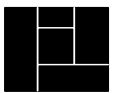


**PROSPECTS FOR ECONOMIC
GROWTH AND WORKFORCE
DEVELOPMENT IN THE MUMBAI
METROPOLITAN REGION**

INDIA URBAN INITIATIVES

Prepared For

Prepared with USAID Assistance
for the Mumbai Task Force
Subgroup on Economic Growth



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LIST OF ACRONYMS

AGERI	Agricultural Genetic Engineering Research Institute
AP	Karnataka and Andhra Pradesh
ASI	Annual Survey of Industries
BKC	Bandra-Kurla complex
BPO	Business Process Outsourcing
B-SAT	BPO Skills Assessment Test
CAD	Computer Aided Design
CAGR	Compound Annual Growth Rate
CIDCO	City and Industrial Corporation of Maharashtra
CRO	Contract Research Organizations
CSF	Critical Success Factors
E&M	Entertainment and Media
EOU	Export Oriented Unit
GDDP	Gross District Domestic Product
GDP	Gross Domestic Product
GESU	Genetic Engineering Science Unit
GET	Graduate Employability Test
GoM	Government of Maharashtra
GSDP	Gross State Domestic Product
IBAB	Institute of Bioinformatics and Applied Biotechnology
ICMA	International City/County Management Association
IDBI	Industrial Development Bank of India
IPR	Intellectual Property Rights
IT	Information Technology
ITES	Information Technology Enabled Services
KPO	Knowledge-Processing Outsourcing
LQ	Location Quotient
Mahyco	Maharashtra Hybrid Seeds Company
MFA	Multi-Fibre Agreement
MIDC	Maharashtra Industrial Development Corporation
MMR	Mumbai Metropolitan Region
MRF	Mahyco Research Foundation
NASSCOM	National Association of Software and Services
NCR	National Capital Region
NIC	National Information Center
NRI	Non-Resident Indian
PSCST	Punjab State Council for Science & Technology
R&D	Research and Development
SME	Small and Medium Enterprises
SUM-II	Sustainable Urban Management – II
TCG	The Chatterjee Group
TIDCO	Tamil Nadu Industrial Development Corporation Ltd

LIST OF ACRONYMS
(continued)

TiE	The Indus Entrepreneurs
TUFS	Technology Upgradation Fund Scheme
UI	Urban Institute
ULCRA	Urban Land Ceiling and Regulation Act
WTO	World Trade Organisation
WTTC	World Travel & Tourism Council

I. EXECUTIVE SUMMARY

In 2003, Bombay First and McKinsey & Company published a report offering a vision for transforming Mumbai into a world class city, developed through a collaborative process with Mumbai's business leadership.

The Government of Maharashtra then established an interagency Task Force, with a strong Citizens Advisory Group, to design and implement a strategy that would elaborate the vision and translate it into reality. The task force operates through five subgroups: strategic planning, housing, economic growth, physical infrastructure, social infrastructure and governance. This report was prepared for the subgroup on economic growth. Chapter 1 offers an analysis of conditions and trends in the economy of the Mumbai Metropolitan Region (MMR) and offers recommendations for actions to remove barriers and stimulate growth in key economic sectors; Chapter 2 provides findings and recommendations on themes increasingly recognized as critical to the region's economic health: workforce development and mainstreaming the informal sector.

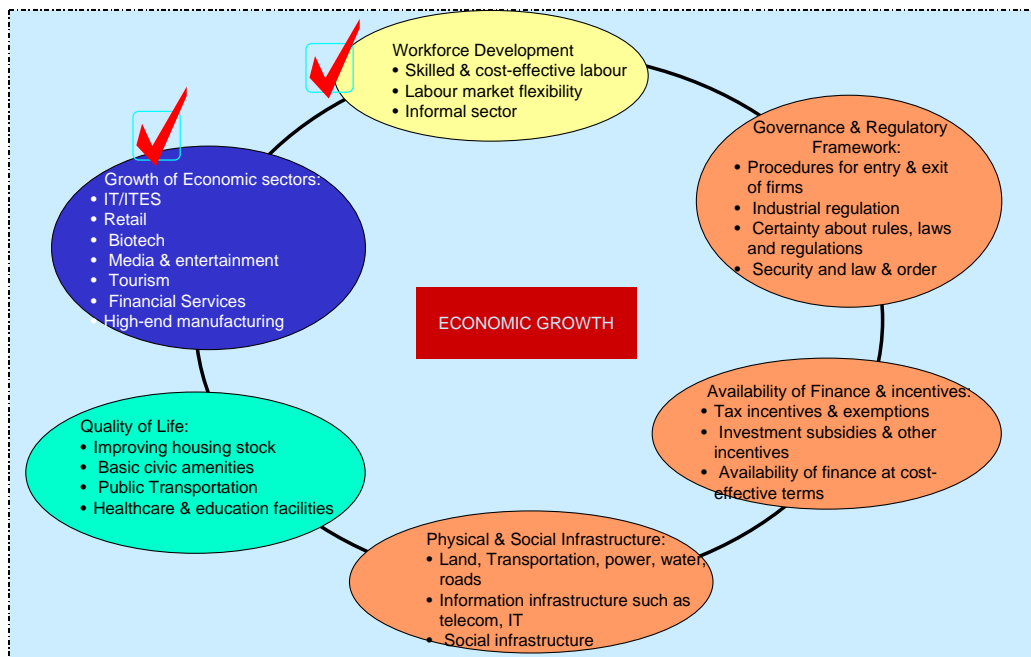
In 2005, USAID commissioned the Urban Institute and International City/County Management Association (ICMA) to conduct a study on rejuvenating economic growth of Mumbai Metropolitan Region (MMR) as part of USAID's India Urban Initiatives project.

