

Foreign Direct Investment (FDI) and Urban Restructuring in Wuhan: Implications for Developing China's Western Interior

^{1,2}Douty Chibamba and ¹Jiangfeng Li

¹Department of Land Resources Management,

²State Key Lab for Geological Processes and Mineral Resources,
China University of Geosciences, Wuhan 430074, Hubei P.R, China

Abstract: This study analyses the role of FDI in the transformation of Wuhan city from a predominantly heavy manufacturing economy into a tertiary and modernising city. The study has 3 major objectives: to explore the inflows of FDI into the city, to assess the impact of the inflows of FDI on urban restructuring and to assess whether Wuhan's restructuring has spurred economic development in China's western interior. It is impossible to examine the full range of the impact of globalisation on urban restructuring due to the limit of space. This study thus, will focus on FDI and the CBD which is currently under construction as the major globalising influences driving urban restructuring in Wuhan city.

Key words: Globalising, global city, urban restructuring, development zone, China's western interior, FDI, CBD

INTRODUCTION

Global cities or world cities (hereafter global cities, only for consistency) are settings for globalisation and the global-local interface. They are basing points of multinational corporations and command centers for the global economy and the global urban hierarchy (Beaverstock *et al.*, 1999). Global cities direct industrial production on a global basis, are increasingly linked by air travel networks and sophisticated telecommunications systems and perform strategic gateway roles for international trade and investment (Graham, 1997; Hutton, 2004; Taylor *et al.*, 2002). Therefore, 'globalising' or 'going global' has achieved the status of conventional wisdom in urban development strategy (Paul, 2005). This is because all nations and cities world over are under the shadow of globalisation, whether or not they are actively participating or forcedly incorporated in the system (Hsu, 2005). This is particularly true in the developing and transitional countries in the Asia-Pacific region (Lo and Marcotullio, 2000; Douglass, 2000). In many of these countries, urban planning is now being framed by goals to acquire, or reinforce, some form of global city status (Olds and Yeung, 2004). Cities are the most dynamic centers of economic change in national economies because globalising influences have their most radical effects in restructuring the urban economy (Harris, 1997).

Globalisation and urbanisation are inter-dependent and mutually reinforcing, what some scholars have termed the globalisation-urbanisation nexus (McCann, 2004). Indeed, the globalisation of production, commerce and finance capital requires a physical geography of cities, urban networks and transport and communications linkages to effect its expanding spatial reach (Douglass, 2000). In China, rapid economic growth propelled by global integration through the open door policy has entailed rapid creation of the built environment and the virtual manufacture of vast tracts of urban space because Chinese urban planning views cities as leading centers of economic modernisation (Cartier, 2002). Thus, competition among Chinese cities for global investment has intensified and has become a major force not only propelling the urbanisation process, but also creating the form and physical content of these cities (Douglass, 2000). In other words, the Chinese urban economy has become a key arena that 'brings together' and 'grounds' the globalising influences (Graham, 1997), in their myriad of forms within specific places. Unless they are regional nodes within global flows, Chinese cities will no longer prosper and survive in the era of global economic competition. The making of this geography is the main storyline of the urban restructuring currently taking place in Wuhan city.

The discussion of the formation and reformation of global cities and their special characteristics is beyond the scope of this study. Instead, our endeavor is to show how

urban restructuring in Wuhan city has been backed by FDI and to establish the extent to which on-going transformation has rendered the city different from its past. As Wu and Ma (2006) point out the question is not whether or not Chinese cities are global cities but rather, the unparalleled rapidity and scale of restructuring is what needs much attention. In fact, almost all Chinese cities, big and small, have experienced massive spatial transformation (Ma, 2004), since the open door policy. In any case, even Chinese mega-cities such as Beijing and Shanghai are more of 'globalising cities' rather than 'global cities' per se because they remain functionally based on the domestic economy which separate themselves from such stereotyped global cities as New York, London or Tokyo (Lin, 2004).

While, a large body of literature exists with respect to the impact of FDI on urban transformation in China, most studies have focused on the economically much stronger regions or mega-cities. In particular, most of the studies have concentrated on the Pearl River Delta cities such as Guangzhou and Shenzhen (Zhu, 1996; Sit and Yang, 1997; Lin, 2001; Seto and Kaufmann, 2003; Wang and Meng, 2004). Others have been confined to China's up-coming 2 global cities of Beijing (Wei and Yu, 2006; Presas, 2004) and Shanghai (Olds, 1997; Wei *et al.*, 2006). These studies have shown that the reform-era spatial restructuring has been a consequence of globalising influences that have converged in these cities, especially FDI. Since, the literature on the impact of FDI on urban restructuring in China over emphasises the experiences of the high profile cities, this study fills the gap in the literature on the dynamics of urban restructuring in second-tier cities such as Wuhan.

MATERIALS AND METHODS

Systematic data officially released by the Chinese statistical authorities and official web sites of respective local governments have provided an important base for the analysis of structural and spatial characteristics of Chinese cities for many years. These officially released data on urban China are not free of discrepancy and errors (Seto and Kaufmann, 2003). Indeed, they need to be used with extra caution and cross-checked with other information. Nevertheless, these systematic data represent a valuable source of information for understanding the temporal and spatial restructuring of Chinese cities. These 2 sets of data, the annual statistical yearbooks and various official web sites on Wuhan city, form the base for this study.

