Impact of Mumbai (India) Textile Mill Land Development on Land Use and Real Estate Markets

Piyush Tiwari
Anil Kashyap
Shashwat Tewary

Lincoln Institute of land Policy
Working Paper

Lincoln Institute Product Code: WP07PT1

Abstract

Mumbai has around 2.5 Square Km of land in the heart of the city (8 Km from the CBD) which is owned by 58 cotton textile mills. Since mid seventies a number of these mills have been declared as sick (loss making) units. Urban Land (Ceiling and Holding) Act 1976 prevented owners to sell the land for real estate development. During the last five years, a number of land transactions and large scale commercial real estate development on mill land have taken place. This paper analyzes the institutional and economic factors that have caused the transformation of mill lands from a centre of economic activity to a degenerated belt and again, post 1991, as a regenerated area of economic activities. Sequential changes in the Development Control regulations since 1991 have allowed mill owners to exploit the commercial potential of the land either through a sale or development by themselves. In this context, this paper analyses the impact of development on mill lands on other micro-markets in Mumbai.

About the Authors

Dr Piyush Tiwari is Senior Lecturer (Property) at the University of Aberdeen Business School, UK. He has published more than sixty papers on issues related to real estate and infrastructure. Other professional responsibilities of Dr Tiwari are Director, Asian Real Estate Society and Associate Editor, International Real Estate Review.

Dr Anil Kashyap is Lecturer at School of the Built Environment, University of Ulster, UK. He has past working experience as Divisional Town Planner for 8 years with State Government of Haryana, India.

Shashwat Tewary is a professional lawyer working with a leading law firm in the UK. He holds a Law degree from National School of Law, Kolkata.

Contact information
Dr Piyush Tiwari
Senior Lecturer
University of Aberdeen Business School
Edward Wright Building
Dunbar Street
Aberdeen AB24 3EH
Tel: +44-1224-272359
Fax: +44-1224-272181
Email: p.tiwari@abdn.ac.uk

Acknowledgements

Authors' are grateful to Akshaya Kumar, Nayan Shah, Vishram Patil, Fali Pooncha, Arvind Nandan, Suresh Menon, Manisha Grover and Sambuddha Chakraborty who spared their time to participate in semi-structured interviews. We thank Raphael Bostic, Roz Greenstein and participants at the October 2006 seminar organized by the Lincoln Institute of Land Policy. Thanks are also due to Lincoln Institute of Land Policy for funding the project.

Table of Contents

Impact of Mumbai (India) Textile Mill Land Development on Land Use and Real Estate Markets

1. Introduction

There are fifty eight cotton textile mills located in the city of Mumbai, which occupy nearly 0.5% of the Greater Mumbai's land area of 468 Square Km. Half of these cotton textile mills have been under public ownership and the remaining is under private ownership. As a land use class, located as a cluster, they are one of the largest (along with the Mumbai Port Trust) land owners in Mumbai. Together these mills occupy a large chunk of land area abutting traditional central business district (CBD) of Nariman Point-Churchgate (southern tip of Mumbai). The location of mill land is commercially important considering the geography of Mumbai, which is a bell-shaped coastal city with limitations on land. Textile mill lands are located between the traditional CBD and suburbs. After being the driver of growth and employment for almost a century, cotton textile mills in Mumbai degenerated after 1980. The land remained commercially underutilized for more than a decade. A series of land use changes since 1991 have permitted the land to be developed for commercial purposes. These changes have created huge potential for development activity on former textile mill land since 1991.

It is important to position cotton textile mill land within the context of Mumbai Metropolitan Region (MMR). The Region extends over an area of 4,355 Square Km. and comprises of Municipal Corporation of Greater Mumbai (southern edge of Greater Mumbai is also called Mumbai Island), Thane, Kalyan, Navi Mumbai and Ulhasnagar, 15 smaller municipal towns, 7 non-municipal urban centre and 995 villages (MMRDA, 1996). Mumbai is a bell shaped coastal city (Figure 1), like slice of a cake with an internal angle of 30 degrees. The thin end of the slice is the traditional CBD, where much of the employment is concentrated. The wider end of the slice is around 40 Km north from the CBD.

Highlighted area within the circle is the location where cotton textile mill lands are located. The grey shaded area is the 'no development zone'. The region above textile mill lands is defined as suburban area or suburbs in this paper. Mumbai Island comprises of the CBD and the Worli – Parel (where mill lands are located) belt.

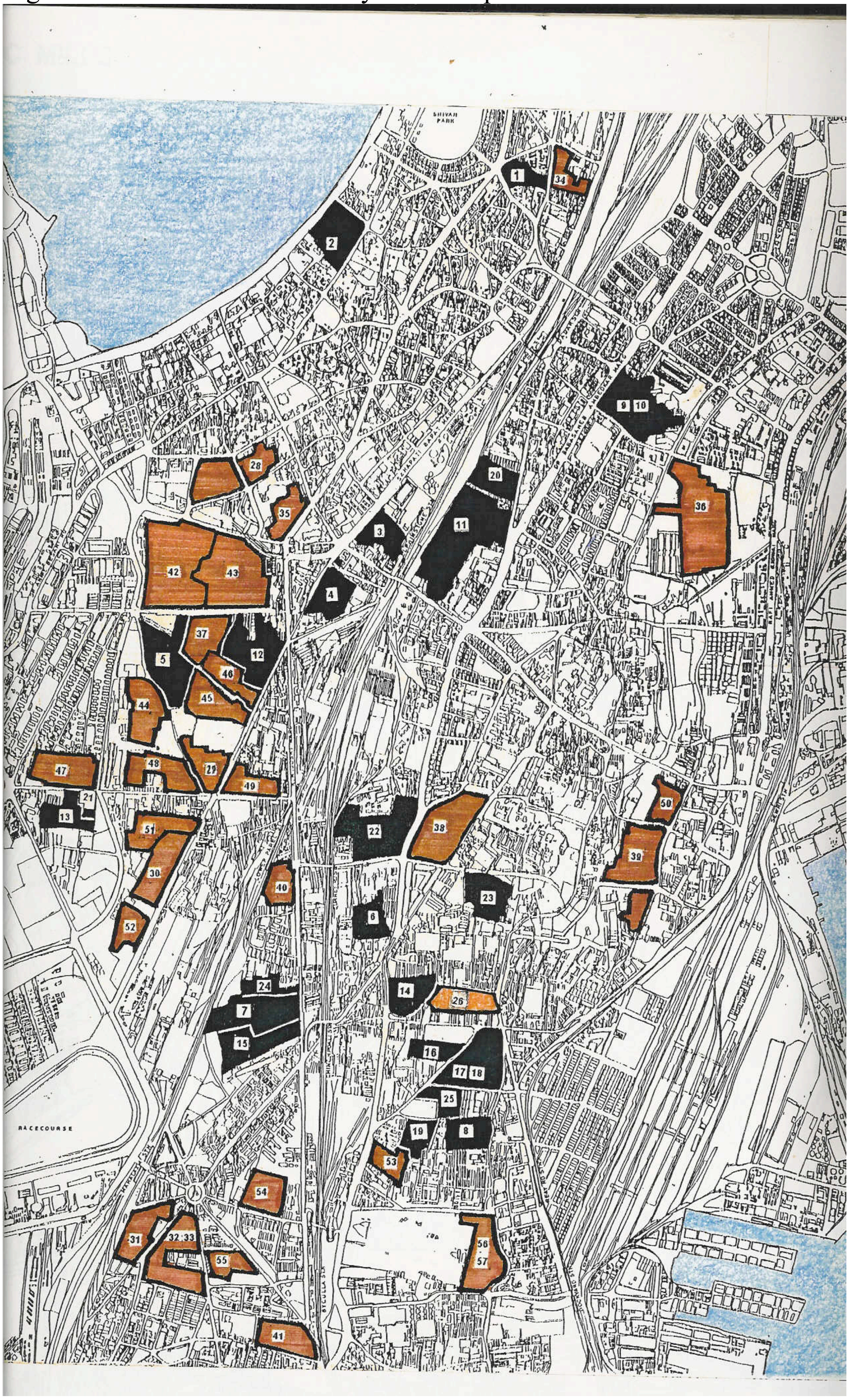
The ownership of textile mills prior to 1991 is shown in Figure 2. There are 58 cotton textile mills in this cluster or which 26 were under public ownership (25 under National Textile Corporation and 1 under Maharashtra State Textile Corporation) and the remaining 32 under private ownerships. Until 1980, textile mills had been key economic drivers for almost a century. However, following 1980, many of these mills became economically unviable. Since 1991, after a series of land use changes, mill lands have been redeveloped for commercial (retail, office etc.) and residential uses.

Large landowners and associated land use play an important role with in the economy of a city and have profound influence on the neighbourhood land uses and property market outcomes. Martins and Sewaya (2006) argue that large landowners have acted sometimes poles (attractors of people by creating economic activities and generating employment) and other times as enclaves (by locking large land into restricted use, which hinders the continuity of urban fabric). The development associated with textile mills in Mumbai suggest that this location has gone through phases of (i) emergence as poles (ii) transformation into enclaves and (iii) re-emergence as poles of economic activities.

Figure 1: Mumbai Metropolitan Region (MMR) and location of textile mill lands

Note: Grey shaded area is 'No development zone'
Source: Correa (1996)

Figure 2: Textile mill location by ownership



Note: Light Brown – MSTC mill; Dark brown – NTC mills; Black – Private
Source: Correa (1996)

The objective of this paper is to analyse following issues:

(i) The forces that have operated and caused various phases in mill land transformation from poles to enclaves and again re-emergence as poles.

(ii) An important characteristic of poles is that they are the places which attract people, through generation of employment and economic activities. The land utilization is efficient and land uses are best possible uses. Poles have positive externalities on neighbourhood. Enclaves generate negative externalities in the form of low land values and decline in economic activity (Martins and Sewaya, 2006). In this context, this paper tries to analyse the impact of textile mill lands on neighbourhood economic viability and property values during various periods of time.

(iii) After more than a decade of degeneration, since 1991, land use change policies were introduced which have allowed mill lands to be used for commercial purposes. These changes have permitted the addition of huge commercial space close to the CBD. This raises a number of questions:
- What happens to the urban form and property market outcomes in a city when a large scale development takes place in the heart of the city?
- What are its local and spatial impacts?
- Is the viability of fringe areas in the pre-existing core compromised?

Rest of the paper is structured as follows: Section 2 presents the methodological aspect of this research. Section 3 discusses the key drivers which led to the emergence of cotton textile mills as poles prior to 1980. During eighties, the economic decline of cotton textile mills began. Section 4 discusses causes and impact. Section 5 analyses the factors which were responsible for re-emergence of textile mills (or more appropriately location of textile mills) as poles. Section 6 discusses the impact of mill lands development post 1991 on other locations and section 7 provides institutional explanation for the observed impact. Section 8 concludes the discussion.

2. Methodological approach

Large land owners and associated land uses may have positive or negative externalities on surrounding areas. Positive externalities lead to an increase in employment, increased property values and increased demand for complimentary land uses like residences. Negative externalities lead to under-utilization of land and decline in land values in surrounding areas.

Cities undergo changes over time and this process is inevitable. It is inevitable because the operation of political, economic and social system constantly generate new demands and presents fresh opportunities for economic and civic improvements (Roberts, 2000). It is not a surprise that the best use of land at a particular location may not remain the best use in future, as city boundaries expand and new peripheral areas emerge. These peripheral areas (or, edge cities in Garreau, 1991 terminology) consolidate as new centres of growth (poles) and former poles undergo economic and physical obsolescence. Whilst economic, social and institutional factors can be identified that explain the physical and economic decline, in many cases these forces can also lead to provide foundation for re-emergence of these locations as poles. Re-emergence may albeit require reconfiguration of land uses conducive to the best possible economic use.