Effective strategies for economic growth involve two themes:

1. Improving the local investment climate; i.e. reducing the general costs of doing business in the city
2. Providing specialized support to key growth industries

1. Improving the local investment climate. This entails a variety of activities that facilitate, and reduce the costs of doing business in general in Mumbai. It includes (see figure below):

Economic Growth Framework



- Providing adequate physical and social infrastructure
- Creating an efficient land/property market,
- Strengthening the system for workforce development
- Creating an effective regulatory environment (and reducing corruption)
- Rationalizing the system of taxation
- Improving access to market financial resources

2. Support key growth industries. Some economic industries are more important to the economy than others. While history has proved that it is inefficient to try to plan industrial development in detail, it is possible for local leaders to find ways to support industries that have the highest potential. This can mean, for example:

- Making special efforts to market and promote them nationally
- Giving higher priority to specific land and infrastructure projects that they need
- Giving higher priority to reducing regulatory barriers most important to them
- Working with universities to provide special research and training programs that will bolster their competitive positions
- Providing subsidies where high payoffs are likely to be gained

Other subgroups in the Task Force are considering the broader programs needed to improve the investment climate namely, physical infrastructure, housing, and social infrastructure. This report focuses on supporting key growth industries and workforce development.

It should be noted, however, that the issues related to increasing economic growth in Mumbai are interrelated and cannot be neatly segregated into these categories. As a result, Chapter 1 of this report includes at least brief discussions of physical infrastructure, land markets, regulatory issues, etc., while Chapter 2 addresses tax and access to credit questions as they relate to workforce development and the informal sector, and both Chapters 1 and 2 touch on the role migration has played in the economy of Mumbai and the importance of skills development for economic growth.

Chapter 1: Economic Growth of the Mumbai Metropolitan Region

Migration has contributed significantly to population growth in the Mumbai Metropolitan Region (MMR); this increase has put severe pressure on the civic infrastructure, especially housing stock. At the same time, there has been an increase in the slum population, with about 38% of the region's population—and about half of Greater Mumbai's—living in unregulated, poor quality structures with little or no sanitation. This underlines the importance of catalyzing economic growth and ensuring that it is spread more evenly throughout the region to reduced pressure on Greater Mumbai and allow the outer areas to develop.

The mainstay of the MMR's economy over the past decade has been the tertiary sector (services), currently representing a 64% share of GDP, which is typical of major metropolitan economies in India and around the world. However, the share of the secondary sector (manufacturing) is still substantial, although it has been declining over the past 10 years. Within these broad sectors, there are clearly some subsectors that hold greater promise in terms of growth and/or employment generation potential: information technology/information technology enabled services; biotechnology; media and entertainment; hospitality



and tourism; financial services; retail trade; construction; and manufacturing of textiles, chemicals, and fabricated metal products.

Chapter 1 includes profiles and specific recommendations for support for each of these subsectors (except financial services as it has already been analyzed in detail elsewhere). One important recommendation, which is also supported by the conclusions in Chapter 2, is that the MMR needs to provide a variety of skills-oriented educational options tailored to the needs of the key sectors of the economy and the needs of those seeking employment.

Chapter 2: Workforce Development and Mainstreaming the Informal Sector: Strategy for the Mumbai Metropolitan Region

As the MMR's economy increasing becomes dominated by the tertiary sector, the quality of the local labor force becomes more and more important in determining the pace of economic growth. While people with advanced technical skills are the leading edge in this environment, the remainder of the labor force is also critical and that component is now dominated by informal sector workers.

The informal sector—those economic activities that occur outside the framework of adopted laws and regulations—does not operate in isolation from the formal economy; rather, informal activities are integrated into the direct activities and support structures of all leading service and manufacturing industries in the formal economy. Informal sector activity does not create incentives that steer investment toward the most productive opportunities, it deprives the public sector of needed tax revenues to support basic societal needs and infrastructure required for economic growth, and it provides no protection of benefits to workers. However, the formal sector labor market is also subject to significant inefficiencies resulting from an onerous regulatory environment.

Currently, the informal sector accounts for 30%-45% of NDP and 55%-65% of employment. At the same time, unemployment is a serious concern, especially for youth: in 2001, unemployment in Greater Mumbai was 11.5% overall, but 28% for those aged 11-24.

Chapter 2 includes analysis of the informal sector and skills gaps in the MMR, an assessment of the current state of educational options for upgrading skills, interviews with NGO and public sector actors working on the issues of workforce development and mainstreaming the informal sector, case studies of the informal sector itself, and recommendations for addressing the challenges described in the report. Recommendations include incrementally legalizing aspects of current informal activities, creating an emergency response system for youth, and reforms aimed at providing vocational education through a range of mechanisms.

II. CHAPTER 1: ECONOMIC GROWTH OF THE MUMBAI METROPOLITAN REGION

INTRODUCTION AND SUMMARY

Introduction

In 2003, Bombay First and McKinsey & Company published a report offering a vision for transforming Mumbai into a world class city, developed through a collaborative process with Mumbai's business leadership.

The Government of Maharashtra then established an interagency Task Force, with a strong Citizens Advisory Group, to design and implement a strategy that would elaborate the vision and translate it into reality. The task force operates through five subgroups: strategic planning, housing, economic growth, physical infrastructure, social infrastructure and governance. This report was prepared for the subgroup on economic growth. It offers an analysis of conditions and trends in the economy of the Mumbai Metropolitan Region (MMR) and offers recommendations for actions to remove barriers and stimulate growth in key economic sectors.

In 2005, USAID commissioned Urban Institute and International City/County Management Association (ICMA) to conduct a study on rejuvenating economic growth of Mumbai Metropolitan Region (MMR) under the Sustainable Urban Management – II (SUM-II) Contract. Subsequently, ICMA commissioned ICRA Management Consulting Services (IMaCS) as a sub-consultant on this project.

Staff of ICRA Management Consulting Services are the primary authors of this report (A. Mahendra and Rashi Grover). However, G. Thomas Kingsley, of the Urban Institute (UI), and Manju Ghodke, on assignment with the International City/County Management Association (ICMA) are co-authors contributing substantive work in some sections and overall guidance. Ms. Ghodke spent six months full time working as an advisor to the Task Force while on sabbatical from Larsen & Toubro Ltd.