RESULTS AND DISCUSSION

Wuhan opens to foreign investment: Wuhan officially opened to FDI in April 1984 when the Chinese government announced that 14 coastal cities (including Wuhan) would open to foreign investment, expanding the open door policy from special economic zones (SEZs) to other coastal regions. Starting from 1985 China listed the Yangtze River Delta, the Pearl River Delta and the South Fujian Triangle (Xiamen-Zhangzhou-Quanzhou) as open economic zones, thus forming an open economic coastal belt (Rimmer, 2002). There are now 4 major extended metropolitan regions (EMRs) which include Shenyang-Dalian; Beijing-Tianjin-Tangshan (Bohai Rim); Nanjing-Shanghai-Hangzhou (Yangtze River Delta) and Guangzhou-Hong Kong-Shenzhen-Macau-Zhuhai (Pearl River Delta) (Rimmer, 2002). More recently, the municipal government of Wuhan was proposing for a Great Wuhan Economic Region which aimed to parallel in development with the 4 EMRs mentioned in the foregoing. The essence of this proposal is to utilise the location advantage of Wuhan for developing an urban system centered on it, through which to fill in a gap of and to provide an engine for, economic development in central China and the western interior (Han and Wu, 2004). Central China includes Wuhan's immediate neighbouring provinces like Shanxi, Jilin, Heilongjiang, Anhui, Jianxi, Henan and Hunan. China's western interior includes areas such as Gansu, Guangxi, Guizhou, Inner Mongolia, Ningxia, Qinghai, Shaanxi, Sichuan, Tibet, Xinjiang and Yunnan. Both regions have received a much smaller share (probably <10%) of the total FDI that has come into China since, the open door policy.

Wuhan is located within 1200 km of China's major metropolises such as Beijing, Tianjin, Shanghai, Guangzhou and Xi'an. Usually referred to as the 'thoroughfare to nine provinces', Wuhan is China's biggest inland rail and road transportation hub, telecommunications and information center. Endowed with advanced water and land transport networks, the city exerts significant influence over the whole country. For example, China's two transportation arteries, the Yangtze River which runs from west to east and the Jing-Guang Railway from north (Beijing) to south (Guangzhou), meet here. In addition, the Hu-Yu Railway (from Chongqing to Shanghai), the Wu-Xun, Han-Dan, Wu-Da and Jing-Jiu Railways all meet at Wuhan, forming a hub with spokes leading to northern, southwestern, mid-southern and eastern parts of China (Yangtze Council, 2008). There are express trains leaving Hankou and Wuchang for 21 big and medium-sized cities in the country over a rail network covering 2705 km. Furthermore, 4 mainline national highways and more than 50 provincial and county

highways all intersect in or close to Wuhan. The four national highways include No.106 (Beijing-Lankao-Huanggang-Guangzhou, 2497 km), No.107 (Beijing-Zhengzhou-Wuhan-Guangzhou-Shenzhen, 2599 km), No. 316 (Fuzhou-Nanchang-Wuhan-Lanzhou, 2616 km) and No. 318 (Shanghai-Wuhan-Chengdu-Lasha-Nielamu, 5447 km) (Yangtze Council, 2008).

Foreign investment comes in: Foreign investment in Wuhan city has increased noticeably since the early 1990s and has become a major agent driving urban transformation (Table 1). However, the high FDI inflows in 1992-94, which averaged 107.9% per year, were exceptional and could not be sustained for several reasons. The removal of tax concessions for foreign investors in 1996 and the reduction in the transfers of labour intensive assembly operations from East Asian neighbours were the most important factors (Dees, 1998). As part of the efforts to counteract the downward trend in FDI, a series of measures were introduced by the Wuhan Municipal Government to improve the city's investment climate. They include one-stop united service system for external investors (aimed at cutting the red tape), the mayors dialogue with investors and investors complaints receiving system. By and large, these measures did work as FDI inflows have since rebounded, albeit in a somewhat fluctuating pattern. Overall, as of 2006, the total accumulated foreign investment and FDI in Wuhan amounted to US\$ 18.28 billion and US\$ 10.73 billion, respectively (Table 1).

In the year 2005, newly approved committed foreign investment registered US\$ 1.989 billion, an increase of 65.6% from the previous year with an actually utilised foreign investment of US\$ 1.74 billion, an increase of 14.5% (Table 1). In the first half of 2006, actually utilised foreign investment was US\$ 1.204 billion, representing an increase of 22.5%. FDI amounted to US\$ 768 million. In the first half of 2007, 99 new foreign invested enterprises (FIEs) were approved, with a total new investment of US\$ 1.57 billion and contractual FDI of US\$ 1.299 billion. About 39 projects involved foreign investment enlargement with a total enlargement volume of US\$ 390 million of which US\$ 291 million was by foreign investors, representing an increase of 46.5% (CBI China, 2008). These figures indicate stronger foreign investor confidence in Wuhan.