To understand the dynamics of changes within the city, it is important not to restrict to the study of property market systems but instead to investigate the whole range of institutions that determine the form and operation of property markets. Three main institutional features, as described by Adams et al. (2003), that characterise land and property markets are: (i) the formal rules within which transactions occur, which may be directly or indirectly determined by the processes of governance, (ii) informal conventions or the unwritten 'rules of the game' that may also be affected by policy decisions and (iii) the network of relationships between market operators or agents and the extent to which policy induces the development of trust and the creation of other forms of social capital within the market place. Adams et al. (2003) regard the economy as a process and suggest that the analytic emphasis should be placed not on the understanding of ultimate equilibrium but on the means by which it evolves from one state of existence to the next.

In property context, Keogh and D'Arcy (1999) argue that what is legally or culturally feasible may deserve as much attention as what is technologically feasible. During the process of transition from one state to another state, institutional changes may equally result from changing ideas, norms and values as from changes in either technology, the ratio of factor prices or the costs of information (Van der Krabben, 1995).

Within the political economic traditions, the institutions of the market are considered to be reflective of power relations in wider society and designed to provide certainty and stability in "an economy that is essentially non-equilibrating, imperfect and irrational" (Amin, 1999). Supportive regimes of formal rules are important for markets to function efficiently. Forms of public intervention that set important regime boundaries for the land market include land use restrictions and ceiling on the size of land holdings. However, "even the law should not be regarded as objective, neutral and beyond reproach, but rather as shaped by the competing ideologies or philosophies that have existed during different times" (Adams et al., 2003).

Sections 3, 4 and 5 discuss the economic and institutional factors within which developments surrounding cotton textile mills took place. These sections also discuss the impact of these factors on cotton textile mills which caused them to be poles or enclaves. Martins and Sawaya (2006) argue that large properties play the role of poles when they stimulate urban development at a local or regional scale and create positive externalities (generate employment, economic activities, create value for the property etc.) of a large urban dimension. Poles have substantial positive impact on property values and local/regional urban form. Large properties operate as enclaves when they cause negative externalities of local/regional dimension (ibid). They destroy the economic and property value of the region. Usually development jumps these enclaves in response to urban growth .

When large scale property developments take place, they have the potential to impact the pre-existing property markets. Post 1991, cotton textile mill lands opened up potential for large scale development. There is a stream of literature which tries to analyse this aspect associated with large scale developments. In recent examples of such studies, Reynolds and Schiller (1992) and Schiller (1996) analyze the impact of a major out- of- town retail development on traditional high street or city centre shopping areas. These studies find that impacts on neighbouring town centres have been negative but the effect is complex. Results confirm that successful town-centre redevelopment can go a long way to alleviate the negative effect (Schiller, 1996). There are also studies which have analyzed the impact of in-town centre development (Crosby et al, 2005).

A number of common features emerge from literature. First there are trade diversion effects, both between centres and within centres. Within a centre, weaker and more peripheral areas suffer the greatest impact which alters the shape and nature of economic activity. Second different types of economic activities exhibit different behaviours. Third, there is social polarization behaviour among economic agents. Finally observed effects depend critically on economic and property market environment and accordingly change over time as conditions change and as the impact of new development stabilizes and matures.

The impact of large scale development on a city is complex and has many dimensions which can be analyzed from socio-economic, property market and land use perspectives. In order to understand the impact this paper would analyse (i) the process of transformation of mills from poles to enclaves and again to poles (ii) the associated institutional (policy and planning) development which resulted from such transformation or caused these transformations (iii) impact of such changes on property markets at local/regional scale as evidenced by property market indicators and (iv) recent economic and institutional changes and their impact on mill lands.

This paper uses secondary property market data and semi-structured interviews with key property professional to understand the impact of cotton textile mill land post 1991.

3. Emergence of textile mills as Poles (Prior to 1980)

Mumbai has been described as the first city to have experienced “economic, technological and social changes associated with the growth of capitalism” in India (Patel, 1995). Despite many inherent problems (such as slums, inadequate basic amenities, pollution etc.), Mumbai has long served as a paradigm for “achievements of post independence India”. Implantation of cotton textile industry during nineteenth century and subsequent diversification into more technologically advanced manufacture such as light and medium engineering were the steps towards industrialisation which led to “modernity and contemporary urban predicament” (ibid).

Prior to the railway era in India (before mid nineteenth century), raw cotton and opium trade with Chinese and British markets were the main export commodities from Mumbai. Mumbai imported cotton piece goods and metals. The trade surplus was significantly high. The foundation, however, of this prosperity were fragile (Markovits, 1995) as both cotton and opium trade were highly speculative. Mumbai’s communication with opium and cotton-growing hinterland were costly and subject to seasonal interruptions (ibid).

Two developments which have had significant impact on Mumbai's industrialisation were the establishment of the first rail link between Mumbai's Victoria Terminus (now renamed as Chatrapati Shivaji Terminus and even today this terminus serves as the origin of central railway link out of the Mumbai's CBD) and Thane in 1853 and the establishment of first modern cotton textile mill in 1854. By 1863 the railway link was extended through the Bhor ghats to the Deccan. It was then possible to transport raw cotton from its major growing areas (Nagpur) to the foreign markets through Mumbai (Chaturvedi, 2005). The central railway line ran parallel to the docks and a large number of warehouses emerged between the railway line and the docks at the Cotton Green dockyard, Sewri. The Mumbai port had the advantageous location for European trade, via a well established link with England through Suez and Alexandria and was in competition with world including American cotton trade.

The first textile mill that appeared on the Mumbai's landscape was Bombay Spinning And Weaving Company's cotton mill at Tardeo in central Bombay. The success of first mill had encouraged entrepreneurs to shift their focus from trading in raw cotton and opium to manufacturing. The Oriental Spinning & Weaving Company started its mill in 1858 and the Bombay United Spinning & Weaving Company followed in 1860. Despite fierce competition from Lancashire's mills in England, the cotton textile industry in Mumbai of 1860's invited further enterprise and by 1865, there were ten mills which employed over 6500 workers (Chaturvedi, 2005).

The current Central Mumbai, where the textile mills were located, was largely a swampy area. The Colonial Mumbai Government undertook the task of filling in with town sweepings the lands between Mahalaxmi & Clerk Road that had originally been covered by swamps. A new thoroughfare was laid across the area where drainage seemed difficult; the land was raised to a height of the new roads. The project made possible the construction of more mills and worker residential units (called 'chawls' in native language – comprises of a building with one room units. The toilet facilities are common for all units.), on land lying between Tardeo and Lower Parel. The land was given to mill owners at concession rates in order to promote industrial production (Knight Frank, 2005).

By 1914 the employment in textile industry in Mumbai increased to 110,000 (Markovits, 1995). Cotton textile in Mumbai accounted for around 25-27% of factory output in India (Authors' calculations based on Markovits, 1995). The number of mills increased from 42 in 1880 to 138 in 1900. Consolidation of mills during early twentieth century saw establishment of 58 cotton textile mills in the Central Mumbai area. In the stretch of Parel and Byculla, land was then available in plenty and the 58 mills spread over 600 acres of land (Jain and Bhatt, 2006).

Land use pattern surrounding cotton textile mill lands was residential and institutional (hospitals and schools for residents). Residences were in the form of units in 'chawls', leased by mill owners to their employees. During World War, Rent Control Act was enacted which froze rents and protected tenants against eviction.

4. Decline from Poles to Enclaves

During 1980s, the economic viability of textile mills suffered from a number of factors some of which were related to efficiency of mills themselves but others which were related to broader institutional aspects related to land use and strategic planning of the city.

Factors inherent to textile mills

Initially, labour was cheap and largely in-migrant to the city from rural hinterland. The industry was largely labour oriented. The survival of mills during the second half of twentieth century rested on low labour cost. With the imposition of trade quotas on textile exports in international markets, competition from Hong Kong, China and Pakistan in the world market and slow expansion of domestic market wiped away the competitive edge of Mumbai cotton textile mills. Working on low profitability margins, mill owners found it difficult to either modernise the mills or offer benefits to workers. Trade Unions were formed and the persistent dissatisfaction with the compensation led to the biggest trade union industrial action (initially started as a bonus dispute) in the history of labour struggle in India (Wersch, 1995). The industrial action, which started on the 18th January 1982 lasted for 18 and half months and involved 240,000 workers (ibid).

By the end of the strike, 75,000 workers lost their jobs and a number of mills, saddled with huge debts and with no production for almost a year and half became unviable and were declared sick. It became uneconomical to maintain these large-scale industrial units with in city limits due to high power and Octroi (a municipal tax imposed on the value of goods from other states that enter the city) costs (Knight Frank, 2005). Of the 58 mills, 25 were deemed sick (loss making unit) and were referred to Board for Industrial and Financial Reconstruction (BIFR), Government of India for legal, financial and managerial restructuring. BIFR transferred these mills to be managed by public sector entities such as National Textile Corporation (NTC) and the Maharashtra State Textile Corporation (MSTC). Despite various attempts to revive these sick units by Government, these mills continued to be sick. Remaining 33 mills continued to be in the private sector (Jain and Bhatt, 2006).

Land use and planning policies

Regional plans for Mumbai Metropolitan Region (MMR) are prepared under the provisions of the Maharashtra Regional and Town Planning (MR&TP) Act 1966. The emphasis of Regional Plan in on land use zoning and the main objective of plans has been regional growth management. Mumbai Metropolitan Regional Development Authority (MMRDA) is the agency which is responsible for preparing plans and implementing them in MMR (an area of 4,355 square Km).

Land use and planning policies also contributed to the decline of cotton textile mills. During early part of the twentieth century, when industrial activities in Central Mumbai were at peak, this region faced problems associated with industrialization such as congestion, environmental degradation, rising land values and shortage of housing.

The first Regional Plan 1970-91 for Mumbai, which was prepared was the predecessor body of MMRDA called Bombay Metropolitan Regional Planning Board (BMRPB), identified problems such as inadequate living conditions, polarisation of land uses with office and service sector located at the southern tip of island and residential use located towards north, heavy concentration of industries in central Mumbai causing huge in-migration, air pollution, off mix of industries, residential and other use of metropolitan land, transport congestion, haphazard development of residential space in fringe areas, that required planning intervention (BMRPB, 1974). In its growth management strategy, the Plan viewed burgeoning population as the root cause of Mumbai's problems. The plan recommended a poly-nucleated city with restrictions on Greater Mumbai's population to 7 million and adopted a 'decentralisation' and 'guided development through land use control (zoning) approach to achieve this. New development of commercial space in the CBD was prohibited. The balance between commercial to residential was restricted to 20:80. No new office requiring more than 250 Square meter of space and creating more than 50 jobs was allowed in the CBD. The development of counter magnets such as Bandra – Kurla complex and Navi Mumbai was accorded priority with the objective of relocation of office space from CBD and industry from Central Mumbai to these new locations. Limits were imposed on the total industrial land area in Mumbai to 800 hectares. The industrial policy thrust was to disperse and decentralise industries from Mumbai Island and the type of industry was restricted to consumer oriented and service industries.

Industrial Location Policy

The Industrial Location Policy (ILP) (see for details: MMRDA, 1996) remained oblivious of the declining competitive strengths of textile industry in Mumbai and the focus towards textile mills was to provide incentives to revive them and retain them in Central Mumbai. The share of employment in cotton textile industry in total employment in MMR had dropped from 27.12% in 1976-77 to 17.14% in 1980-81 and 12.51% in 1990-91. In number terms, textile industry lost 133,000 workers during 1976-77 to 1990-91. The share of cotton textile mills in MMR's value added, which was 17.21% in 1976-77 reduced to 10.07% in 1990-91 (ibid).