The consultants recognize that an effective strategy to promote economic growth involves two themes:

- a) Improving the local investment climate; i.e., reducing the general costs of doing business in the city
- b) Providing specialized support to key growth sectors

This report focuses on the second topic: supporting key growth sectors. In order to avoid duplication of work with that of other subgroups in the Task Force, which are working on broader programs needed to improve the investment climate (e.g., physical infrastructure, housing, and social infrastructure).

In this work, we take an "economic cluster" approach rather than one that focuses on traditional sectors. A traditional sectoral approach would look at the process of manufacturing a particular product individually. In contrast, the cluster approach recognizes that the manufacturing activities are themselves supported by a host of activities that occur in other sectors as conventionally defined.

As to its recommendations, this report focuses on opportunities related to key economic sectors and, as such does not attempt to cover all actions needed to spur economic growth in the region (many of which fall under the aegis of other subgroups). Particularly important in this regard are proposed programs in land reform and infrastructure provision (developed with World Bank support) and in workforce development.



The workforce development report, being prepared as a companion to this one, is also supported by USAID (the Urban Institute is the lead author, with contributions from ICRA and ICMA).

This report was developed by:

1. Assembling and analyzing secondary data on the MMR and its economy from a variety of economic surveys and databases.
2. Reviewing a number of relevant reports and publications on economic change and development approaches (international, national, and Mumbai specific – see list of references in Annex E)
3. Consulting national experts on economic development and, especially, on the key sectors selected as the focus of the work in Mumbai.
4. Interviewing professionals and industry experts (in both the private and public sectors) about the workings of the local economy and possible strategies and actions to promote growth.

Summary of Findings & Recommendations

1. Our analysis of GDP composition and growth trends for MMR's economy brings out the following:

Sector growth & share trends:

- a) In recent years, the mainstay of MMR's economy has been the tertiary sector, which is also seen as the key driver of growth in most large metropolitan economies. The tertiary sector in MMR grew at a compound annual growth rate (CAGR) of 7.6% over the period 1993-94 to 2003-04 and its share increased from about 52.5% of total GDP in 1993-94 to 63.5% in 2003-04
- b) The share of the secondary sector has been declining in the last 10 years (from about 44% of GDP in 1993-94 to 34% in 2003-04, though there are signs of revival in 2002-03 to 2003-04)
- c) Despite this, the size of the secondary sector is still substantial and cannot be neglected in the overall economic context of MMR. MMR still contributes to 50% of Maharashtra's manufacturing GSDP and over 8% of India's manufacturing GDP and within MMR, Greater Mumbai accounts for about 60% of MMR's manufacturing GDDP

Trends in volatility of GDP:

- d) An interesting feature of the economy of MMR and Maharashtra during the period FY94-FY04 is the volatility in year-on-year growth rates of GDP. MMR's GDP growth rate was negative in the years FY2000 and FY01 and even the growth rate of Maharashtra's GDP was negative in FY01
- e) The secondary sector is one of the major contributors to the volatility and witnessed negative growth for three consecutive years (FY 2000 to FY02). Within the secondary sector, the following sub-sectors were the major under-performers during this period (figures in parenthesis give the negative growth rate vis-à-vis the preceding year):
 - Manufacturing (-17%), Construction (-6%) and Utilities (-13%) in FY 2000
 - Manufacturing (-9%) and Utilities (-12%) in FY02
- f) "Manufacturing" grew at a CAGR of 3% (between FY94 to FY04) but there are signs of revival in the last two years (growth of about 15% per annum in FY04)
- g) The tertiary sector's growth (CAGR of 7.6%) is relatively more consistent and is the reason for MMR's economic growth during this ten year period

Primary sector:

- h) The primary sector contributes a very small share to GDP (2.6% in 2003-04, reduced further from its already low share of 3.3% in 1993-94). The CAGR for this sector was about 3.4% over the period 1993-94 to 2003-04. The sector's share has been declining, especially from 2001-02 onwards

Implications:

- i) Both the secondary and tertiary sectors will have to be given impetus to achieve 12-15% growth of MMR's economy on a sustainable basis
 - j) Within these broad sectors, there are clearly some sub-sectors that hold greater promise in terms of higher growth or greater employment generation potential and therefore these sectors should be focused on
 - k) While catalyzing economic growth, there is also the need for spreading out economic activities evenly throughout MMR, not just to Mumbai City
2. Going forward, a suggested overall vision for MMR is as follows:
- a) Enable economic growth of 12-15% per annum while ensuring even growth throughout MMR
 - b) Supplement this economic growth by facilitating superior quality of life factors to the citizens of MMR
 - c) Ensure equitable participation in economic growth by all segments of society
3. It is worth emphasizing again that the recommended strategy to achieve this targeted rate of economic growth recognizes two central themes:
- Improving the local investment climate; i.e., reducing the general costs of doing business in the metropolis
 - Providing specialized support to key growth sectors

Improving the local investment climate may be most important. As noted earlier, recommendations are offered in reports of other subgroups in the Task Force and others. The following topics are critical.

- Providing adequate physical and social infrastructure
 - Creating an efficient land/property market
 - Strengthening the system for workforce development (USAID is supporting a companion report on this topic)
 - Creating an effective regulatory environment (and reducing corruption)
 - Rationalizing the system of taxation
 - Improving access to market financial resources
4. This report concentrates on the second theme: providing specialized support to key growth sectors. It identifies two main groups of economic sectors to be targeted for achieving the above vision. The first includes the export-oriented sectors most likely to draw in resources from outside the region and, therefore, contribute to overall growth. The second includes sectors that have the highest capacity to absorb labor.