By the end of 2006, investment in Wuhan had come from 70 different countries and/or regions. The city has approved over 4,900 foreign invested enterprises, with a total actualised foreign investment of US\$ 2 billion in 2006. Sixty-nine of the world's top 500 companies have invested in the city, including IBM, Hewlett Packard, the

Table 1: Actually utilised foreign investment (US\$ billion), 1990-2006

Year	Total	Cumulative	FDI	Cumulative	Percentage of Increase total
1990	0.08	0.08	0.01	0.01	2.7
1991	0.10	0.18	0.02	0.03	26.6
1992	0.21	0.39	0.07	0.10	108.7
1993	0.46	0.85	0.29	0.39	118.4
1994	0.91	1.76	0.45	0.84	96.7
1995	1.12	2.88	0.59	1.43	22.1
1996	0.92	3.8	0.47	1.90	-17.5
1997	0.93	4.73	0.45	2.35	1.2
1998	1.06	5.79	0.45	2.80	13.5
1999	1.16	6.95	0.48	3.28	10.4
2000	1.30	8.25	0.75	4.03	11.7
2001	1.43	9.68	0.72	4.75	10.0
2002	1.58	11.26	0.86	5.61	10.1
2003	1.76	13.02	1.11	6.72	11.8
2004	1.52	14.54	1.16	7.88	20.6
2005	1.74	16.28	1.34	9.22	14.5
2006	2.00	18.28	1.51	10.73	15.0

Wuhan Statistical Bureau (2007)

Danone Group, Hyundai Motors, NEC, Shell Petroleum, Phillips, Citroen, Peugeot and Nissan. More than 300 multinational companies have set up their representative offices in Wuhan, including 110 regional headquarters (Echinacities, 2008). In addition, a number of international retail giants including Carrefour (France), Metro (Germany) and Wal-Mart (US) have set up operations in Wuhan giving great momentum to the local retail sector. Further, there are eight foreign-invested banking institutions including the Societe Generale (SG), HSBC, Bank of East Asia, Dai-Ichi Kangyo Bank, Industrial Bank of Japan, ABN AMRO, Michinoku Bank and AXA. As one of the nine major financial centers of China, Wuhan has over 2,250 branches of both domestic and foreign financial institutions (Echinacities, 2008).

The top 5 sources of foreign investment in the city in 2006 were Hong Kong, the US, Japan, Taiwan and Singapore. Hong Kong, for obvious reasons, is the most important investment and trade cooperation partner for Wuhan, accounting for 53.08% of the city's total FDI. Over the same period, FDI in the manufacturing sector was US\$ 0.964 billion, accounting for 63.8% of total FDI in the city, FDI in the service industries was US\$ 0.542 billion, accounting for 35.9% of the total and FDI in the real estate sector was US\$ 0.32 billion (Echinacities, 2008). Most (over 90%) of this FDI would otherwise be invested in the three state level development zones. The large figure of investment in the manufacturing sector implies that Wuhan remains an industrial base despite the rapid development of the tertiary sector in recent years.

Spatial restructuring in the city: The 1990s was a decade during which Wuhan experienced rapid expansion and restructuring in land use. In the early years (1978-1990), spatial restructuring was very slow. During that period, some of the sub-standard buildings, textile factories, small

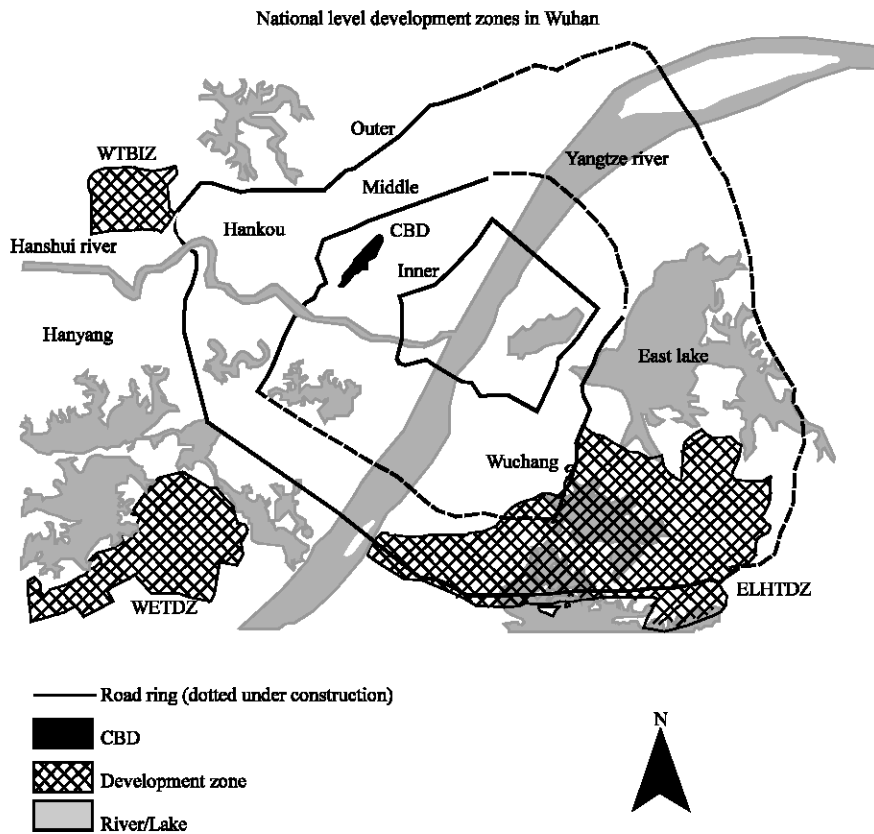


Fig. 1: National level development zones in Wuhan. Sketched by author based on the traffic and tour map of Wuhan (China University of Geosciences, 2008)