The genesis of the ILP lies in the recommendations of Regional Plan for MMR – 1973, which recommended decentralisation of industries from Mumbai, reduction in the zoned area for industries in Greater Mumbai and creation of new industrial zones outside Island city to relocate existing industries. The ILP that remained in force from 1984 to 1992 prohibited any new small, medium or large scale development of industrial units in Island city of Mumbai, its suburbs, and Thane and Bhayander areas. During 1974-84, modernisation and expansion of small scale textile mills located in the Island City was not permitted under the ILP. Medium and large scale textile units could expand without restriction on built up area, water and power consumption. However, the renovation and expansion was allowed on the condition that additional labour would not be employed. The modernisation of medium and large scale units was allowed subject to pollution control. Though the ILP was emphasizing on shifting of industries out of MMR but in case of textile mills its position was diametrically opposite and often restrictive. By the policy of May 1977, textile mills were not permitted to shift outside the MMR (ibid). Restriction on relocation only accelerated the demise of cotton textile industries in Mumbai.

Spatial Planning Restrictions

During mid seventies, the construction activities in Mumbai Island were frozen due to various planning restrictions. Reclamation of land at Backbay was stopped in 1975 and the FAR limit of 1.33 was imposed in 1977. Most of the buildings in the CBD (south of the Mumbai Island) are built prior to the imposition of FAR restrictions and are at much higher FAR levels[1]. FAR restrictions diminished the potential of redevelopment of commercial properties in Mumbai (Adarkar and Phatak, 2005). Textile mill lands, which were lying between the CBD and the suburban location of Bandra- Kurla complex, offered significant potential for commercial and residential development. However, mill lands could not be developed due to the Board for Industrial and Financial Reconstruction (BIFR)[2] restrictions and land use restrictions. BIFR and the mills looked at the land and built assets of mill as assets to be disposed to repay the loans or if possible resurrect the mill (ibid). The Development Plan of 1967 had zoned the land of textile mills for the purposes of "textile mills" only and no other use was permissible.

Urban Land (Ceiling and Regulation) Act, 1976

Probably the most important Act related to land, which has much wider implications on land holdings and is considered as one of the policies that had affected the development of textile mill land, is the Urban Land (Ceiling and Regulation) Act 1976. One of regulations that had prevented mill owners from selling the land was Urban Land (Ceiling and Regulation) Act 1976. The Act specifies that "persons are not entitled to hold vacant land in excess of the ceiling limit" and the ceiling limit for different urban agglomerations have been specified by the Act (MMRDA, 1996). The agglomeration is defined to include an area within a radius of 8 Km. As per the Act, the land in excess of the specified limit is deemed to have been acquired by the State Government. In case of lands, where there is income, compensation is paid equal to 8.33 times the net average yearly income of last five years preceding the date of notification. The Act also specified a ceiling on the amount of compensation, which was extremely low. The policy, in general, has not been effective in acquisition of land but has been a big deterrent to the supply of land in the market. According to MMRDA (1996), till January 1990, about 13,917.63 hectare of land was identified as excess land by Competent Authorities in Mumbai Metropolitan Region but only 5,712 hectare of land has actually been acquired. Instead of bringing the land in the market, UL(C&R) Act has locked them into legal disputes.

Impact of these factors on textiles mills and associated land use was immense and negative.

Economic viability of mills: Post industrial action settlement in 1982, mill owners of surviving private mills were forced to give them a number of benefits in addition to high wages. Their shares in profits reduced. With increasing land values property taxes also rose. Low profitability led to low investment. Half the machinery in Mumbai's mill sector was 40 or more years old (operating at nearly double its rated life) (Harris, 1995).

[1] Based on discussions with Arvind Nandan of Cushman and Wakefield.
[2] BIFR is a public sector body to deal with industrial sickness.

Change of use: An impact of policies based on which the land use in Regional Plan was determined has been that the development activity almost froze in Mumbai Island for more than two decades. The supply of built space became inelastic. Greater Mumbai continued to reel under increased demographic pressures, poor infrastructure and high level of environmental pollution. Property prices in Mumbai Island kept on appreciating. A big chunk of industrial land (around 2.5 square Km), that was occupied by textile mills in Mumbai island became unusable after many of these mills became unviable. Redevelopment of old dilapidated office space in Mumbai Island became impossible after FAR restrictions were imposed in 1977.

Attitude of mill owners: By late 1970s mill owners had realised the declining competitive strengths of their mills in international markets. Labour cost advantages were also fading away. An ideal solution would have been to relocate these mills and utilise land for other commercial uses. However, restrictions imposed by ULCR&A (1976) did not allow the land use to be changed for any other purposes without attracting provisions this Act. The economic value of textile mill lands had declined substantially but the textile manufacturing activity continued. Had they closed the mills, land would have become vacant and had attracted provisions of ULCR&A (1976), which in effect meant that a large part of land had to be surrendered to public authorities. By that time property prices for commercial and residential property in the CBD had appreciated substantially and an artificial shortage created by planning regulations had further fuelled price appreciation. Mill owners were fully aware of windfall gains possible from land use conversion. By 1987, the commercial value of land far exceeded the value of mills themselves and mill owners began to press the government to allow them to sell the land (ibid). Land use conversion was not easy as land use zoning regulations as suggested in the Plans are rigid. There were other associated social issues such as potential job losses due to closure of mills, which made the process of land use conversion unattractive politically.

Cotton textile mills became enclaves, hidden behind huge iron gates, with notional economic activities. Land values in surrounding areas declined substantially. Chawls were occupied by workers who had either lost jobs or were continuing with low value added jobs. Rent control act protected them from eviction and multi-tenanted nature of this property saddled with low rents did not allow these to be redeveloped.

5. Re-emergence from Enclaves to Poles of Activities

Since 1991, through a series of amendments to the Development Control Regulation 58, Government has allowed the development/redevelopment of mill lands.

Institutional frameworks are not rigid. They keep on evolving in response to various external and internal factors. External factors such as factors related to globalization of the economy and capital flows and internal factors specific to property markets such as demand for space and location influence the institutions with in which property markets operate. Various transformative forces, which are operating with in Mumbai property market have resulted in re-emergence of cotton textile mill land as poles of activities. These factors are (i) Globalization, economic liberalization and shift in economic base (ii) Changes in planning objectives and associated regulatory changes (iii) Growth of a consumer class with demand for niche products and (iv) Changes in customs and traditions related to property markets.

Globalization, economic liberalization and shift in economic base

The economic base of Indian economy has changed from agrarian to service based economy. India, after independence in 1947, pursued a protectionist economic strategy with a strong social welfare system (Weinstein, 2005). However, worsening fiscal situation over a period of time and pressure from global monetary and trade institutions led to policy shift towards deregulation. The strong flip to the liberalization process, which was initiated during mid 1980s, came after 1991 when the policies such as devaluing the rupee, dismantling the system of industrial licensing, reducing trade barriers, allowing private banking institutions and permitting greater international participation in banking and finance sectors, were implemented. India's process of liberalization has been successful in linking the economy with the global economy. Now services account for more than 50 percent of the total GDP.

The growth in the service sector in India during last decade is led by information technology (IT) and ITES (IT Enabled Services). India has become the favoured location for business process outsourcing (JLL, 2006). The IT and ITES sector is currently growing at a rate of over 30% per year. On AT Kearney Offshore Location Attractiveness Index, India continues to be the most favoured destination for outsourcing due to low cost, significant depth in its human resources and critical mass of existing outsourcing activities.

Over the last ten years, outsourcing and off shoring activities have established a multi-national and domestic corporate base, creating demand for commercial and office space. The success of IT/ITES sector is gradually extending to other sectors of the economy. India has emerged as a destination for R&D activities, particularly related to electronics and telecoms. Rise in personal incomes has led to growth in financial services and manufacturing sector.

Mumbai has been, economically, the most important city in India, first as the hub of industrial (prior to 1970s) growth and later as a centre for service sector (primarily finance and corporate head office led activities). The contribution of Mumbai to the national GDP is around 6% in 2003-04 (MMRDA, 1996). However, during 1998-2002, the GDP growth rate in Mumbai has reduced to 2.4% per annum from 7% in 1994-98. Its contribution to the national GDP has also declined (McKinsey, 2003). Mumbai has experienced dramatic deindustrialisation during last two decades. This has caused substantial reduction in the share of its workforce employed in manufacturing (MMRDA, 1996). The decline of industry in Mumbai has permitted the city, as Harris (1995) claim, "to play the more important role of financial capital (including the headquarters of most major domestic and foreign banks and corporations etc.)". Harris (1995) attributes global economic forces as the cause for deindustrialisation, while Adarkar and Phatak (2005) attributes the decline of industry to regulations which prohibited industries (e.g. Cotton textile mills) from modernising.

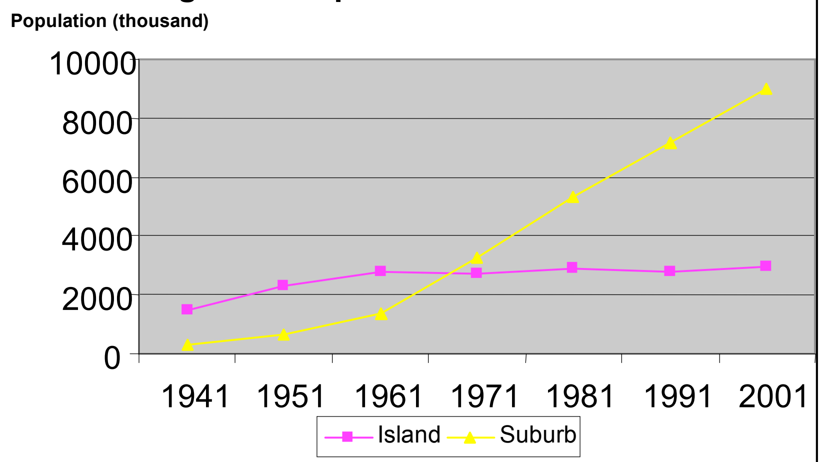
Though Mumbai still retains its competitive edge as the financial centre, the new service industries (IT/ITES) have located in cities like Bangalore Gurgaon, Chennai, Hyderabad etc. to take cost advantages related to space. Cost competition and availability of space in other cities is bringing about institutional changes in property markets in Mumbai, as would be discussed later in this paper.

Population and demographic trends

Mumbai has, traditionally, been a magnet for attracting work force. During the last century, the population of Mumbai Metropolitan Region grew 140 fold from 1 million in 1991 to 14 million in 1991. The share of Mumbai in population of urban India increased from around 4% in 1941 to 6% in 1991 (MMRDA, 1996). About 46% of the households are migrants and of these, about 20% have migrated to Mumbai during the period 1981-91 (ibid). Migrants with their origins in rural areas constitute about 65% and about 57% of the migrants are from outside Maharashtra. It may, however, be emphasised here that the migration trends to Mumbai were strong even though the manufacturing industry (during the textile mill workers strike, in 1982-83, nearly 127,000 workers had lost jobs) was declining and a large part of the work force was being employed by the service sector. The share of service sector in employment was 62% in 1980 which increased to 81% in 1998 (MMRDA, 2003).

Large in-migration had put pressure on the demand for residential and commercial space increased substantially. The supply of space in Mumbai Island was limited because of constraints posed on new development by various land use policies as described above. New property development jumped the location around mill land and moved to suburbs. The population in the suburbs grew substantially while the Island city population remained around 2 million (Figure 3), a result of restrictive policies implemented during 1971-90 Plan which limited population growth in Mumbai Island.

Figure 3: Population trend in Mumbai



Source: MCGM (2007)

There has been shift in the location of employment. The share of employment in Island city declined from 71.8% in 1971 to 55.7% in 1990. Most of the new employment was located in suburbs. Since 1991, the employment share of Island city has increased and in 1998 the share was 60% (MCGM, 2007).

Shift in strategic planning objectives

Regional Plan 1996-2011, though, did not diverge from the Regional Plan 1971-1990 in the strategy of a poly-nucleated structure as the growth model for Mumbai, but it did diverge in its strategy towards Mumbai Island. Office location policy and industrial location policy were reoriented towards to keep pace with 'economic liberalisation policies' which were initiated in India since 1991 (MMRDA, 1996). The new industrial growth policy allowed revival or replacement of sick and obsolete industries with in the framework of economic, environmental and urban development objectives. The Plan also recommended modification to the office location policy. Though the proportion of total area under commercial and industrial was not changed, the redevelopment of old building blocks was recommended.