5. To identify key growth sectors, we examined data on all economic activities in the region (presented in the individual sections that follow). Two factors were emphasized:
 - a) Evidence of a high potential for future growth nationally
 - b) Evidence of a strong competitive advantage for the sectors in the MMR

National studies and experts were consulted to obtain evidence of growth potential. To rate local competitive advantage, we interviewed local industry experts and reviewed data on location quotients which show the comparative concentration of various industries locally. As a result of this research the following local sectors were identified in the key growth category:

- a) Information Technology (IT) and Information Technology Enabled Services (ITES)
- b) Media and Entertainment
- c) Biotechnology
- d) Financial Services
- e) Hospitality and Tourism
- f) High-end Manufacturing

Key growth sectors provide jobs directly but, often more importantly they provide jobs indirectly through multiplier effects. Our analysis shows that two sectors deserve special attention because of their labor absorptive capacity in addition to hospitality and tourism which has already been selected as a key growth sector):

- g) Retail Trade
- h) Construction

This report includes profiles (analysis and recommendations) for most of these sectors: IT/ITES, Media and Entertainment, Hospitality and Tourism, Biotechnology, Textiles (example approach to manufacturing) and Retail Trade. (As noted above, financial services is certainly a promising key growth sector for Mumbai. We do not profile it here only because a thorough analysis has already been done – see Bombay First, 2000.) Each of the profiles covers:

- Industry size & growth trends,
- Critical Success Factors for the industry,
- Maharashtra's current industry base,
- Why Maharashtra/MMR and the impact of the industry on economic growth and employment opportunities, and
- Interventions required to promote the industry.

6. The recommended overall approach to providing specialized support to these sectors entails the following types of interventions
 - Making special efforts to market and promote them nationally
 - Giving higher priority to specific land and infrastructure projects they need
 - Giving higher priority to reducing regulatory barriers most important to them

- Working with Universities to provide special research and training programs that will bolster their competitive positions
- Providing subsidies where high payoffs are likely to be gained

Highlighted recommendations across sectors are as follows (more detailed recommendations are provided in the profiles later on in the report).

7. New, higher profile initiatives to market and promote Mumbai's advantages and potentials are needed in particular for IT/ITES, media and entertainment, tourism, biotech and high-end manufacturing. One way to increase the forcefulness and visibility of these efforts will be to engage private sector leaders in each of these fields and encourage them to play leading roles. For example, well-known figures in entertainment from Mumbai could have a powerful influence in securing greater market shares for the MMR in tourism as well as in their own sector. High-level officials in state and local governments, however, will of course also have to be involved.
8. The provision of land and infrastructure to support these sectors is already endorsed in Maharashtra policy documents. What is needed now is a more forceful effort to implement projects with the highest payoffs – a fast-tracking mode is called for. In the profile sections later in this report, priority is identified for: the provision of sizeable high quality facilities for IT/ITES, particularly in Navi Mumbai and Thane; upgrading studio space and facilities for the entertainment sector; key locations for biotech that emphasize the Mumbai-Pune corridor; new tourist destinations (including a Bollywood City, similar to Universal Studios, recreation centres, like Sentosa Island, a world class amusement park, like Disneyland) and an international convention centre. Also, it must be remembered that physical infrastructure improvements throughout the region generally will be vital to creating attractive residential environments as needed to attract and retain a skilled work force in leading sectors. This means not only a significant improvement in the ease of commutation but also the development of efficiently planned integrated townships in the MMR outside of Greater Mumbai.
9. Recommendations for several of these sectors recognize the importance of notable further simplification and speed in the processes of gaining government approvals to set up new businesses and develop related land and infrastructure. Special windows with one-stop orientations warrant priority. (See sections on IT/ITES, biotech, textiles, and retail trade.)
10. Our research has also identified the increasing importance given to *security* by entrepreneurs in many of these sectors. This means effective local police work, but even more important today, it means security with respect to intellectual property rights (IPR). MMR officials cannot assure the latter only by their own actions but they could assemble a cross-sector leadership team to press the case for more effective safeguards at the national level. (See more detailed discussion in the sections on IT/ITES, media/entertainment, and biotech.) However, MMR leaders can do more within the region as well; for example, constituting a regional anti-piracy task force to carry out investigations, creating public awareness, promoting new digital technologies make it more difficult to break the rules.
11. Compared to other urban centers, the MMR is not enlisting its universities in support of economic development as well as it might. There needs to be an entrepreneurial effort to identify key needs and opportunities in individual key sectors and, then, to develop customized approaches to helping universities develop the new courses and research programs that are called for. Examples discussed later in this report include: a range of training courses needed to develop a high quality workforce in the



media/entertainment industry; new research institutes and training to support biotech; creativity centers to stimulate new product designs in textiles.

12. Last but not least, the state government needs to build strong capabilities within the pertinent departments in collating accurate data and statistics at disaggregated industry level within the primary, secondary and tertiary sectors. Only then can meaningful analysis of the economy be undertaken and help the government in taking suitable policy decisions.

1. DESCRIPTION OF THE REGION

1.1 Location

The Mumbai Metropolitan Region (MMR) encompasses a total area of 4,355 sq. km and consists of the following administrative units:

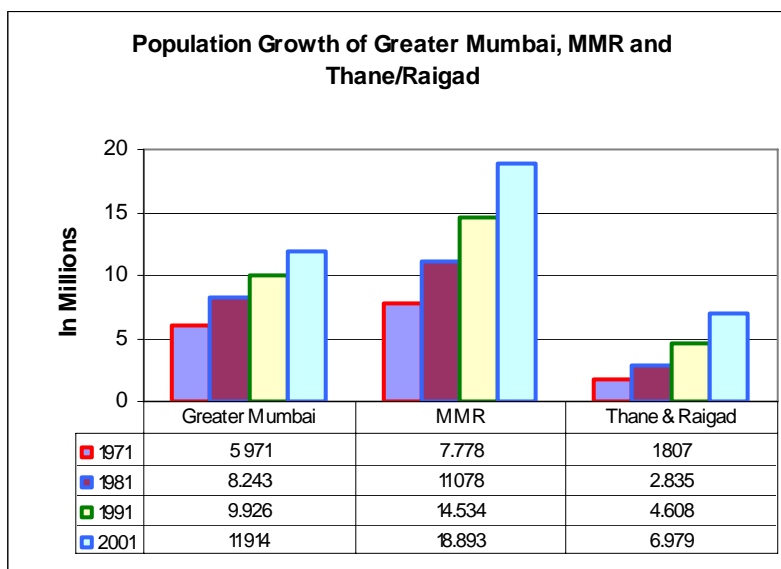
- Mumbai city district;
- Mumbai suburban district;
- Part of Thane district comprising:
 - a) Thane, Kalyan, Bhiwandi and Ulhanagar tehsils; and
 - b) Part of Vasai tehsil.
- Part of Raigad district comprising:
 - a) Uran tehsil; and
 - b) Part of Panvel, Karjat, Khalapur, Pen and Alibag tehsils.

The region consists of seven municipal corporations (Greater Mumbai, Thane, Kalyan-Dombivali, Navi Mumbai, Mira Bhayander, Bhiwandi-Nizampur and Ulhasnagar) and 13 municipal councils (six in Thane district and seven in Raigad district). **Out of these, Greater Mumbai constitutes about 10% of the total geographic area, but accounts for 63% of the population of MMR region.** Annex 1.1 presents the map of MMR indicating the physical boundaries and proposed land use pattern for the region.

1.2 Demographic Data

Figure 1.1: Population Growth in Greater Mumbai, MMR and Thane/Raigad

The population of MMR increased from 7.8 million in 1971 to 18.9 million in 2001, recording an average compound annual growth rate (CAGR) of 3% over the 30-year period. The population build-up during this period illuminates some interesting facts about the overall development of MMR region (figure 1.1):

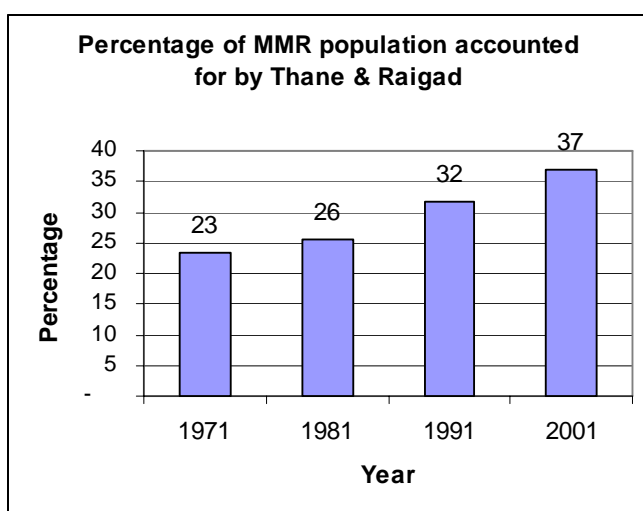


Source: Population and Employment Profile of Mumbai Metropolitan Region, MMRDA

- The MMR's population growth slowed down during the nineties (2.7% during 1991-2001) as compared to the seventies (3.6%)
- The overall CAGR of population of MMR (3%) was higher than that of Greater Mumbai (2.3%) and also of Maharashtra (2.2%) over the 30-year period (figure 1.1). As a result of which,
 - MMR's share of Maharashtra's population increased from 15% in 1971 to 20% in 2001;

- The share of Greater Mumbai's population in that of MMR declined from 77% in 1971 to 63% in 2001, which indicates that population has grown at a faster pace in the outer areas of the MMR compared to Greater Mumbai.
- While the CAGR of population of Greater Mumbai declined from 3.3% in 1971-81 to 1.8% in 1991-2001, Thane & Raigad Districts registered substantial growth in population (4.2% over 1991-2001 and 4.6% over 1981-2001). These two districts accounted for only 31% of the growth in population of MMR over 1971-81 but for 54% in 1991-2001. This is also a reflection of the direction of spatial growth in the region and the flow of population within MMR.
- As a result of this growth the share of Thane & Raigad in the total population of MMR increased from 23% in 1971 to 37% in 2001 (figure 1.2) and therefore the trend is already in the direction of wider distribution of population throughout MMR.

Figure 1.2: Percentage of MMR population accounted for by Thane & Raigad



Source: Population and Employment Profile of Mumbai Metropolitan Region, MMRDA

Table 1.1: Population, Annual Rates of Growth of Greater Mumbai, 1951-91

Year	Population in '000s	Rate of Growth p.a.)	of Decade (% Increase ('000s)	Natural Increase ('000s)	Net Migration ('000s)	Share of Migration (%)
1951	2994	5.1	1193	243	950	79.6
1961	4152	3.3	1158	558	600	51.8
1971	5971	3.6	1819	934	885	48.7
1981	8243	3.2	2272	1204	1068	47.0
1991	9926	1.9	1683	1387	296	17.6
2001*	11914	1.8	1989	1257	732	36.8

* As estimated by Sudha Deshpande

Notes:

Though the above data shows sharp decline in the growth rate and percentage share of net migration in 1991, it was primarily the result of under-enumeration of Mumbai's population. She estimates that if counted correctly in 1991, Mumbai's population would be 10.5 to 10.7 million, net migration 0.88 million to



1.13 million and its share in the 39 to 45 % and not 17.6 %. (Source: Maharashtra Human Development Report, 2002)

1.3 What is driving Population Growth in MMR?

The population increase in Greater Mumbai from about 3 million in 1951 to 11.9 million in 2001 is partly a result of natural increase in population and partly due to migration (table 1.1 shows the share of migration in the total increase in population). The share of migration in the total increase in population was 36.8% in 1991-2001, lower than in earlier decades, except for 1991-2001, which is being debated as an underestimate*.

Such a sharp increase in population definitely puts pressure on the civic infrastructure of the region, especially the housing stock. As a result, unauthorized dwellings get developed in the form of slums due to the region's inability in this period to provide affordable housing to the burgeoning population.