workshops and factories, were removed from the inner road ring (Fig. 1) and replaced by commercial and residential developments. Farmland in the middle ring was replaced by secondary and tertiary activities (Han and Wu, 2004). After 1993, Wuhan entered a new era of urban development, which was characterised with rapid urban growth on the fringe and redevelopment in the inner city. Urban growth in this period, has shifted its focus from industrial to multi-function new zones which are different from traditional sub-urban centers. They are large, diverse, information-age cities with high-order retailing, entertainment, services and housing (Cheng and Masser, 2003). This change is largely stimulated by massive and sustained investment in fixed assets by the municipal government, especially capital construction and real estate development (which did not exist hitherto). For example, total investment in fixed assets averaged RMB 46.08 billion annually during 1990-2006, of which RMB 31.19 billion and RMB 11.82 billion went into urban construction projects worth RMB 500,000 or more and real estate investment, respectively. In 2005 and 2006, total investments in fixed assets were RMB 105.52 billion

and RMB 132.53 billion, respectively (Wuhan Statistical Bureau, 2007). In 2007, it was RMB 170 billion, an increase of 28.27% over 2006 (CBI China, 2008). These trends will continue into the foreseeable future and they play a crucial role in attracting FDI to the city. Also, while the first wave of foreign direct investment in China (1980-1991) was forced largely on investments in industrial growth, the second wave, beginning in 1992, has been directed as well towards infrastructure and land development (Gaubatz, 1999).

During the 2000s, most of the industrial and storage land parcels and old dilapidated housing units have been and/or are being redeveloped to accommodate large commercial and service activities in the inner ring. However, the pace of redeveloping dilapidated residential areas has lagged behind that of building villa luxury houses even though, the miss-match between supply and demand is obvious considering the consistently higher vacancy rates in the villa luxury houses as compared to the economically affordable houses (Wuhan Statistical Bureau, 2007). Thus, the old and the new are juxtaposed, creating the impression that urban planning is somewhat

losing control of rapid urban development. Further, investment projects that convert residential use to commercial use, or ordinary housing to high-quality property seem to be favoured in the sense that local governments facilitate relocation of residents from the inner city to the periphery in order to pave way for such developments (Wu, 2001; Cartier, 2002). Large scale shopping and recreational centers are being built by upgrading and redeveloping small commercial buildings. The middle ring (Fig. 1) is expanding towards the outer ring, as a result of the newly established development zones, of which there are three state level zones and several others (lower tier) in each district of Wuhan city. In tandem with the on-going spatial restructuring, Wuhan's economic structure has been transformed tremendously. From 1990, the city's primary and secondary sectors' contribution ratios to GDP declined, whilst the tertiary sector expanded significantly (Table 2).

The role of FDI in urban restructuring: The inflow of FDI gave rise to spatial restructuring of Wuhan, as foreign investment is unevenly distributed among the municipal districts. The unevenness in the distribution of FDI is attributable to the establishment of development zones and the layout of the new transportation systems. To attract FDI to Wuhan, the central government established three national level development zones including Wuhan Economic and Technological Development Zone (WETDZ) (1991), East Lake High-Tech Development Zone (ELHTDZ) (1988) and Wujiashan Taiwanese Businessmen Investment Zone (WTBIZ) (1992) (Fig. 1). The three zones differ in sectoral emphasis. WETDZ is a manufacturing base intended for automobile and auto parts industry. ELHTDZ, often referred to as 'Optics Valley of China', focuses on fibre-optical technologies and related products while WTBIZ is the national food and beverage industrial base which emphasises on food-processing and other high-tech industries. Though not a national level zone, Yangluo Economic Development Zone (YEDZ) (not shown in Fig. 1) complements the other three zones in its orientation toward transportation activities especially for export.

Given the greater administrative efficiency of national-level zones, these zones have led to the rapid expansion of urban built-up area in Wuhan, as they all involve large-scale green field development projects on the urban fringe. As a result, the built environment of the city has changed dramatically and urban area has substantially enlarged. Together, the four key development zones add about 172 km² of built-up area. This Fig. 1 is not included in the official developed area (determined by the city boundary) which was estimated

to be 220.22 km² in

Table 2: Wuhan's GDP composition (%)

Sector	1990	1998	2006
Primary	10.0	7.9	4.5
Secondary	48.6	44.7	46.1
Tertiary	41.4	47.4	49.4

Echinacities (2008)

2005 (Wuhan Statistical Bureau, 2006). The built-up area added by development zones could be much higher if we include lower tier zones such as Hanyang, Qiaokou and Jiangnan economic development zones. National level zones have the most authority and autonomy to approve business applications, can address a wide variety of business issues and are where generous incentives are offered to encourage specific types of FDI, such as for high-tech or export processing purposes (Dong and McMahon, 2006). Each tier below national level (provincial, municipal and township) generally introduces higher location risk, because they do not have the same authority and autonomy to approve business applications as national level zones. They also do not have good infrastructure or special designations (incentives, tax concessions, etc.) which are available to national level zones. Therefore, compared to national level zones, lower tier zones are much less transparent and have difficulty recruiting sophisticated and capable management teams, who can communicate effectively with investors. Hence, working with lower tier zones often creates more project complexity and lengthens decision timing (Dong and McMahon, 2006).