Regulatory regime shift

Land regulations such as Urban Land (Ceiling and regulation) Act, Mill Land regulations, Zoning laws - FAR norms and restrictions on development/redevelopment have all created an environment which made redevelopment of mill lands impossible, causing "artificial scarcity of land (Knight Frank, 2002)" in Mumbai Island. Prior to 1991, under the Development Control Rules, it was not possible for mill owners to exploit commercial potential of land for any other purposes than textile mill use without attracting provisions of Urban Land (Ceiling and Restriction) Act, 1976. Internal and external pressures to reform land related legislations have been immense since 1991. Mill land owners were lobbying for change in DC 58 to permit redevelopment of mill land to exploit commercial potential of their land. To facilitate mill owners to sell/develop mill land, changes to development control regulations (DCR) were introduced in 1991.

At the national level, Central Government repealed Urban Land (Ceiling and Regulation) Act in 1999. However, since land is a state subject and each state had to adopt the repeal Act. Even after seven years, some states such as Maharashtra, Karnataka, MP, Rajasthan, Andhra Pradesh, Assam, Bihar, Orissa and West Bengal have not adopted the repeal Act (Ministry of Finance, 2002). ULCR&A (1976) still regulates the land markets in Mumbai, as state of Maharashtra has not adopted the repeal Act.

Changes to the Development Control Rule 58

Land use changes related to the mill lands were introduced through changes in Development Control (DC) rules, a mechanism to bypass provisions in the Regional Plan. Maharashtra Region Town Planning (MRTP) Act empowers the State Government to make special development control regulations for the purpose of executing a Special Township Project. The Act provides that such regulations may be a part of Development Control Regulations or Development Plan or Regional Plan. In terms of the MRTP Act, Development Control Rules (DCR), 1967 were framed. In 1990, the State Government took a policy decision to frame new DCR which came into effect in 1991.

DCR 58 of 1991

DCR 58 of 1991 provided for development or redevelopment of lands of cotton textile mills - modernization of mills and development of surplus lands in the manner specified. It also allowed the development of mill lands as a part of package of BIFR approved rehabilitation schemes and also for modernization and shifting of textile mills. These rules permitted the sale of a portion of the mill lands in order to channel funds into the revival of the mills. These funds were to be used for clearing off financial liabilities of mill owners like workers wages, financing of voluntary retirement schemes, retiring loans etc. According to DCR 58, in case of redevelopment, entire mill land (either open or after demolition of existing structures) had to be distributed as follows:

- One-third to be BrihanMumbai Municipal Corporation (BMC) for open spaces
- One-third to the MHADA
- The rest to be used by owner/developer for commercial development.

The land underneath the existing structures if retained was not to be shared and for the two-third of the land that was surrendered to public authorities, mill owners were to be compensated by TDRs[3] (Adarkar and Phatak, 2005). Property prices (as discussed in the next section) were booming at the time when DCR 58 1991 amendment was introduced. Nine private mills (with total area of 133 acres) sought permission to redevelop and three mills (Modern, Matulya and Swadeshi) redeveloped according to the DCR 58, 1991 formula. Some mills converted existing structures to different commercial uses without demolition (e.g. Phoenix mill converted to Phoenix retail mall by retaining old mill structures). However, most of the private mills found the regulations of the DCR 58, 1991 unattractive as the value of land to be surrendered to the city was far large to let go. Mill owners kept on lobbying for more favourable changes. One of the concerns with the DCR of 1991 was that it was applied to the individual mill plot and did not promote an integrated mill lands development. Absence of integrated plan caused problems with regard to the development of public infrastructure and even the open space that became available was in small pockets and unplanned. In 1994, the Government appointed a committee to propose an integrated plan and public authorities were directed to hold further permission. Moreover, following 1996, property prices in the CBD declined by around 50%. Mill owners lobbied with the state government to amend the DCR 58 to allow a larger portion of land to be developed on commercial grounds. They argued that the residual after surrendering land, paying workers' compensation for job losses and retiring

[3] Development Control Rules of 1991 introduced the concept of TDRs. The regulation separated the development potential on land from the land itself and allowed them to be made available to the land owners in the form of TDRs (Knight Frank, 2002). Owners of land, which are reserved for public purposes, will be granted development rights in terms of FAR credit equal to the gross area of the reserved plot to be surrendered without encumbrances and free of cost to public authorities. The development potential arising from TDRs were allowed to be applied to locations north of the plot from which they have originated except in the Mumbai Island (Jain, 2006). TDRs could be traded in the market. The concept of TDR has served as a useful tool for public authorities to acquire land under public reservation without going through lengthy acquisition procedures. TDRs led to high density development in the suburbs and also increased the land value. Mumbai has developed an active TDR market.

outstanding debt, was not sufficient to be attractive for commercial redevelopment under prevailing property prices.

In 2001, the Government proposed an amendment to the DCR 58(1991). According to the new rules, only the “open land” on which there was no construction was to be distributed in the manner laid down in the DCR 58 (1991) (Knight Frank, 2005). The modified DCR 58 proved quite attractive to mill owners/developers as they could retain whole of the existing floor space area for the existing built up space and were required to share land for open space and public housing development only for the “open land” portion of the mill lands. This change provided momentum to the development of sprawling mill lands in central Mumbai and BMC officially gave permission for the redevelopment plans of more than 15 private mills (Knight Frank, 2005).

Changing consumer demand

Another important factor that is setting boundary for the land and property markets in Mumbai is the growth of a new affluent class. Incomes in Mumbai have risen like elsewhere in India. According to an estimate by JLL (2006), the real disposable incomes are expected to rise by 8-10% per year over the period 2006-10. This has transformed the demand and profile of consumer products. According to a study by NCAER (2005), the number of affluent households (with income above Rupees 1 million per annum) has increased from 0.27 million in 1995-96 to 2.3 million in 2005-06, a nine fold increase over a period of ten years. The growth of an affluent population along with an expansion of credit system with low interest rates and less restrictive trade barriers have transformed consumer demand and supply choice set (Weinstein, 2005). The direct influence of growing presence of trans-national migrants and returnee non-resident Indians is also evident from the changing consumer culture and taste. An important implication of the growth of this consumer class is the demand for luxury apartments closer to the CBD. This has led to competing pressure on textile mill land to develop for residential uses.

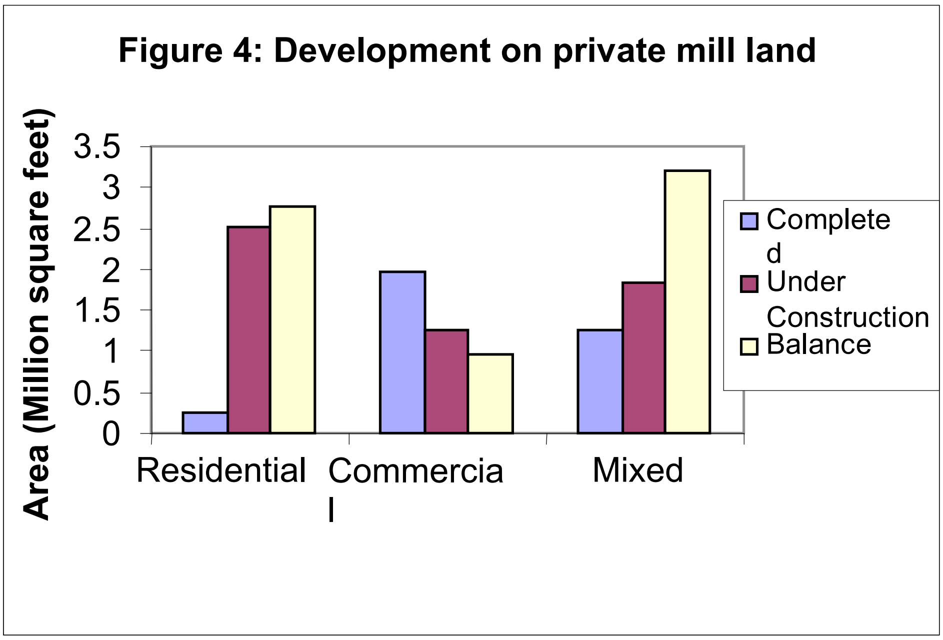
Impact

Impact of various transformation forces that have been dominant during 1990s is discussed below.

Changes in the Development Control Rules Permitting Commercial Development

The commercial and residential development on private mill lands began after changes to the Development Control Rules (DCR 58) were made in 1991, albeit the pace of development was slow. The development activity picked up momentum after further changes to DCR 58 were introduced in 2001. As of July 2005, of the total 32 private mills, real estate activity has been undertaken on 23 mills (Knight Frank, 2005), located in Central Mumbai.

Of the total potential supply of the real estate space on these 23 mills of around 15.99 million square feet, nearly 3.49 million square feet has already been constructed whereas 5.59 million square feet is under construction as of 2006. There still exits a future development potential of around 6.91 million square feet (ibid). Of the 23 private mills, 7 mills have undertaken commercial developments, 10 have undertaken residential developments and 6 have mixed use developments. Figure 4 shows the property development activity by asset class as of July 2005.



Source: Based on data from Knight Frank (2005)

Textile Mill Owners Response

Private sector mill owners have had different approaches to the re-development of their lands. Some sold their land to developers (e.g. owners of Empire mills), some of them formed joint ventures with developers and others became developers (e.g. Owners of Kamla mills and Morarjee Goculdas Spinning and Weaving Company Limited).

The public sector mill owner, NTC also got an approval for development of seven of its mills out of 25, from the Supreme Court. Plans for sale and redevelopment of lands were obtained from the Maharashtra Government and BMC. The proposal for development of NTC mill lands that was approved was different from the development process that was happening on the private mill lands. NTC combined its 7 mill lands located in Central Mumbai in the development plan and requested for approval of commercial development on 5 mill lands (with total area of 51.2 acres) and agreed to surrender 2 mill lands (with total area of 24.4 acres) for open space and public housing development.

Table 1 shows transaction details for select private and public sector mills.

Table 1: Transaction details

Mill name	Location	Land area (acres)	Transaction date	Buyer	Amount (Million Rs.)	Multiple of reserve price
Private mills						
Standard	Prabhadevi	10.1	Q2, 2003	Sheth Builders	1300	NA
China	Sewri	9.5	Q3, 2004	Dosti Group	530	NA
Khatau	Byculla	13	Q3, 2004	Marathon Group	980	NA
Srinivas Cotton	Lower Parel	10.5	Q1, 2005	Lodha Group	2000	NA
National Textile Mills						
Jupiter	Lower Parel	14	March 2005	India Bulls	2760	1.8
Mumbai Textile	Lower Parel	17	June 2005	Jwala	7020	2.6
Apollo	Chinchpokli	7.5	June 2005	Lodha Group	1800	1.8
Kohinoor Mill No.3	Dadar	4.84	Aug 2005		4210	3.5
Elphinstone	Parel	8.49	Sep 2005		4417	3.5

NA: Not available
Source: Knight Frank (2005) and Authors' compilations from various sources

NTC decided to sell the land. NTC adopted an 'open auction' mechanism for the sale of mill lands in Mumbai. The reserve price was fixed as the highest of the valuation obtained through three methods (i) comparative evidence (ii) Income Tax authority suggested valuation approach and (iii) the circle rate. The table 6 indicates that the auction price has been 1.8 to 3.5 times the reserve price (which was the best valuation price for land under commercial use), indicating the extent of latent value to be realised through the change of use.