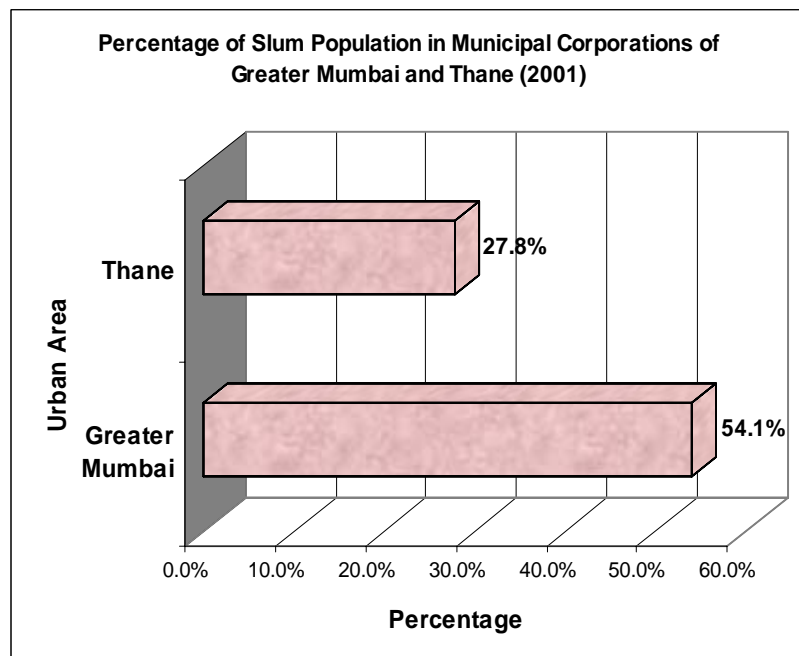
As per the 2001 Census, about 38% of the population of urban MMR lived in slums at an aggregate level. The situation is more alarming in Greater Mumbai where about half of the population lives in slums. The situation is also serious in Thane Municipal Corporation area, where about 28% of the population lives in slums.

Such a large proportion of slum population is alarming, providing a challenge for any city administration to control creation of new slums in the region and regularize the existing slums by providing requisite infrastructure facilities. As a premier employment center of the country, it

would be difficult to markedly curtail migration to the region. Answers to the slum problem lie in more evenly spreading out the economic activities throughout the MMR and reforming the land and housing markets to enable increased supply of decent housing at lower costs.

At present, Greater Mumbai accounts for about 67% of MMR's GDP and 76% of total employment in Urban MMR¹. The following sub-section presents the employment statistics for MMR and the sector wise distribution of employment that outlines the nature of economic activities in the region. Further statistics on GDP and population in MMR are presented at Annex A.

Figure 1.3: Percentage of Slum population (Census-2001)

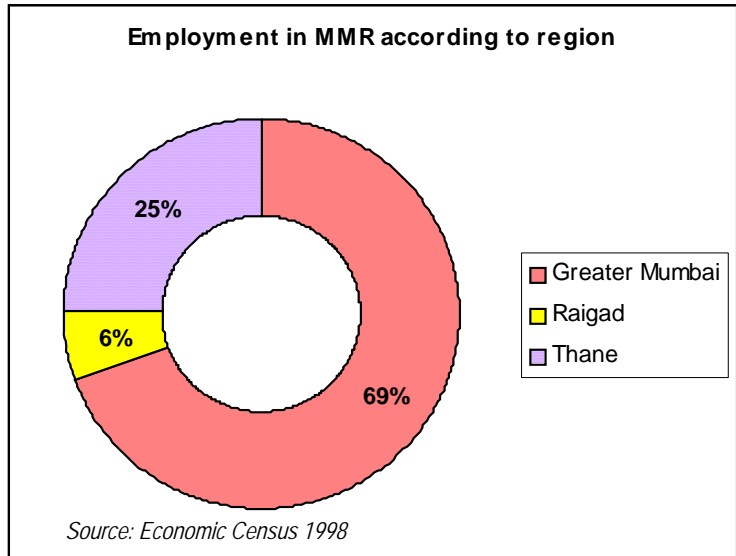


¹ Rural MMR accounts for only about 3% of total employment in MMR

1.4 Employment in MMR

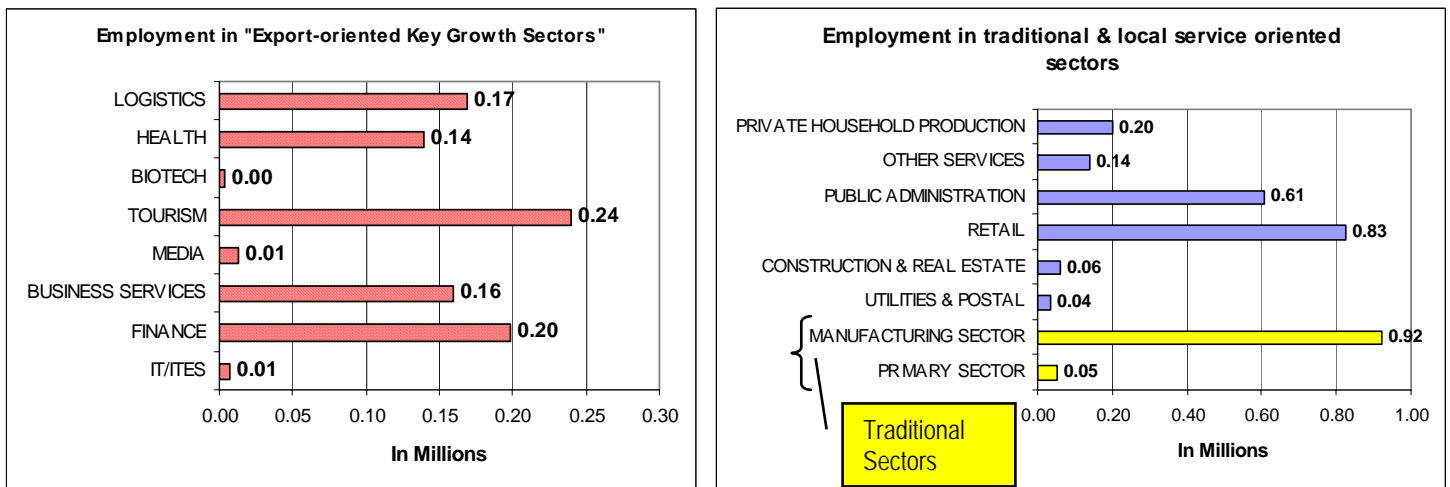
Figure 1.4: Regional distribution of employment in MMR (1998)