The national level development zones will determine the direction and magnitude of future city expansion in Wuhan. This is in line with the new land use mantra in China which emphasises on the three put into and the two stresses. This describes the strategy to: put in new industrial parks for new manufacturing and other industrial uses inside the existing development zones, put in housing in the new industrial parks to house the factory workers and put in the new industrial parks services for industries and residents. When that is done, you manage the two key stresses: preservation of agricultural land and land conversion for construction use (Palubeski *et al.*, 2004). Indeed, there are already several industrial parks in each of the development zone in Wuhan city. The WETDZ (Fig. 1) has three industrial parks in it, Wuhan Export Processing Zone (EPZ), Modern Logistics Park and Electric Vehicle Industrialisation Park. The largest project in WETDZ is Dongfeng Peugeot Citroen Automobile, a joint venture between the French PSA Group and the Dongfeng Group. In 2003, it ranked as the 6th largest passenger car maker with a total output of 105,000 cars. In the same year, several other automobile enterprises, such as Dongfeng Nissan and Dongfeng

Honda set up plants in the zone. The fast growing automobile industry has boosted the economic performance of the zone. From 1991-2005, WETDZ witnessed GDP of RMB 68.9 billion (USD 9.2 billion), industrial output of RMB 167.5 billion (USD 22.3 billion) and fiscal revenues of RMB 13.8 billion (USD 184 million), becoming the largest and fastest growing zone in mid-west China (WEDZ Administrative Commission, 2008). The automobile industry accounts for about 2/3 of the zone's economy. Besides the automobile industry, other encouraged industries in the zone include bio-engineering and new pharmaceuticals, electronics, mechanical electronics, new materials and advanced agriculture. Total planned area for the zone is 90.7 km² of which 40 km² has been fully developed.

Located on the banks of the East Lake in Wuchang, Hongshan and Jiangxia districts, the ELHTDZ (Fig. 1) is one of the most intellectually intensive zones in China with a total area of 24 km². The zone has 23 universities and colleges, 56 scientific research and design institutions, 10 national key laboratories and over 700 technological development institutions. The zone primarily focuses on fibre-optical technologies and related products, biological engineering, electronics, new materials, software development, laser technologies and other advanced technologies. Inside the zone, there are more than 10 industrial parks specializing in various fields. There are now more than 8,000 enterprises with operations in the Zone. In 2007, gross industrial output revenue for enterprises dealing in optoelectronics and information related products reached RMB 6 billion, of which, RMB 5 billion came from information optoelectronics, RMB 210 million from energy optoelectronics and RMB 820 million from software industry (WELHTDZ Administration Commission, 2008).

WTBIZ is a national food and beverage industrial base covering an area of 22 km² and has 4 industrial parks in it (Fig. 1). The zone focuses on food processing, introduction of new hi-tech industries, electromechanical and IT industry, logistics bond storage and port construction. There are about 56 Taiwanese-invested leading enterprises including Formosa Plastic Group and Far Eastern Group, among others, making the zone Central China's largest Taiwanese capital compact district. In 2007, GDP per capita in the zone stood at US\$ 5000, the highest in Hubei Province (Ministry of Commerce, 2008). Though not a state level zone and still under construction, Yangluo Economic Development Zone (not shown in Fig. 1) is in Xinzhou District along the northern bank of the Yangtze River and is one of the key development zones in the city. Occupying an area of 35 km², the zone is divided into a port logistics section,

industrial park and residential area. Located on the best deep water river setting on the Yangtze, which is suitable for a container yard, Yangluo is poised to become the key logistics center in central China. It will gradually become a port with a handling capacity of 250,000 containers and cargo transfer volume of 8 million tons by 2010. The nearby Yangluo Power Station, China Southern Petroleum Corporation and Hubei Tianfa Group have provided adequate energy resources for the zone's development. Inevitably, the zone is granted the various preferential policies, which are given to the WETDZ and ELHTDZ by the Wuhan municipal government.

The new CBD: As one of the major central cities in China, Wuhan is committed to developing itself into a center for economy, trade, finance, transportation, information, science and education in central China and building itself into a modern and multi-functional cosmopolitan city. To that end, Wuhan is building a central business district (CBD) which is one of the city's key projects and is situated in Wangjiadun district in downtown Hankou (Fig. 1). The idea to build the CBD was arrived at during the 11th Wuhan People's Congress in January 2003. The planned area of the CBD covers 7.14 km². It will comprise one center, two axes and four functional areas. One center refers to the core of the CBD which covers an area of 1.0 km² around which will be high-rise buildings targeting finance, insurance, law, accountancy, information, design and consultancy services. Two axes are the intersection of the traffic and commercial areas which will form a 'Golden Cross', reflecting the prosperity and high efficiency of the modern CBD. Four functional areas consist of the central business center, the living city (the booster sector), the comprehensive business area and the residential area (WHCBD, 2008).

The guiding thought behind the construction of the CBD and as proposed by the municipal party committee and municipal government is 'high starting point, high standard, high efficiency and high grade'. To realise the tenets of the guiding thought, the municipal government invested huge sums of money to engage several world-renowned consultants, architects, planners and designers to offer their respective expertise in various aspects of the CBD such as strategic planning, transportation, landscaping and conducting feasibility studies. They included, among others, McKinsey and Company, Price Water House Coopers, Atkins (Britain), EDAA (US), SOM-Architecture Design Office (US), Obermeyer Design and Consulting Company (Germany) and Jones Lang LaSalle. Ultimately, the Wuhan Urban Planning and Design Research Institute did the Comprehensive Planning Scheme for the CBD, which was later checked

and approved by the municipal party committee and municipal government. According to the construction plan, the detailed planning and control mechanisms would be completed by March 2005 and construction would begin in earnest towards the end of 2005. The entire project is expected to be completed in 2020. Investment for the construction of the municipal basic facilities is about RMB 4-5 billion. It is envisaged that the construction of the CBD will attract total investment of about RMB 100 billion and that developers will get higher returns if they located in the CBD than they would elsewhere (WHCBD, 2008).