Response of Other Stakeholders:

The new DCR 58 reduced the land available for open space and public housing to less than 5% each and the impact became more evident when NTC sold its mills to private developers. Realising the dramatic reduction in open spaces, public interest litigation was filed before the Mumbai High Court by an environmental NGO (Non Governmental Organization). The main thrust of the petition was to address the need for open spaces and public housing in the city of Mumbai, as this was one of the main objectives of old DCR 58. The High Court (2005) ruled in favour of the petitioners.

The judgement froze the development activity on mill land and further sale of land was put on hold by NTC. The NTC appealed to the Supreme Court against the judgement and interpretation of the new DCR 58 by the Mumbai High Court. Supreme Court (2006), stressing the lack lustre response to the development activity with in the Old DCR 58 regulations that had necessitated changes to the DCR 58 in 2001, upheld the sale of land by NTC. The Supreme Court also addressed the factual issue of whether the amendments of 2001 would lead to a reduction of open space in Mumbai. Upon analysis of the impact of the amendment to DCR 58 in terms of availability of green areas, the Court found that there would be no substantial reduction in the green areas under the new DCR 58, as compared with the old DCR 58.

Land use at neighbourhood locations:

Neighbourhood locations which were occupied by chawls continue to remain so even after recent development. The new residential development has either come on the mill lands or along the sea front area of Worli (western part of Worli – Parel belt).

6. Impact of development on textile mill lands on CBD and suburban property markets

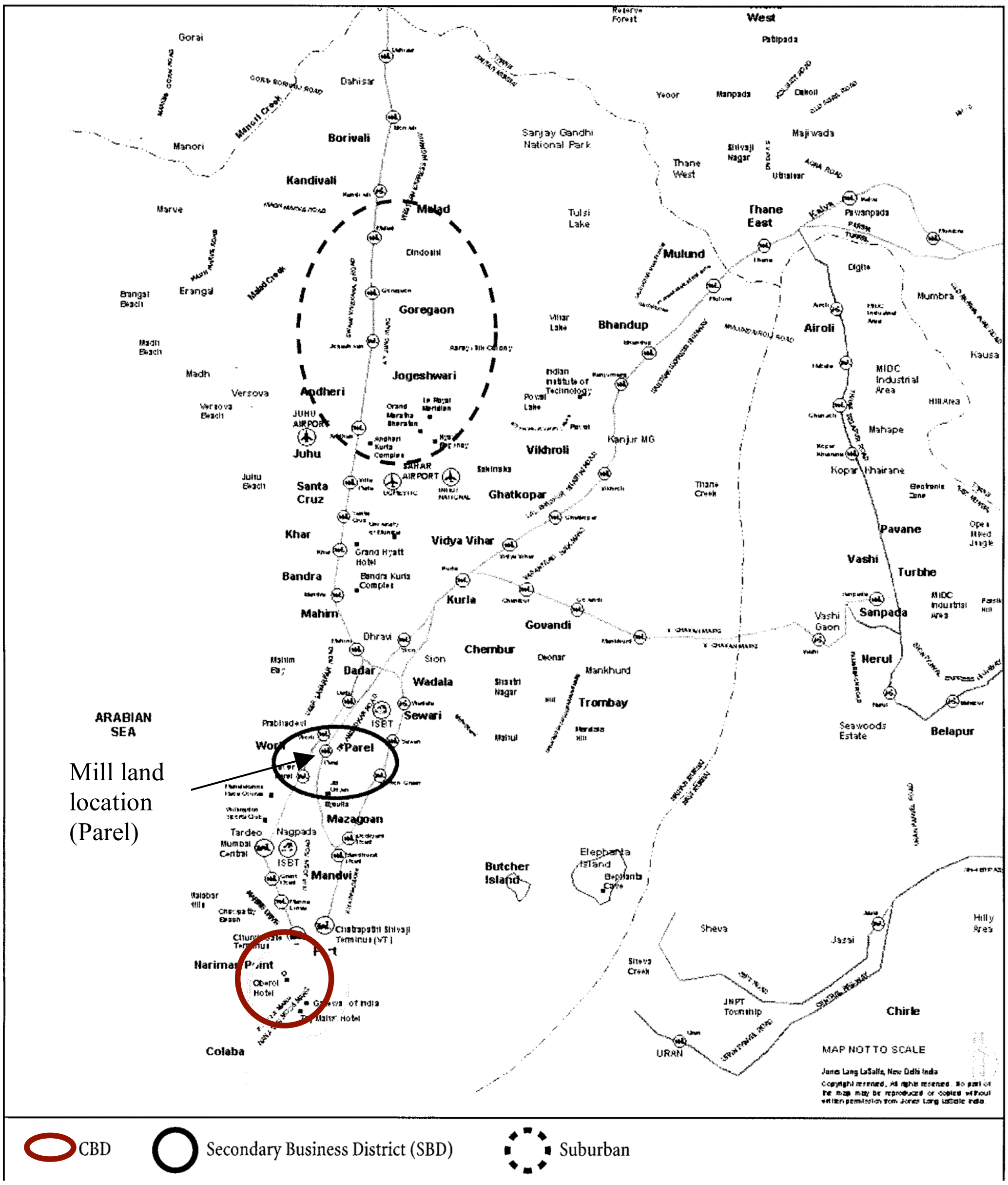
Property markets in Central Mumbai (where textile mill lands are located) relate to broader property markets in Mumbai. For example, the office space in Central Mumbai competes for users and investors with the office space in the CBD and Suburbs. The residential and retail development on mill land competes with other locations in Mumbai. This section analyses key property market indicators in Central Mumbai with in the context of Mumbai property market. The context as Mumbai property market is extremely important here because property markets in the Central Mumbai don't operate in isolation.

Figure 5 shows various micro-markets (in property consultant terminology), as explained later, for office property based on JLL (2005). Three micro-markets (Central business district, secondary business district and suburban locations) have been highlighted in Figure 5. The discussion here also uses this classification. It may, however, be emphasized that this classification is essentially from simplification point of view for exposition purposes rather than a functional classification. For example, the traditional hub of corporate office location was the CBD but it is not unusual to find corporate offices located in the suburbs. Similarly, high end analytics is located in suburban location as well as in the CBD. Economic expansion has merged the traditional boundaries.

The CBD comprises of following areas: Nariman Point (location of international companies, insurance companies and consulting firms), Cuffe Parade (high end residential location, World Trade Centre and office buildings), Fort/Fountain (Business and government offices, national and international banks) and Ballard Estate (prime commercial area). Secondary business districts include Worli and Parel (Central Mumbai). Suburban locations include Bandra, Andheri, Malad and Goregaon to the west and Powai, Mulund, Navi-Mumbai to the east (Figure 5). It may, however, be pointed out here that prior to mid nineties, the total usable commercial space in SBD (Central Mumbai) was very small compared to CBD or suburbs. The only location which had commercial space was Worli. Parel, where textile mill lands were located, was not part of the secondary business district. Separate classification for

Central Mumbai (Worli and Parel) as SBD is appropriate now than it was in mid nineties.

Figure 5: Mumbai micro-markets for office property



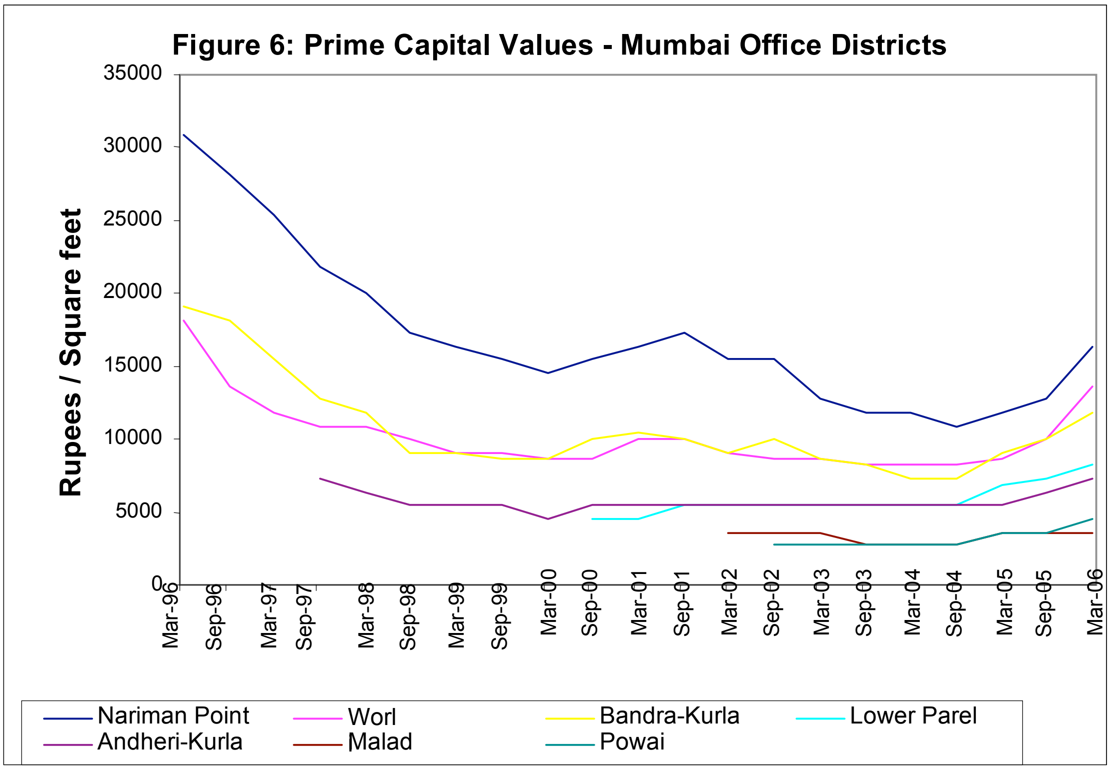
Source: JLL (2005).

Figure 6 presents the prime capital values[4] for office space in certain office districts of the CBD, SBD and suburban locations. Property prices in Mumbai had seen secular growth for more than two decades prior to 1990s. Perception from past property market performance and economic liberalisation process that was initiated during early nineties led to the belief that property markets in Mumbai would continue to rise. During first half of nineties, the property markets were driven by the speculative bidding of investors (Weinstein, 2005). Capital values of office property at Nariman

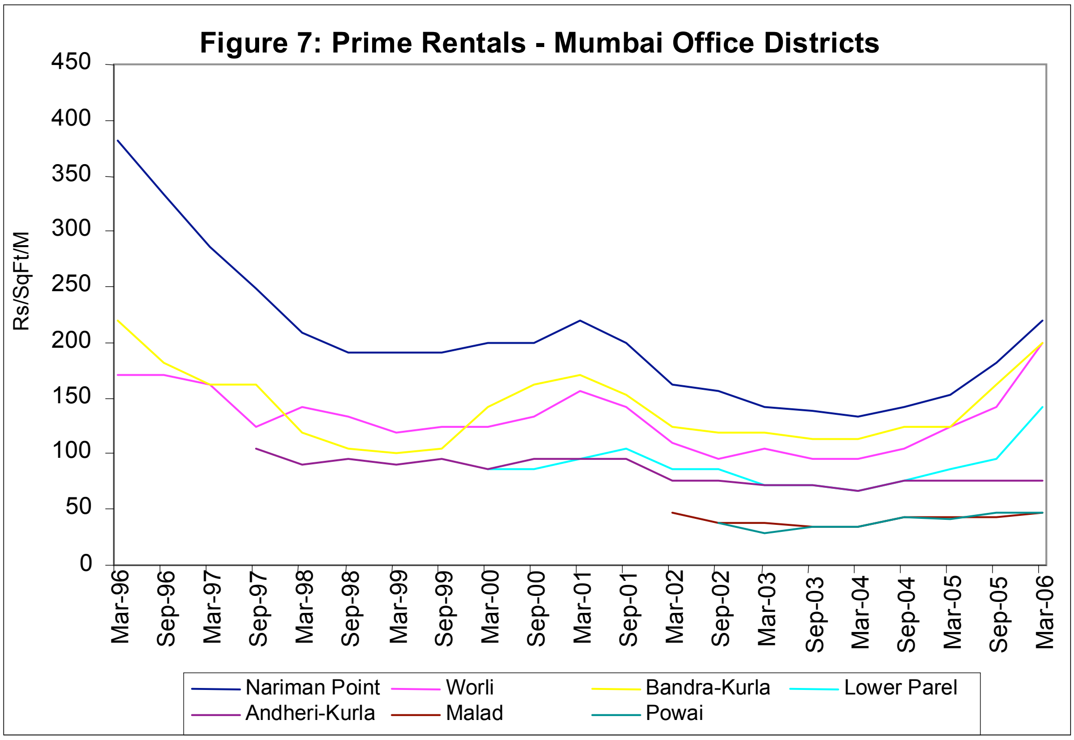
[4] It must be pointed out here that capital values here are not for constant quality properties and are extracted from reports prepared by property consultants. The notion of prime properties is subject to debate but usually refer to high quality, well maintained buildings.