As per the 1998 Economic Census (The 2004 Census still being analyzed and is expected to be published in the second half of 2006), the total employment in MMR was about 3.77 million, out of which the share of Greater Mumbai was about 2.63 million. This shows the prominence of Greater Mumbai as an employment center in MMR. Apart from Greater Mumbai, which accounts for 69% of employment in MMR; Thane and Raigad account for 25% and 6% respectively (figure 1.4).



The sector-wise distribution of employment in MMR in 1998 as per the NIC classification is shown in figure 1.5. The biggest employers, were the manufacturing sector (24.5%) followed by retail (21.9%) and public administration (16.1%).

Figure 1.5: Sector-wise employment in MMR

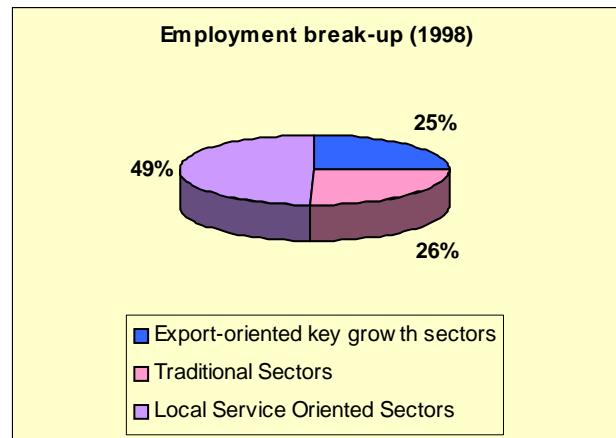


Source: Economic Census 1998

Further analysis of the employment data shows that the “local service oriented sectors” accounted for 49.6% of employment; “traditional sectors” accounted for 25.8% and “export-oriented key growth sectors” accounted for 24.6% of total employment in MMR in 1998. (see figure 1.6).

More detailed sector-wise employment statistics are presented in **Annex B** to this report.

Figure 1.6: Sector-wise employment in MMR



1.5 GDP composition and growth trends – MMR and Maharashtra

The following sub-sections present the salient characteristics of the economy of MMR and compare them with that of Maharashtra with respect to the following parameters:

- GDP composition and growth trends;
- Contribution of specific sub-sectors within primary, secondary and tertiary sectors;
- Location Quotient (LQ) analysis for identification of sub-sectors that have relatively high concentration in MMR as compared to Maharashtra and India.

The analysis of trends in economic growth shows overall unimpressive growth in GDP in MMR² as well as Maharashtra over FY94 to FY04. The CAGR of GDP was 5.3% for Maharashtra and slightly higher (5.6%) for MMR over the period 1993-94 to 2003-04 (figures 1.7 and 1.8). However, there has been an upturn in the (MMR) economy with over 10% growth in each of the last two years.

Figure 1.7: Trends in GDP for Maharashtra (1993-94 to 2003-04)

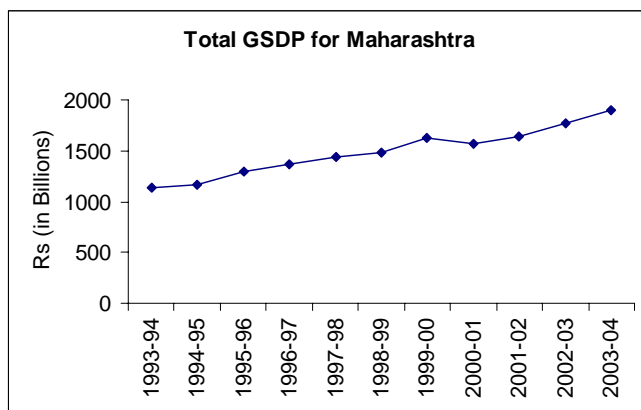
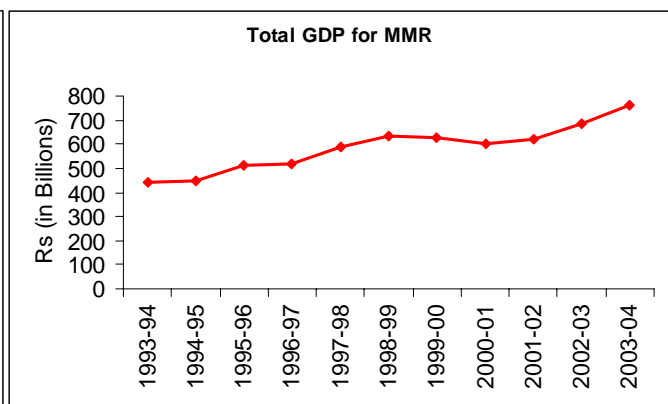