The CBD as a mega-project should be seen as a reflection of stiff competition for FDI among Chinese cities. It also serves as a classic example of how Wuhan's urban development is increasingly dependent upon and its development options limited by, the city's global connections through FDI. As an attempt to attract more FDI to the city, a series of other important infrastructure projects are planned and being executed through 2020, hoping that they will give the city a modern infrastructure platform from which to build upon. Some of the major projects include, among numerous others, construction of 1,353 km of highway and city interchanges (Fig. 2) and Wuhan subway system (both of which are partly funded by the central government) (CBI China, 2008). Others are reconstruction of the Wuchang train station (reconstruction of Hankou train station will begin soon), on-going construction of three additional bridges across the Yangtze (Tian Xinzhou, Yangluo and Er'qi), on-going construction of the middle and outer ring roads, on-going construction of the Grand Ocean shopping area which will supposedly host the world's longest pedestrian street (1,350 m) when completed (Fig. 3). All these are attempts to beat the formidable competition for FDI posed by other Chinese cities. But the competition is just getting stiffer by the day.

Implications for taking development to China's western interior: While, Wuhan has been growing, it has not grown as fast as many thought it would and has actually lower growth rates than other second tier Chinese cities. The vision of using Wuhan as a flagship to spur rapid development in central and China's western interior has not been realised. Instead, the move to invest in the West appears to have taken what would have been investment earmarked for Wuhan to other locations. As a result, the economies of some cities in the western interior including Chengdu, Chongqing and Kunming have all grown at faster rates than Wuhan. Even Shanghai's satellite towns of Suzhou and Ningbo have larger GDPs. Wuhan has yet to become the hub of business it thought it would. While

building, the necessary infrastructure, the link has yet to prove important as earlier believed. One of the reasons for this scenario could be that the West is just beginning to develop and perhaps Wuhan did not need that much infrastructure for this goal. In addition, while it was thought that the rise of the West would lead to more shipments of goods from the West to the coast through Wuhan, it seems a lot of what is produced in the West is either intangible or is consumed in the West.

Ironically, Wuhan's economy has not stagnated over the years; rather the city has enjoyed double-digit annual economic growth since, the early 1990s, an incredible record lasting 16 consecutive years, with no sign of abatement (it was 14.8% in 2006). Thus, Wuhan's decline (16th in 2006 in GDP terms from second only to Guangzhou, Shanghai or Beijing in the early 1980s) (Echinacities, 2008) is not that the city's economy has stagnated, but rather that other second tier cities are developing just faster in the era of economic reform and openness. Indeed, it was only in 2000 that the Chinese government announced the 'Great Western Development' campaign programme aimed at restoring a more balanced regional development when it decided to apply preferential policies to attract FDI in the western interior. However, preferential policies were only one of the advantages that coastal provinces offered to foreign investors. They also have substantially better economic endowments which give them advantages over inland provinces, such as superior infrastructure, geographic proximity to international markets, more modern amenities and ample skilled and professional labour. These factors have spurred rapid economic advancement in the coastal provinces during the open door era, developed a dynamic non-state sector and thus provided a more favourable environment to foreign investors. Further, as coastal provinces recorded higher economic growth, they also provided foreign business with larger and strongly expanding local markets. As a result, these regions have received a vastly disproportionate share of FDI projects relative to central China and the western interior (Dong and McMahon, 2006). Wuhan will need to replicate most of these characteristics for the city to attract massive inflows of FDI to itself first and then to channel those flows to the western interior. That is a mammoth task, but it can be done and Wuhan is doing it through, numerous infrastructure construction projects currently being undertaken.

Moreover, the present scenario presents a great opportunity for Wuhan and China's western interior cities. Excess demand in coastal areas has created oversubscription and shortages of resources. Many coastal investment zones now face significant land availability and conversion issues as well as other



Fig. 2: Cross-road (interchange) construction at the junction of Zhuo Dao Quan and Luo Yu roads in Wuchang



Fig. 3: Grand Ocean shopping area. Translation of the Chinese characters on the right (written below them) is the longest pedestrian street in the World of 1350 m. Smile at the world pedestrian street

infrastructure shortages. The most developed zones are out of or nearly out of land. Consequently, such zones are now highly selective and officials parcel their precious land resources to what they consider to be the best investment opportunities. Usually they are looking for the top global multinational brands, the most advanced technologies, the most environmentally friendly projects, the largest capital investments and the highest ratio of capital investment to the amount of land required (Dong and McMahon, 2006). For example, Shenzhen began upgrading its foreign investment structure in the early 1990s by restricting labour-intensive firms and encouraging knowledge or hi-tech firms. To that end, in February 1994, the Shenzhen government did not approve any labour-intensive project within the SEZ, instead targeting hi-tech and capital-intensive foreign investment as a priority within its SEZ (Wang and Meng, 2004). In addition, costs of investing in the more developed coastal regions are skyrocketing, implying that high capital investment projects will be the only ones that will afford

to locate in coastal regions (Dong and McMahon, 2006). As a result, these developments could compel foreign investors to look West to Wuhan and other interior regions, a blessing in disguise kind of scenario for the interior regions. In this regard, Wuhan's massive investments in construction projects including roads, subway, villa luxury housing and even the CBD could be justified. It could be only a matter of time, the investments could pay off as new investors begin to head West to Wuhan and the interior where advantages such as abundant supply of low-cost land, low labour costs and lower operating costs abound. The challenges of less-developed infrastructure, longer supply chain for exporters, relative lack of sophistication especially by zone management officials and fewer expatriate amenities can be overcome with time. But the biggest question remains why some cities in the western interior have overtaken Wuhan, the very 'Dragon Head' which is supposed to jump-start their economic development process. That is an area for further research.