Point had peaked by 1994, rising to a level which some authors (for example Nijman, 2002) believed that they were highest in the world. The ripple effects from CBD led to the rise in office property price in secondary business district and suburban locations. The peak in property prices in the SBD and Suburbs came two years later in 1996. However, the property prices crashed and by March 2000 the property price in the CBD had halved. Suburban locations (Andheri – Kurla) remained stable because the nature of demand in these locations was being sustained by out-migration of low value added activities from CBD, which could not afford high property prices of the CBD.

The second half of nineties saw a decline in property markets in Mumbai. The downswing in property prices in CBD, SBD and suburbs continued until mid 2000. The prime property prices had fallen by almost 50%.



Source: Cushman and Wakefield (2006)



Source: Cushman and Wakefield (2006)

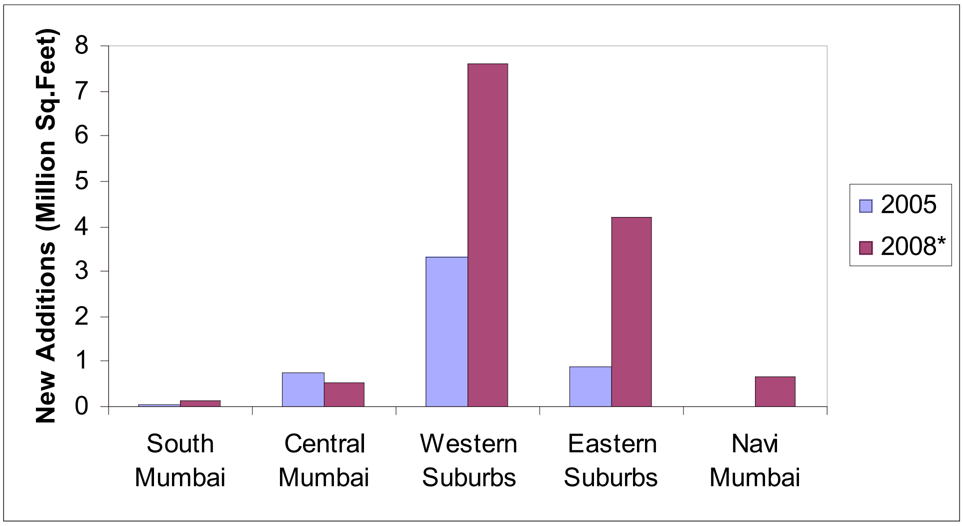
The property market reversed in 2001 for a brief period; however, the momentum was not sustained. The prices continued to decline until second half of 2004. However, since then the prices have again risen sharply. Rental values for office property are shown in Figure 7. Rental value also declined and the vacancy level for use property in the CBD increased substantially, rising to about 16% in 2001 (JLL 2005). Many of the corporate, though retained their headquarters in the CBD, relocated their operations to the suburbs.

Prior to 2004, the capital values and rents in Parel (an SBD location) moved along with the suburban locations (Andheri – Kurla) in absolute terms and relative to other locations. Even though the redevelopment on mill lands had begun, the supply of quality space was slow and it got further affected by depressed property markets. Since 2004, after property markets started to recover, the capital value and rent movement in Parel has been substantially higher than Andheri – Kurla and the trend is towards convergence of this location with other SBD.

Between 2000 and 2006, the supply of new office space was very much skewed towards the suburbs (Bandra Kurla and beyond), as these were the locations where "Greenfield" development was possible (Figure 8). Even through the redevelopment in CBD were permitted, not much supply was forthcoming because FAR restrictions of 1977 made redevelopment unattractive[5]. Average rental values at CBD locations (Figure 8) had declined by more than 50% by 1998 from their levels in 1996. The addition to the office space supply in Central Mumbai (where mill lands are located), was around 0.75 million square feet. Projections by Knight Frank (2006) suggest that an additional 0.5 million square feet would be added by 2008.

[5] Based on discussions with Arvind Nandan of Cushman and Wakefield.

Figure 8: New additions to prime office space supply (Million Square feet)



* Projections
Source: Authors' calculations based on various reports by JLL, Knight Frank.

However, since March 2004, rental values have also appreciated[6] and vacancy levels by the March 2006 fell to 3.6% (JLL, 2006). The demand drivers, post 2004, are high end services. With booming economy, financial sector and relocation of global analytical and equity research, a new breed of services, 'analytics' have emerged[7]. These 'big margin' businesses along with general space expansion of corporate headquarters are demanding space in the CBD and SBD.

Residential property market has always been the most active market in Mumbai. Historically, due to huge migration of population to Mumbai and constraints posed by the rent control laws, the prices for ownership residential properties kept on appreciating. Restrictions on the development in Mumbai Island led to substantial property price appreciation in these locations. The new development of residential property was possible in the suburbs and the demand always surpassed the supply, leading to property price rise and expansion of city outwards. After 1991, when the TDRs were permitted, residential property development offered immense potential for the application of TDRs. This led to increase in residential land values in suburbs.

After 1996 when the property market went into slump, the demand for prime residential property (in CBD and Worli) declined. From 2000 to 2004, the residential prices had fallen by 20% (Figure 9). The suburban market in residential properties which added huge supplies during the first half of 1990s also started to decline.

Interesting development, however, was taking place on textile mill lands (particularly private mill lands since 1991). Historically, the Central Mumbai area where mills are located suffered from working class area perception and the property prices were low, despite being close to the CBD. Not much new residential space could be constructed

[6] During 2005-06, the rental growth in the CBD was 25% and SBD was 10-15% (Discussions with Manisha Grover of JLL).
[7] Based on discussions with Manisha Grover of JLL.

because of hardly any open land and prevailing land use restrictions. When amendments to the DCR 58 took place in 1991, huge development possibilities arose on the mill land. Seizing the opportunity and upward residential market trends during first half of nineties, residential development started to take place on private mill lands. Table 2 shows the type of development on mill lands.

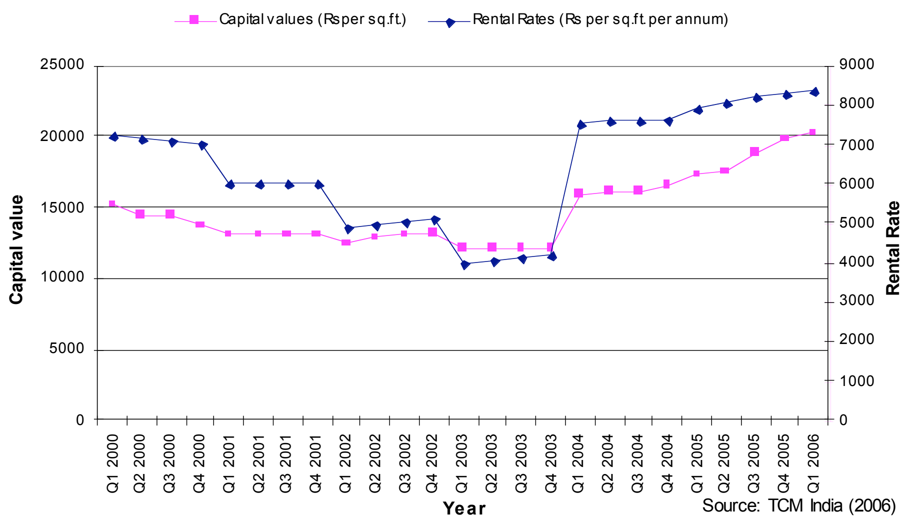
Table 2: Nature of development on private mill lands, 2005

Type of development	Number of mills	Total area of mills
Office/commercial	7	24
Residential	10	36
Mixed use (combination of commercial, residential and retail)	6	26

Source: Knight Frank (2005)

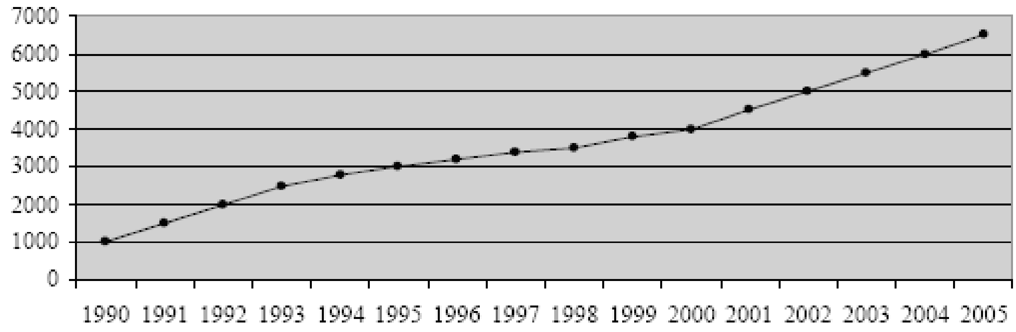
New development was notionally different from the existing residential stock in Mumbai Island as it was more like suburban development of 'gated communities' with amenities being internalised with in the development[8]. Developers marketed these properties as 'get suburban facilities in the heart of city'[9] developments. The product was differentiated by adding fringe facilities like club house, swimming pool, private garden, high tech connectivity in the apartment etc. Residential property prices in Lower Parel increased, as shown in Figure 10. Suburbs have been experiencing more township development projects whereas new developments in South and Central Mumbai focussed on product quality, brand and large size dwelling unit[10]. Figure 9 indicates that the prime residential values in Mumbai increased by around 30% during 2000(Q1) to 2006(Q1). During this period the residential property price in Parel increased by around 60%. The value gain from conversion of land use from textile industry to commercial and residential in Parel has been substantial. As shown in Figure 9, compared to 1991, the residential prices had increased seven fold by 2005.

Figure 9: Prime values and rental in Mumbai Residential market



[8] Based on discussions with Suresh Menon of HDFC.
[9] Based on discussions with Fali Pooncha of Knight Frank.
[10] Based on discussions with Fali Pooncha of Knight Frank.

Figure 10: Property prices in Lower Parel



Source: Knight Frank (2005)

Retail shopping malls, as an asset class emerged as a 'new product' in Mumbai around 2003 (though a few superstores existed in Mumbai prior to 2000)[11]. During 1996-2004 periods, when the office property markets were declining, builders started to focus on shopping malls. The growth in supply of retail mall space has been phenomenal. The total space in retail malls grew from 1.51 million square feet to 4.5 million square feet in 2005. This is expected to grow to 20 million square feet by 2007 (Knight Frank, 2005). Prior to 2003, 95% of the new supply was added in the suburbs. By 2005, the share of Mumbai Island in total retail space increased to 15%. A large part of the new retail space by 2008 would be added on mill lands. Malls are scattered all over the city. The average vacancy declined from 35% to around 10% (JLL, 2006). Malls in Mumbai Island have the lowest vacancy ranging between 2-5% (ibid).

Above discussion suggests that property markets in Parel (development on mill lands) have not had negative impact on other locations. The new development has been slow to add to cause negative impact on other property markets.

7. Explaining land use and market outcomes on textile mill land in Mumbai

Property market and land use outcomes related to Mumbai mill lands are a result of economic and institutional transformations which have taken place during the last three decades.

