ISSN 1913-0341[Print] ISSN 1913-035X[Online] www.cscanada.net www.cscanada.org

Research on Development Pattern of Underground Shopping Malls in China

YU Ronghua^{1,*}; YE Quanyi ²

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

*Corresponding author.

Email: 15105167213@139.com

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

Received 15 July 2011; accepted 18 October 2011

Abstract

China's underground shopping mall has gradually transformed from one with a very high degree of government intervention into a more market-oriented system. The underground shopping malls in China have undergone rapid evolution, development and growth. To investigate the performance of underground shopping centers in China, some underground shopping centers are successful while a lot of them failed in term of average rental income and rental occupancy rates. Researching on development pattern of underground shopping malls in China, this study reveals that lack of effective planning and a transparent approval mechanism has led to irrational development patterns. The development patterns of underground shopping malls in China are not sustainable.

Key words: Development pattern; Sustainable; Underground shopping malls; China

YU Ronghua, YE Quanyi (2011). Research on Development Pattern of Underground Shopping Malls in China. *Management Science and Engineering*, *5*(4), 16-20. Available from: URL: http://www.cscanada.net/index.php/mse/article/view/j.mse.1913035X20110504.1888

DOI: http://dx.doi.org/10.3968/j.mse.1913035X20110504.1888

INTRODUCTION

With ease of international relations and boost of comprehensive national strength, China gradually shifted the purpose of underground space utilization from air defense projects to overall consideration of national defense and economic construction. China's underground shopping mall has gradually transformed from one with a very high degree of government intervention into a more market-oriented system.

With the further development of urban underground space and use of underground construction, underground shopping centers in China are undergoing a period of fast development. Many new underground shopping centers have been developed, but unfortunately many are failures. So it is important to analyze what is the development pattern in China's underground shopping malls.

1. DEVELOPMENT OF UNDERGROUND SHOPPING MALLS IN CHINA

China's underground shopping malls are derived from civil air defense projects, and progressing along with urban construction (QIAN and CHEN, 1997). Take Chongqing for example, most of the underground shopping malls of main districts center in Chongqing City are civil air defense projects (Table 1).

² Southeast University, Nanjing, 210007, China

Table 1
The Statistics of the Underground Business Area of Main Districts Center in Chongqing City, 2005 (Source: ACUUS, 2009)

110000, 200	·)					
The center of main districts	Guanyinqiao business circle	Jiefangbei business circle	Shapingba business circle	Yangjiaping business circle	Nanping business circle	total
Area(m2)	76000	61000	29000	26000	16000	208000
Origin	Underground space of central square	Civil air defense projects and light rail stations	The Reconstr	uction Project of Civ	ril Air Defense	Basally with air defense works
Characteristics	basement is gene basically from 30 underground busi	d Business is basically rally to the 10 -20 mete 000 to 10000 square me iness is Monotonous, a Of scattered distributio	ers underground, and eters, the largest one and the indoor environ	with two floors at m is only 450 million s ment is depression,	ost. The size of indiquare meters. The fo	vidual projects is orm of this

Since the implementation of the "open-door" policy in 1978, 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 with construction. The underground shopping malls in China have undergone rapid evolution, development and growth. The total scale of China's underground shopping malls has increased from 4.6 million square meters in 2003 to 8.49 million square meters in 2010. The annual growth rate is about 7.5% (Figure. 1).

Harbin, Shanghai and Guangzhou are ranked 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)

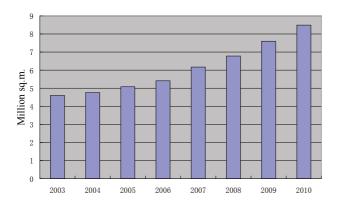


Figure1
Total Underground Shopping Mall Areas in China
(Source: National Bureau of Civil Air Defense)

China's underground shopping malls' boom in past years has led to growing vacancies. Taking 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 %.(Table 2)

Table 2 Vacancy Rate in Selected Cities 4q 2010 (Source: CBRE)

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%

2. DEVELOPMENT PATTERN OF UNDERGROUND SHOPPING MALL IN CHINA

There are two kinds of land supply patterns in China. The first, non-market-oriented land allocation is the land allocated for city infrastructures for no cost, such as public utilities, green belts, and so on. The second, market-oriented land allocation is the land allocated for civil utilities based on rent, such as commerce, industrial, housing, etc. The central government commanded local governments to use more professional ways to launch land to market, such as biddings, auctions, sales, etc.

Based on land supply patterns in China, 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).

2.1 Civil Air Defense Underground Shopping Centers in China

Before economic reform, China's construction of civil air defense shelters charged by government departments. The development of civil air defense underground shopping centers in China gathered momentum when the government authorities promulgated rules in 1983 allowing the development of underground civil air defense shelters for commercial use. In 1990s, for the first time, PRC laws and regulations explicitly allowed foreign capital to invest in the development and operation of underground civil air defense shelters. Subsequently, rules and notices were issued to encourage private and foreign enterprise participation in the development of underground civil air defense shelters. A brief timeline of key reforming activities is set out below (Table 3):

Table 3
A Brief Timeline of Key Reforming Activities (Source: Renhe Commercial Holdings Company Limited)

Time	Reforming activities
1983	The PRC government promulgated rules relating to the development and use of underground civil air defense shelters during peace time.
1993	The PRC government promulgated rules to explicitly permit the development of underground civil air defense shelters funded by private and foreign capital.
1997	The PRC government promulgated rules providing for the favorable tax treatment for foreign invested enterprises engaged in the underground civil air defense shelters sector.
2001	The PRC government issued a notice requiring that the ownership and operation rights of underground civil air defense shelters be separated and that operation rights be transferable in a market-based system.
2003	The PRC government promulgated rules regarding the approval process for and the administration and supervision of the development and construction of underground civil air defense shelters using private and foreign capital.