CONCLUSION

Wuhan has made tremendous and steady progress in urban restructuring under the influence of FDI. From a heavy industrial manufacturing base, whose heavy industries were predominantly located in the inner city, it is changing its spatial and economic structure. Spatially, most of the primary and secondary industries have moved out of the inner ring road to the outer ring while tertiary activities have dominated the inner ring. Economically, the primary and secondary sectors GDP contribution ratios have declined while the tertiary sector has taken the lead. Of course the reduced share of GDP contribution ratios does not mean a shrinking output in the primary and secondary sectors in absolute terms. To the contrary, Wuhan remains a traditional manufacturing city with one of the biggest automobile and iron and steel industrial bases in the country. The impetus for Wuhan's urban restructuring was triggered by urban land reforms of the 1980s which in turn necessitated massive investment in fixed assets, particularly urban construction and real estate investment. Improved urban infrastructure attracted FDI which encouraged commercial redevelopment in the central city and large-scale greenfield development projects in development zones on the urban fringe thereby dramatically transforming Wuhan city into a modernising city. Already, the construction of the CBD has shown that Wuhan is facing stiff competition for FDI from other Chinese cities. It also implies that Wuhan's future urban development will be determined by the amount of FDI the city will be able to attract.

However, Wuhan's strategic location as a transportation hub in central China which can act as the 'Dragon Head' to spur economic development to China's interior is yet to be realised. With the building of the new CBD and the numerous on-going infrastructural development projects that include a subway system, roads and interchanges and villa luxury houses, the city will soon have superior infrastructure similar to that which attracted FDI to the coastal regions. That, coupled with comparative advantages such as abundant supply of low-cost land, low labour costs and lower operating costs should surely catch the attention of prospective investors given the fact that the cost of locating in the coastal areas is rising sharply. Wuhan, though, needs to find urgent answers as to why some cities in the western interior have grown faster than Wuhan even though, the city appears to be better endowed with locational advantages than them. One big guess would be lack of information about Wuhan's investment opportunities, reasonably sufficient information that foreigners (both investors and academics) could easily access, for example, on the

internet or in the libraries of academic institutions. That preposition, though, needs further verification. Overall, Wuhan is on track to becoming the 'Dragon Head' that will jump-start economic development in central and China's western interior.

REFERENCES

- Beaverstock, J.V., P.J. Taylor and R.G. Smith, 1999. A roster of world cities. *Cities*, 16 (6): 445-458. PII: S0264-2751(99)00042-6.
- Cartier, C., 2002. Transnational urbanism in the reform-era Chinese city: Landscapes from Shenzhen. *Urban Studies*, 39 (9): 1513-1532. DOI: 10.1080/00420980220151637.
- CBI China, 2008. Wuhan. http://www.cbichina.org.cn/downloads/files/Wuhan_brief_April_2008.pdf.
- Cheng, J. and I. Masser, 2003. Urban growth pattern modeling: A case study of Wuhan city, PR China. *Landscape Urban Planning*, 62: 199-217. PII: S0169-2046(02)00150-0.
- China University of Geosciences, 2008. The Traffic and tour map of Wuhan. China University of Geosciences Press: Wuhan. ISBN: 7-5625-2073-9.
- Dees, S., 1998. Foreign direct investment in China: determinants and effects. *Econ. Plann.*, 31: 175-194. F23, O33, P33.
- Dong, S. and A. McMahon, 2006. Go west young company! Opportunities for foreign investors are changing China's interior. How to make the most of them? Deloitte Development LLC. [http://www.deloitte.com/dtt/cda/doc/content/us_consulting_s_o_gowest_210806\(1\).pdf](http://www.deloitte.com/dtt/cda/doc/content/us_consulting_s_o_gowest_210806(1).pdf).
- Douglass, M., 2000. Mega-urban regions and world city formation: Globalisation, the economic crisis and urban policy issues in Pacific Asia. *Urban Stud.*, 37 (12): 2315-2335. DOI: 10.1080/00420980020002823.
- Echinacities, 2008. Economic overview: Wuhan city's strategic industries, foreign trade and foreign direct investment (FDI). <http://www.echinacities.com/cityguide/wuhan/Biz/>.
- Gaubatz, P., 1999. China's urban transformation: Patterns and processes of morphological change in Beijing, Shanghai and Guangzhou. *Urban Stud.*, 36 (9): 1495-1521. Print/1360-063X On-line/99/091495-27.
- Graham, S., 1997. Telecommunications and the future of cities: Debunking the myths. *Cities*, 14 (1): 21-29. PII: S0264-2751(97)00037-6.
- Han, S.S. and X. Wu, 2004. City profile, Wuhan. *Cities*, 21 (4): 349-362. DOI: 10.1016/j.cities.2004.03.007.