In this section, we interpret the property market indicators in Central Mumbai, where mill lands are located, and how they relate to other locations with in Mumbai property markets, with in the context of economic and institutional developments. The focus of the analysis is not limited to DCR 58, which had direct impact on mill lands, rather a whole range of policy and institutional developments which have shaped property market outcomes have been analysed. To supplement the analysis, we conducted semi-structured interviews with leading property professionals and government decision makers during the period of July-August 2006. Interviewed professionals are part of the top management team of the organization which they represent (CEOs or Head of Divisions) with all of them having professional experience of at least 15 years. No two respondents were from the same organization. Respondents' have been

[11] Most of the retailing in India is un-organised, through independent individual owned shops. Organised retailing constitutes only 2-3% of retail market (JLL, 2006).

directly involved in the recent developments related to textile mill land and property markets in Mumbai. There prime areas of operation are presented in Table 3. Semi-structured interviewed were conducted through face-to-face or telephonic interviews. Though for some arguments, we have referenced a specific respondent. However, when more than one respondent shared the view, we have avoided specific referencing and the credit for the argument goes to all of them.

Table 3: Sector of operation of respondents

Sector of respondents	Number
Property consultants	4
Planners	1
Developers	1
Government decision makers	1
Financiers	1

Source: Authors' survey.

Based on the discussion of property market indicators in Section 6, we make following three observations specific to mill lands:

Observation 1: Regulatory changes related to mill lands were largely reactionary, being shaped within the prevailing economic and property market conditions, rather than futuristic and strategic. Demand for space for three asset classes (residential, office and retail) have outpaced supply at all locations since 2004.

Observation 2: Despite land use/development policy changes since 1991, not much new supply on mill lands has actually come to the market. Competing objectives of various interest groups (Mill owners, Government, Environmental groups, Worker unions) have slowed down the process of bringing mill lands into the market.

Observation 3: The mill lands have not affected property market outcomes in other micro-market. Positive demand drivers (transformation forces) have far out-weighed negative impact of mill land policy (if any), in other property micro-markets.

We analyse above three observations in terms of five factors: supply, demand, market risk and uncertainty, information availability and price. The discussion would rely on the information gathered through data collection and interviews.

Supply, demand and prices

With the expansion of the economy since 1991, the demand for commercial space has increased. Structural changes in the economy and the emergence of service sector led by IT/ITES changed the nature of space demanded. New occupiers demanded space that had large and flexible floor plan. In addition, there was an increase in the demand for high end space for expansion of corporate headquarters of both domestic and foreign firms. Forces of globalization, global capital or foreign multi national corporations (MNCs), local expansion of the economy have played an important role in shaping property prices. In explaining the volatility in commercial and residential property prices, local and national regulatory environment and changing domestic demand are more consequential than external forces of globalization (Nijman, 2002). The hype created during the first half of nineties by the entry of trans-national firms contributed to the rise in property prices in Mumbai, however this phase was short lived. The CBD of Mumbai and surrounding areas were saddled with restrictive land regulations. FAR were frozen to 1.33, office location policy restricted new construction of office space in Mumbai Island (this policy was changed in 1996-2001 Master Plan), changes to DCR 58 which were proposed during 1991 to allow mill land to redevelop for commercial purposes were not perceived as attractive by mill owners. Consequence was that the property capital values in Mumbai Island were appreciating because supply curve was inelastic. Locations where development was possible were in suburbs. Though some mill owners were responding to the price signals and were developing either by themselves or forming joint ventures with developers to develop, others were holding land for further favourable changes to the regulations which may allow them a larger share in development gains.

Prices started to rise and appreciated by more than 2.5 times during 1990-94 (Weinstein, 2005). During 1991, another policy change that had implications for land supply was the introduction of development rights. These rights, in the form of TDR were allowed to be loaded on the new development in the suburbs. Huge supply of TDRs came to the market and led to the boom in construction activity in the suburbs, particularly along fringes of the Island city. Development on the planned new financial district, Bandra – Kurla complex (a suburban location at the fringes of Mumbai Island), also picked up pace. New construction was larger and had open floor plan compared to existing CBD commercial space. High prices in the CBD, mismatch between types of space demanded and supplied, limited new supply in Mumbai Island led to the location of existing companies through expansion and new companies, in suburbs.

The competition from other cities (such as Delhi, Bangalore, Hyderabad and Chennai) intensified who were implementing favourable policies to attract a greater share of international investment and foreign firm headquarters, offices and production facilities (Weinstein, 2005). Along with Bangalore, the satellite town of Delhi, Gurgaon, emerged as a destination for IT/ITES firms in India (Knight Frank, 2000). The post 2000 property price rise in India was led by cities like Gurgaon and Bangalore, where the availability of large land parcel facilitated the development of office space demanded by the emerging service sector[12]. The suburban property markets (Andheri-Kurla, Malad and Powai) were largely stable due to demand for setting up of back offices or call centres, which required huge space at low cost. During the period 1996 to 2004, the property prices in the traditional CBD of Mumbai declined on average. Other Mumbai micro-markets followed the CBD. The price decline until 2004 in various micro-markets in Mumbai were in response to competition from other cities rather than due to development on mill lands.

Construction activity on mill land in central Mumbai after the changes in the DCR 58 in 1991 was initiated in big way, however, the new development happened in a fragmented and leapfrog manner. One of the policy objectives of the DCR 58 of 1991 was to bring two-third of the land for open space and public housing. The land that was surrendered for open space and public housing was only 15% of the total land that was developed (Adarkar and Phatak, 2005). Public authorities were asked to hold further permissions till an integrated development plan was proposed. The committee

[12] Based on discussions with Akshaya Kumar of Colliers International.

that was constituted to prepare integrated development plan submitted its report in August 1996 but by then property markets had moved into downward phase. After intense lobbying by mill owners for further amendments to the DCR 58, and with in the broader scenario of falling property prices, the DCR 58 was amended in 2001. As discussed earlier, this allowed mill owners to sell/develop almost all the land for commercial purposes.

Contrary to the expectations, additions to the supply has not been forthcoming as the process of getting approval for development of mill lands from public authorities has been quite lengthy, at times taking 3-4 years[13] on account of clearances required from various agencies. Environmental clearance itself takes up to one year[14]. Mill land supply is also coming to the market in rather small parcels to have major impact on overall supply of land[15]. NTC sold part of its mill land holdings. A major chunk is yet to be sold by NTC. Some of the private mill lands suffered from unclear titles. Land prices in Lower Parel (where most of the mills are located) remained stable during 2001-05 as the addition to the supply of built space has been steady but slow. In 2005, the biggest mill lands owner, NTC put seven mills on auction. As discussed earlier, the auction value achieved by these mills had surpassed all market expectations. The reserve price which was based on valuation by market experts was 1.8 to 3.5 times lower than the achieved sale price.

A number of ex post explanations could be accorded to this outcome:

(i) This was the first time that such a huge chunk of land, free from encumbrances, was being auctioned in Mumbai Island. The comparative evidence of similar transaction was not available for valuers to base their valuation[16].

(ii) The nature of buyer/investor has changed. The development industry in different cities in India is largely dominated by local players. Traditionally local developers had competitive edge over outside developers because of their better knowledge about local practices, laws and ability to secure development rights on clear titled land (Knight Frank, 2002). The developers on private mills lands were local builders (Table 6) but the nature of developer/investor who bid were NTC mill land transformed. NTC mill lands are clear titled. The DCR 58 does not impose any restrictions on use – office, retail or residential (except that polluting industries are not permitted). These acted as positive factors for the sale. The first NTC mill was sold to Indiabulls, an investment firm for which this was the first property development venture. Indiabulls together with foreign direct investment from a US based investment firm, Farallon Capital Management LLC had bid 1.8 times above the reserve price (undisclosed). Two months later, another mill was sold to a consortium of a Delhi based developer, DLF and Mumbai based developer Akruti Nirman Group. Other mills were sold to local developers but the level of bidding price had risen because of competition from non-local bidders.

---

[13] Based on discussion with Akshaya Kumar of Colliers International.
[14] Based on discussions with Suresh Menon of HDFC.
[15] Based on discussions with Arvind Nandan or Cushman and Wakefield.
[16] Based on discussions with NTC.

(iii) The third explanation for the high bid price, could be that starting March 2004, the market itself had turned upwards due to increased liquidity. Low interest rates, increase in lending volume for real estate by banks and availability of investible funds from a number of private real estate funds increased the availability of funds for real estate[17]. This put the property prices on upswing. Since the whole bidding process had taken more than a year and half, the reserve price, which was based on valuation conducted quite some time before actual sale, was undoubtedly low[18].

The impact of mill land sale on property prices at other locations has been profound and largely positive. Earlier this year in January 2006, a plot of land of size 7.5 hectare (with land use as part commercial, part convention and exhibition centre plus hotel) at Bandra- Kurla complex was sold for Rs. 11041 Million[19], almost double the reserve price. The bid price was 20% higher (based on per square feet price of built up space excluding construction cost) than nine commercial plots that were sold at Bandra – Kurla complex just a fortnight ago. Important aspect of this auction was that none of the five top bidders were usual local developers[20] and for the two of them (including the highest bidder), real estate was not the core activity.

As discussed earlier post 2005, the general property prices in Mumbai have increased (Section 6). Compared to March 2004, the commercial property prices in March 2006 appreciated by around 65% (in Bandra-Kurla, Worli and Powai) and by around 50% in Parel (where mill lands are located). The commercial property prices in the CBD have increased by around 40%. Other suburban locations also appreciated by around 35%.

Market risk, uncertainty and information availability

One of the functions of market economy is to convert uncertainty into risk. Risk is calculable and manageable but uncertainty has huge transaction cost. Public policy has the potential to directly affect the prices through the extent to which it increases of decreases the risk and uncertainty. Information availability plays a crucial role in reducing risk and uncertainty in land and property markets and the state has crucial role in reducing information shortages and asymmetry.

Until very recently, and even now, the development industry in Mumbai is dominated by local players. One of the main entry barriers for developers from outside Mumbai has been the non-availability of clear information, such as property titles and process of securing development rights, for various parcels of land. Taking the political economic perspective, those who control information wield disproportionate bargaining strength in the market; undoubtedly Mumbai market was almost totally dominated by local developers. Sale of NTC Mill lands and BKC land opened up the

---

[17] Based on discussions with Akshaya Kuman of Colliers.

[18] Based on discussions with Akshaya Kumar of Colliers.

[19] Interestingly, this was the third attempt to sell the plot by MMRDA. One last two occasions the interest in land was weak. In its second attempt in 2004, MMRDA received only one bid and the bid price was less than one-tenth of current achieved price. It may, however, be flagged here that the components of permissible uses have changed in the recent bid compared to earlier. The allowed commercial space has increased.

[20] The top five bidders were Reliance Industries Ltd, DLF Universal, Reliance Communication, Gammon India and Emmar – MGF.

possibilities of enhanced competition. The size of sale was large enough to attract interest from non-local developers and investors. The government policy clearly spelt out the development rights and the property titles were well defined. Reduction in risk associated with these transactions led to the increase in property prices.

There have also been improvements in the level of availability of property market information in published and private form. Information on broad legal processes has improved. Local firms have begun to adopt internationally accepted accounting and reporting practices (JLL, 2006). All these have contributed to reduction in risk. Improved transparency levels have the potential of creating environment which could lead to substantial development activities.

