average level of 30-50% of the property industry (Source: Bloomberg, BOCI).

The developers of underground commercial real estate can use the land as collateral to secure bank financing, buyers of the operation rights of individual shops receive government - sanctioned registration of property title and thus can obtain bank mortgage financing. Most domestic underground commercial real estate developers lack the required capital and expertise in underground shopping centre development and management, and rely on bank loans to finance the development. In order to make a quick profit, some developers lease only the anchor retail spaces, and sell the smaller units to independent retailers or to individual investors, turning the underground shopping centre into a condominium complex. Consequently, the management's ability to control the desired tenant mix is therefore lost, which can lead to undue competition within the centre, poor performance, and high vacancy rates.

6. ANALYSIS GOVERNMENT DEPARTMENT IN DEVELOPMENT UNDERGROUND SHOPPING MALLS

The government has no specific department for managing underground shopping malls; there are two relevant departments without setting up clear duty division. Civil Defense Office manages the civil air defense underground shopping centers while the real estate Department manages underground commercial real estate projects.

Because of civil air defense underground shopping centers do not need to pay land use rights premiums and land appreciation tax. The developer can not receive government - sanctioned registration of property title, the civil air defense underground shopping centers development process lacks transparency and the approval processes are different at both local and national levels.

Underground commercial real estate projects are subjected to many laws, rules, taxations and regulations governing the regular real estate industry, the development and operation of such projects enjoy the advantages of low underground land costs, those policies vary from one city to the other.

The only one national regulation about underground

development and management is the Regulations for Developing, Utilizing and Managing Urban Underground Space revised in 2001. The lack of coordination makes more unnecessary waste of human and material resources in development underground shopping malls. In order to make better use of underground space of shopping centers, the government is necessary to change its role in managing investment of underground shopping malls.

7. PROPOSITION FOR IMPROVING THE DEVELOPMENT UNDERGROUND SHOPPING MALL IN CHINA

In order to make better use of underground space of shopping, the reform of underground shopping mall investment and operation framework is necessary (Li, 2009). Reform should proceed according to the Corporation Law and the policies of clearly defining property rights, authority, and responsibility; of separating government and enterprises; the enterprises can strengthen their management, raise their level of efficiency and operations, raise and maintain the quality of their products and services, and make a profit. The government should change its role in managing investment rather than be Project Company. Government should establish the appropriate monitoring mechanisms to strengthen environmental management and ecological security, including creating a regulated market environment. The enterprises must be under constant government macro-management and supervision.

In order to reduce repeated excavation, avoid waste of underground space resources, we should integrate development and construction of underground shopping mall over and under the land. The integrated development and construction of underground shopping mall is reflected in integrated planning, design, construction and operation management.

CONCLUSION

Along with the process of large scale and fast urbanization in China, development and utilization underground shopping mall in China has become a hot issue. The high-return of underground shopping mall projects had attracted a lot of investors, to investigate the performance of the shopping centers in China; some shopping centers are successful while a lot of them are failed in term of average rental income and rental occupancy rates. Research on development pattern of underground shopping mall at present in China, we found that the development patterns are not sustainable. In order to make better use of underground space of shopping, the reform of underground shopping mall investment and operation framework is necessary. The government should change its role in managing investment rather than be Project

Company. Government should establish the appropriate monitoring mechanisms to strengthen environmental management and ecological security, including creating a regulated market environment. In order to make better use of underground space of shopping, Investor should fully consider future changes in the basis of risk analysis and made risk response mechanisms so that to reduced future losses to the minimum.

REFERENCES

- QIAN, Qihu & CHEN, Zhilong (1997). The Prospect of Development and Utilization of Underground Space in 21th Century. *Journal of Nanjing Engineering Institute*, 12(3), 1-8.
- CHEN, Zhilong, WANG Yubei, LIU Hong & XIAO Qiufeng (2007). Prediction of Underground Space Needs. *Planner*, 23(10), 9-13.
- ZHU, Daming (2008). On the Development Degree of Urban Underground Space. *Chinese Journal of Underground Space and Engineering*, 4(5), 793 -797.
- Yuan, H., Liu, X.R., Dai, Z.Z. (2009). Research of the Underground Space Planning and Underground Building Design in Mountain City-Take Chongqing City for Example. *Proceedings of 12th International Conference of the associated research Centers for Urban Underground Space, China*, 188-192.
- Tong, L. X. (2005). The Way of Development of Urban Underground Space in China. *Chinese Journal of Underground Space and Engineering*, 3(1), 27-32.
- Wang, S. G., Zhang, Y. C. & Wang, Y. F. (2006). Opportunities and Challenges of Shopping Centre Development in China: A Case Study of Shanghai. *Journal of Shopping Center Research*, 13(1), 19-55.
- Renhe Commercial Holdings Company Limited, Annual Report. <http://www.researchandmarkets.com/reports/1720378/renhe_commercial_holdings_company_limited.pdf>
- Renhe Commercial Holdings Company Limited, Global Stock Offering Guidelines. <<http://ebookbrowse.com/ipo-fullset-eng-pdf-d121778661>>
- BOC International Fixed Income Research, 2008.10.1 <<http://www.google.com.hk/search?q=P020101006666796710333.pdf>>
- China News, 2011.5.17, Property disputes in the underground building management problems to be an increasing legislative break. (<http://www.cnkeyword.info/property-disputes-in-the-underground-building-management-problems-to-be-an-increasing-legislative-break>)
- Li, Y. (2009). The Potentials for Integrated Underground Space Development in Urban Planning: A Case Study of Shanghai City, the University of Hong Kong. <<http://hub.hku.hk/handle/10722/56865&sa=U&ei=QknjTbLUBoOsvgONm4j2Bg&ved=0CBEQFjAA&usg=AFQjCNGs85kT3AtxsAlaLzWrHr4M7-41bw>>