- Harris, N., 1997. Cities in a global economy: Structural change and policy reactions. *Urban Stud.*, 34 (10): 1693-1703. 0042-0980/97/101693-11.
- Hsu, J.Y., 2005. A site of transnationalism in the ungrounded empire: Taipei as an interface city in the cross-border business networks. *Geoforum*, 36: 654-666. DOI: 10.1016/j.geoforum.2004.11.004.
- Hutton, T.A., 2004. The New Economy of the inner city. *Cities*, 21 (2): 89-108. DOI: 10.1016/j.cities.2004.01.002.
- Lin, G.C.S., 2001. Metropolitan development in a transitional socialist economy: Spatial restructuring in the Pear River Delta, China. *Urban Studies*, 38 (3): 383-406. DOI: 10.1080/0042098012002742 9.
- Lin, G.C.S., 2004. The Chinese globalising cities: National centers of globalisation and urban transformation. *Progress Plann.*, 61: 143-157. DOI: 10.1016/j.progress.2003.10.001.
- Lo, F.C. and P.J. Marcotullio, 2000. Globalisation and urban transformations in the Asia-Pacific Region: A review. *Urban Studies*, 37 (1): 77-111. 0042-0980 Print/1360-063X On-line/00/010077-35.
- Ma, L.J.C., 2004. Economic reforms, urban spatial restructuring and planning in China. *Progress Plann.*, 61: 237-260. DOI: 10.1016/j.progress.2003.10.005.
- McCann, E.J., 2004. Urban political economy beyond the global city. *Urban Stud.*, 41 (12): 2315-2333. DOI: 10.1080/00420980412331297555.
- Ministry of Commerce of the People's Republic of China, 2008. Wuhan Wujiashan Taiwanese Businessman Investment Zone-Central China's Largest Taiwanese Capital Compact District. http://www.ec.cn/article/eninvest/ennews/200807/627840_1.html.
- Olds, K., 1997. Globalising Shanghai: The 'global intelligence corps and the building of Pudong. *Cities*, 14 (2): 109-123. PII: S0264-2751(96)00048-0.
- Olds, K. and H.W.C. Yeung, 2004. Pathways to global city formation: A view from the developmental city-state of Singapore. *Rev. Int. Polit. Econom.*, 11 (3): 489-521. DOI: 10.1080/0969229042000252873.
- Palubeski, D., P. Mah, J. Wolfe, A. Cheung, B. Bowron, N. Prud'homme, J. Wang, C. Salazar and E. Grifone, 2004. Report: China Advisory Planning Mission # 1. Canadian Institute of Planners 2003/04 China Advisory Planning Team.
- Paul, D.E., 2005. The local politics of 'going global': Making and unmaking Minneapolis-St. Paul as a world city. *Urban Stud.*, 42 (12): 2103-2122. DOI: 10.1080=00420980500332114.
- Presas, L.M.S., 2004. Transnational urban spaces and urban environmental reforms: Analyzing Beijing's environmental restructuring in the light of globalization. *Cities*, 21 (4): 321-328. DOI: 10.1016/j.cities.2004.04.005.
- Rimmer, P.J., 2002. Overview: Restructuring Chinese space in the new millennium. *Asia Pacific Viewpoint*, 43 (1): 1-8.
- Seto, K.C. and R.K. Kaufmann, 2003. Modeling the drivers of urban land use change in the Pear River Delta, China: Integrating remote sensing with socioeconomic data. *Land Econ.*, 79 (1): 106-121.
- Sit, V.F.S. and C. Yang, 1997. Foreign-investment-induced Exo-urbanisation in the Pearl River Delta, China. *Urban Stud.*, 34(4): 647-677. 0042-0980/97/040647-31.
- Taylor, P.J., G. Catalano and D.R.F. Walker, 2002. Exploratory analysis of the world city network. *Urban Stud.*, 39 (13): 2377-2394. DOI: 10.1080/0042098022000027013.
- Wang, M.Y. and X. Meng, 2004. Global-local initiatives in FDI: The experience of Shenzhen, China. *Asia Pacific Viewpoint*, 45 (2): 181-196.
- WEDZ Administrative Commission, 2008. Wuhan Economic and Technological Zone: Introduction. <http://www.wedz.gov.cn/theme/foreignlanguage/en/1-1.html>.
- Wei, Y.D. and D. Yu, 2006. State policy and the globalisation of Beijing: Emerging themes. *Habitat Int.*, 30: 377-395. DOI: 10.1016/j.habitatint.2004.10.002.
- Wei, Y.D., C.K. Leung and J. Luo, 2006. Globalising Shanghai: Foreign investment and urban restructuring. *Habitat Int.*, 30: 231-244. DOI: 10.1016/j.habitatint.2004.02.003.
- WELHTDZ Administration Commission, 2008. Introduction to Wuhan East Lake High-Tech Development Zone. http://www.wehdz.gov.cn/en/en_yqjs/advantages.htm.
- Wu, F., 2001. China's recent urban development in the process of land and housing marketisation and economic globalisation. *Habitat Int.*, 25: 273-289. PII: S0197-3975(00)00034-5.
- Wu, F. and L.J.C. Ma, 2006. Transforming China's globalising cities. *Habitat Int.*, 30: 191-198. DOI: 10.1016/j.habitatint.2004.02.006.
- Wuhan, CBD (WHCB), 2008. Welcome to Wuhan C.B.D. <http://www.whcbd.com/english/Survey%20of%20Wuhan%20CBD1.html>.
- Wuhan Statistical Bureau, 2006. Wuhan statistical yearbook 2006. Wuhan Press: Wuhan.
- Wuhan Statistical Bureau, 2007. Wuhan statistical yearbook. Wuhan Press: Wuhan.
- Yangtze Council, 2008. Yangtze Economic Region, Wuhan. http://www.yangtzecouncil.org/region_introduction.asp?region=Wuhan.
- Zhu, J., 1996. Denationalization of urban physical development: The experiment in the Shenzhen Special Economic Zone, China. *Cities*, 13 (3): 187-194. S0264-2751 (96)00005-4.