However, the impact of public policies on reduction of uncertainty has been weak. In the case of mill land, the whole process of the allowing sick/closed mill land to be utilised for productive purposes took more than fifteen years. The policy (old and new DCR 58) left many loose ends and subjectivities in the interpretation that the whole process of mill land development was at the brinks of collapse. The PIL against the sale of NTC mill lands and on the interpretation of the DCR 58 in the Mumbai High Court clearly demonstrated the vagueness in the policy. The High Court judgement interpreted the DCR 58 and other policies (order from BIFR) in a different manner than the government and had put a stop on the development even after the sale of land was concluded. The uncertainty that exists could not be emphasized more. Though the Supreme Court reversed the High Court order, the whole process of lengthy legal battle had its impact on property markets. No new built space has come to the market since 2001 on mill land. This was defeating for the initial objective of policy change (from DC rules prior to 1991 to old DCR 58 1991 and later to new DCR 58 of 2001) which aimed at increasing the supply of land in Mumbai[21]. Even the process of giving approval to the development plans of mill owners underwent frequent switches (during 1991 till now), as the public authorities tried to keep up with often unclear objectives, so aggravating uncertainty and transaction costs. Even now policy is uncertain. Recently, NTC approached public authorities for approval for sale of their remaining mills but the public authorities required them to give away larger area for public space and also required them to develop public infrastructure even for the mills which they have already sold[22].

Product Innovation, Market expansion and Novae investors

The development that has come up during last five years is more 'attuned to demand from domestic and foreign companies; and tenants are driving an improvement in the quality of commercial real estate development' (JLL, 2006). Campus development in the suburbs is a new product to suit the requirements of IT/ITES sector. The product demand of residential buyers, have also changed as their affordability levels have improved.

Market boundaries are merging as the demand for space is increasing[23]. The traditional micro-markets have become much more integrated as the size of economy has expanded. The land use constraints such as FAR limits are still a binding

[21] There were also social objectives such as increase in open space and construction of public housing.
[22] Based on discussions with NTC.
[23] Based on discussions with Manisha Grover of JLL.

constraint on the supply in the CBD; the only way to cope with the economic expansion is to develop outwards. Positive consequence of this is that fringe areas are not marginalised.

Property investor profile has changed. Earlier the investors in the market used to be high net worth individuals. In 2004, when real estate mutual funds were permitted, a number of private equity funds have emerged. With liberalisation of FDI norms, the foreign investors have also entered the market through development or venture capital route. There is huge liquidity in the market looking for prime properties. The supply is so short that private equity funds are still 'exploring market'[24].

8. Conclusions

Cotton textile mills, as a group, are the largest landowners in Mumbai occupying around 2.5 square Km land in Central Mumbai. These mills, 58 in number, under public and private ownerships, have faced similar economic fortunes. During their development over 150 years, the mill lands location underwent a transformation from poles to enclaves and then since 1991 redeveloped as poles of economic activities. The paper has following objectives: (i) to analyse institutional and economic forces that causes transformation from poles to enclaves and again re-emergence as poles, and (ii) to understand the impact of Mumbai mill lands development on other property markets in the CBD and suburbs in Mumbai. The theoretical framework with in which this research has been conducted is to explain the temporal transformation process of the mill lands and their impact on property markets in Mumbai is the political economy of institutionalism, discussed in Adams et al. (2003). Economic and institutional explanations have been provided for the changes that have caused transformations at the mill lands location and how these transformations particularly since 1991 have impacted upon other property micro-markets in Mumbai.

Various economic and institutional developments that have surrounded cotton textile mills are as follows:

- Cotton textile mills were the generators of economic activities and employment for more than 150 years prior to 1980s. These mills have led industrialisation process in Mumbai. Earlier location of these mills was at the fringes of traditional CBD.

- During seventies cotton textile mills faced fierce competition in international markets. Quota regime and declining cost advantages (and industrial action by workers) of these mills started the decline of these mills. Post 1980, growth management strategies adopted in the Regional Plan which rigidly controlled the land use and affected the modernisation and relocation of mills.

- The economic base in Mumbai transformed from industrial to services. Growth restrictions in Mumbai Island imposed by Regional Plan 1970-91 led to substantial property price rises and policy approach adopted by Plan to promote poly-nucleated city space caused the growth to jump over the mill

[24] Based on discussions with Arvind Nandan of Cushman and Wakefield.

land locations to suburbs. Mill lands were not permitted to change their land use.

- Mill land owners could not sell their lands without surrendering a large portion of land for public uses due to ULCR&A (1976). Realizing that gains from land use conversion were huge, mill owners continued to manufacture textile even though it was loss making, in many cases, while lobbying for change in land use. Closure of mills would have attracted provision of ULCR&A (1976). The response of Government was also to revitalise these mills rather than to permit the land to be used for best use. Mill owners allowed their lands to become enclaves.

- Property prices continued their secular growth during eighties and early nineties. Liberalization policies adopted in India since 1991, globalization of economy, substantial increase in local and domestic demand for space and opportunity to revise Regional Plan (which ended its term in 1990) led to re-visioning of growth management strategy.

- Changes in the Development Control Regulations since 1991 which permitted land use changes opened up potential for redevelopment on mill lands.

- Property prices for all types of properties in all micro-markets in Mumbai increased from 1991-94, declined and remained subdued during 1999-2004 and increased subsequently in all micro-markets.

Following are the conclusions from the study regarding their impact on land and property markets in Mumbai:

Impact on urban form and property market

- Despite land use/development policy changes since 1991, not much new supply on mill land has actually come to the market primarily because regulatory changes related to mill lands were reactionary, being shaped within the prevailing property market conditions, rather than futuristic in shaping the market outcomes.

- The policy changes related to Mumbai textile mill lands have undergone frequent changes during 1991-2006, causing uncertainty. The uncertain policy changes have led to the slow pace of development on mill lands.

- Additions to the built space supply has been in a fragmented and leapfrog manner, on mill lands and this has had marginal effect on property prices in other locations. Positive demand drivers have far out-weighed negative impact of mill land policy (if any), on other property micro-markets.

- Mill owners have adopted various strategies to develop their land. Private textile mill owners have formed joint ventures with developers or sold land to developers or in other cases have themselves undertaken the development activity.

Local, spatial impacts and viability of fringes of pre-existing cores

- The impact of mill land development on neighbourhood land use has been minimal as most of the land surrounding mills is residential dominated by low quality multiple-tenant properties. The redevelopment of these properties has been difficult because of rent control act which protects tenants against eviction.

- The new high quality luxury residential development has come up either on the mill lands or along the Western coast of the city.

- The nature of demanders for commercial space in Mumbai have transformed from industrial plus service sector to service sector. The growth of IT/ITES and financial sector led to the demand for state of art space with large, flexible floor plate. This type of space was available only in the suburbs (prior to1991) due to restriction on development in the Mumbai Island.

- Property markets have also witnessed innovations in the product type, some led by public policies – such as easing restrictions on FDI in real estate, permitting real estate mutual funds and other caused by changing nature of demand – such as demand for luxury residential properties.

- The increased transparency has led to the transformation in developer industry in Mumbai and more and more outsider developers/investors are becoming active in Mumbai.

- International investors and developers are also causing transformation to the institutional structure of property markets by requiring better information and standardisation in accounting and financial practices.

- Traditional micro-markets are becoming integrated due to economic expansion as well as caused by still persisting restrictive land use policies, particularly related to Mumbai Island.

- Restrictions on development/redevelopment in the CBD due to various land legislations, has affected the supply and has led to price growth.

- Overall, the impact of mill lands led supply on property markets has been substantial in terms of product innovation, institutional development but marginal in terms of prices, in neoclassical sense.

References

Adams, D., Allmendinger, P., Dunse, N., Houston, D., Tiesdell, S., Townsend, J., Turok, I., and White, M. (2003) Assessing the impact of planning, housing, transport and regeneration policies on land pricing, Report for the ODPM, London.

Adarkar, N. and Phatak, V.K. (2005), Recycling mill land, Economic and Political Weekly, December 17, 2005, Mumbai.

Amin, A. (1999) An institutional perspective on regional economic development, International Journal of Urban and Regional Research, 23, 365-378.

BMRPB (1974), Regional Plan for Bombay Metropolitan Region 1970-91, Bombay metropolitan Regional Planing Board, Mumbai.

Chaturvedi, S. (2005) Impact of mill land on Mumbai's skyline, Accommodation Times, Mumbai.

Correa, C. (1996), Report of the study group on the cotton textile mills in Mumbai Part I, Charles Correa committee report, Mumbai.

Crosby, N., Hughes, C., Lizieri, C. and Oughton, M. (2005), A message from the Oracle: the land use impact of a major in-town shopping centre on local retailing, Journal of Property Research, 22(2-3), 245-265.

Cushman and Wakefield (2006) An overview of the Mumbai Market, Marketbeat India First Quarter 2006, Cushman and Wakefield (India) Private limited.

Economic Survey 2005-06, New Delhi.

Economic Survey of Maharashtra 2005-06, Mumbai.

Garreau, J. (1991), Edge cities: Life on the new frontier, Doubleday, NY.

Harris, N. (1995) Bombay in the global economy, in Patel, S. and Thorner, A. (eds.) Bombay metaphor for modern India, Oxford.

ING Real Estate (2006) Building up India, RREEF research, May.

High Court of Mumbai (2005), judgement on PIL writ petition no. 482 of 2005.

Jain, M.C. and Bhatt, H.M. (2006), Commentary on development control regulations for Greater Mumbai 1991, Law Times (Bombay), Mumbai.

JLL (2005), Corporate occupiers guide Republic of India, Jones land LaSalle, April.

JLL (2006), India A real estate investment future, Jones Lang LaSalle.

JLL(2006b) Mumbai Real Estate Review, Jones Lang Lasalle.

Keogh, G. and D'Arcy, E. (1999), Property market efficiency: an institutional perspective, Urban Studies, 36, 2401-2414.

Knight Frank (2002), India land property review, Knight Frank (India), Quarter 1, Mumbai.

Knight Frank (2005), Mumbai cotton textile mills, Knight Frank (India), July, Mumbai.

Knight Frank (2006), India office market review, Knight Frank (India), Quarter 2, Mumbai.

Markovits, C. (1995), Bombay as a business centre in the colonial period: a comparison with Calcutta, in Patel, S. and Thorner, A. (eds.) Bombay metaphor for modern India, Oxford.

Martins, A.D.C. and Sewaya, M. (2006), The impact of university campuses in disperse urban contexts: Case study of Brasilia, Brazil, Lincoln Institute of Land Policy.

Ministry of Finance (2002), The tenth five year plan (2002-07), New Delhi.

MCGM(2007), City development plan, Municipal Corporation of Greater Mumbai, http://www.mcgm.gov.in/ (accessed on 25th March 2007).

MMRDA (1996), Regional plan for MMR 1996-2011, Mumbai Metropolitan Regional Development Authority, Mumbai.

NCAER (2005), The great Indian market, presentation by NCAER on August 9, 2005, http://www.ncaer.org/.

Nijman, J. (2002), The effects of economic globalization: land use and land values in Mumbai, India, in Grant and Short (eds.) Globalization and the margins, Palgrave – McMillan, New York.

Patel, S. (1995), Bombay's urban predicament, in Patel, S. and Thorner, A. (eds.) Bombay metaphor for modern India, Oxford.

Reynolds, J. and Schiller, R. (1992), A new classification of shopping centres in Great Britain using multiple branch numbers, Journal of Property Research, 9, 122-160.

Roberts, P. (2000), The evolution, definition and purpose of urban regeneration, in Roberts, P. and Sykes, H, (eds), Urban Regeneration A Handbook, British Urban Regeneration Association.

Schiller, R. (1996), Town-centre winners and losers, Estate Gazette, 13, July 134-135.

Supreme Court of India (2006), Court judgement on the appeal by Bombay Dyeing, 7.3.2006, New Delhi

Van der Krabben, E. (1995) Urban Dynamics: A Real Estate Perspective - An Institutional Analysis of the Production of the Built Environment, Center for Economic Research, Tilburg University

Weinstein, L. (2005), Mumbai on the margins: towards a sociology of property relations in a globalizing city, University of Chicago, mimeo.

Wersch, H.V. (1995), Flying a kite and losing the string: communication during the Bombay textile strike, in Patel, S. and Thorner, A. (eds.) Bombay metaphor for modern India, Oxford.