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 during wartime. (Source: BOC International Fixed Income Research, 2008.10.1)

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 ownership 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.

2.2 Underground Commercial Real Estate in China

Development pattern of underground commercial real estate is the same with aboveground commercial project development pattern. Underground commercial real estate projects are subjected to many laws, rules, taxations and regulations governing the regular real estate industry, when the development and operation of such projects enjoy the advantages of low underground land costs. Those policies vary from one city to the other in China. The land price of underground commercial real estate is about 20%-60% of aboveground commercial projects. For instance, On August 17th, 2006, Nanjing government sold 5 pieces of underground space, the overall area being forty

The developers use the land as collateral to secure bank financing, while buyers of the operation rights of individual shops receive government - sanctioned registration of property title and thus can obtain bank mortgage financing.

2.3 Two Main Development Patterns are not Sustainable

Most domestic underground shopping mall 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 would lead to undue competition within the centre, poor performance, and high vacancy rates (WANG and ZHANG, 2006).

For example, Renhe Commercial Holdings Company Limited(1387.HK), established in 1992, 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. The

revenue generated from the transfer of operation rights and lease income. In 2009, the average selling price from transfer of operation rights is about RMB 33000-38000/square meter (Fig. 2). The annual lease income is about

RMB 900-1200/ square meter (Fig. 3). The investors sell 47.5% of the operation rights of shopping center units for a one-time. (Source: Bloomberg, BOCI).

Table 4
Operation Rights Transfer (Renhe Commercial Holdings Company Limited, Annual Report 2009)

Project	Revenue from Operation rights transfer(Thousands RMB)		Transfer of gross floor area realized (sq.m.)		Average transfer price realized (RMB per sq.m.)	
	2009	2008	2009	2008	2009	2008
Phase I of Shenyang Project	1321003	0	31148	0	42411	0
Wuhan Project	674025	0	26130	0	25795	0
Phase I of Guangzhou Project	374154	1344129	8252	28729	45341	46786
Phase I of Harbin Project	214613	80224	6267	2101	34245	38184
Phase II of Harbin Project	7078	39308	265	1922	26709	20452
Phase III of Harbin Project	0	408672	0	18433	0	22171
Phase I of Zhengzhou Project	0	995863	0	22792	0	43694
Phase VI of Harbin Project	1253876	0	40748	0	30771	0
Harbin Youyi Road Project	188825	0	6448	0	29284	0
Total	4033574	2868196	119258	73977	33822	38772

Table 5
Lease income (Renhe Commercial Holdings Company Limited, Annual Report 2009)

Project	Lease income in 2009		Lease income in 2008		Leaseable gross floor area at the end of year (sq.m.)	
	Thousands (RMB)	Except for percentage (%)	Thousands (RMB)	Except for percentage (%)	2009	2008
Phase I of Harbin Project	25118	19.4	30082	16.5	7552	13819
Phase II of Harbin Project	21595	16.7	23768	13.1	19446	19711
Phase III of Harbin Project	5249	4.1	30120	16.5	2582	2582
Phase I of Guangzhou Project	30443	23.5	98115	53.9	5587	13839
Phase I of Zhengzhou Project	13001	10.0	0	0	0	0
Harbin Spring	18077	14.0	0	0	16800	0
Phase I of Shenyang Project	15886	12.3	0	0	79352	0
Total	129369	100.0	182085	100.0	131319	49951

The management system is inadequate. The lack of coordination makes more unnecessary waste of human and material resources in development of 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. The only one national regulation about underground development and management is the Regulations for Developing, Utilizing and Managing Urban Underground Space revised in 2001.

3. PROPOSITION FOR IMPROVING THE DEVELOPMENT PATTERN OF UNDERGROUND SHOPPING MALL

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 should be able to strengthen their managements, raise their level of operation efficiency, raise and maintain the quality of their products and services, and make profits. 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 macromanagement and supervision.

In order to reduce repeated excavation and 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.

CONCLUSIONS

Along with the process of large scale and fast urbanization in China, development and utilization of underground shopping mall in China has become a hot issue. It is a systematic project and a hard decision-making task. When researching 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 shopping space, we should carry forward the reform of underground shopping mall investment and operation framework. Lack of experience in underground shopping mall development and management has lead to high vacancy rate in many underground shopping centers.

REFERENCES

- [1] QIAN, Q.H., & CHEN, Zh.L. (1997). The Prospect of Development and Utilization of Underground Space in 21th Century. *Journal of Nanjing Engineering Institute*, 12(3), 1-8.
- [2] CHEN, Zh.L., WANG, Y. B., LIU, H., & XIAO, Q.F (2007). Prediction of Underground Space Needs. *Planner*, 23(10),

9-13.

- [3] ZHU, D. (2008). Research on the Development of Urban Underground Space. *Chinese Journal of Underground Space and Engineering*, 4(5), 793 -797.
- [4] LI, Y. (2009). The Potentials for Integrated Underground Space Development in Urban Planning: A Case Study of Shanghai City. (Unpublished masteral thesis.) The University of Hong Kong, China.
- [5] 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, 188-192.
- [6] 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.
- [7] 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.
- [8] SHUN, Y.D. (2008). Practice of Performance Based Design and Evaluation for Architecture in Shanghai. *Fire Science and Technology*, *27*(11), 804 -806.