Figure 1.8: Trends in GDP for



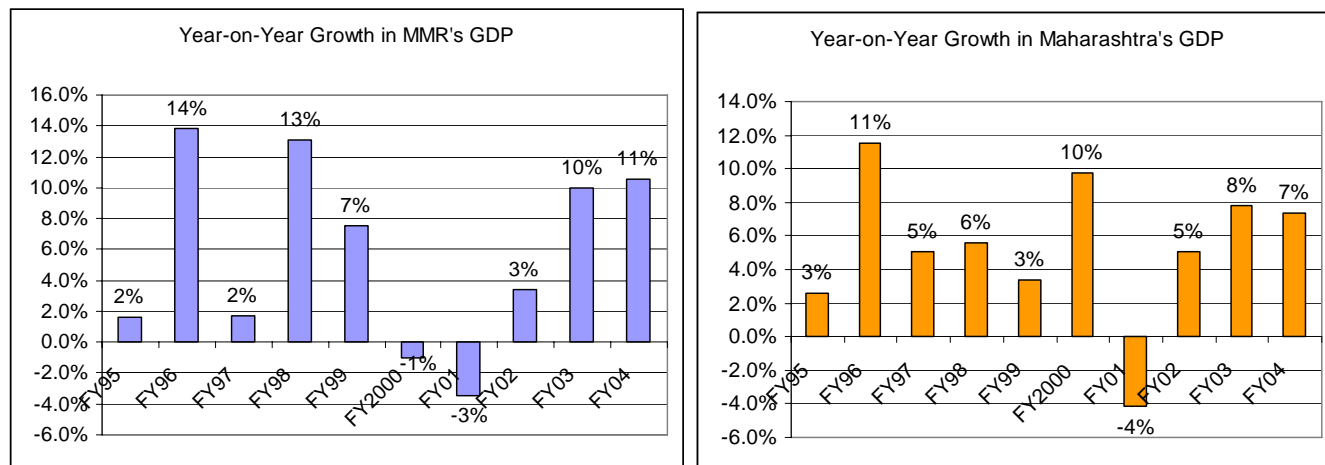
MMR (1993-94 to 2003)

Source: Department of Economics and Statistics, Government of Maharashtra

² The Domestic Product of MMR is calculated as the sum of the district domestic products of Mumbai, Thane and Raigad districts. Because the physical boundaries of MMR cut through the districts of Thane and Raigad and do not include them completely, this is a slight over estimation

An interesting feature of the economy of MMR and Maharashtra during the period FY94-FY04 is the volatility in year-on-year growth rates of GDP. MMR's GDP growth rate was negative in the years FY2000 and FY01 and even the growth rate of Maharashtra's GDP was negative in FY01.

Figure 1.9: Year-on-year trends in GDP for MMR & Maharashtra (1993-94 to 2003-04)

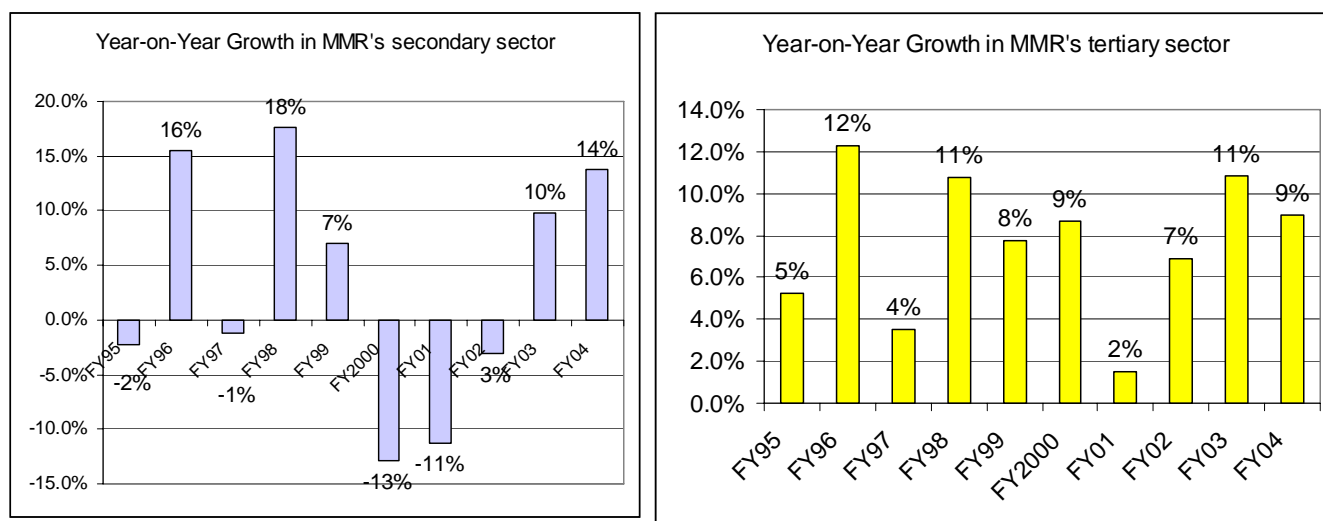


Source: Department of Economics and Statistics, Government of Maharashtra

Further analysis of the sector-wise growth trends (figure 1.10) for MMR shows that:

- The secondary sector is one of the major contributors to the volatility and witnessed negative growth for three consecutive years (FY 2000 to FY02). Within the secondary sector, the following sub-sectors were the major under-performers during this period (figures in parenthesis give the negative growth rate vis-à-vis the preceding year):
 - Manufacturing (-17%), Construction (-6%) and Utilities (-13%) in FY 2000
 - Manufacturing (-9%) and Utilities (-12%) in FY02
- "Manufacturing" grew at a CAGR of 3% (between FY94 to FY04) but there are signs of revival in the last two years (growth of about 15% per annum in FY04)

Figure 1.10: Year-on-year trends in secondary & tertiary sector GDP for MMR (1993-94 to 2003-04)



Source: Department of Economics and Statistics, Government of Maharashtra



- As per ASI data, sub-sectors such as, manufacture of coke, refined petroleum products and nuclear fuel; manufacture of chemicals and chemical products, manufacture of basic metals and fabricated metal products, manufacture of machinery & equipment including electrical machinery are important constituents of MMR's secondary sector³ (refer table 1.2)
- The tertiary sector's growth (CAGR of 7.6%) is relatively more consistent and is the reason for MMR's economic growth during this ten year period

Table 1.2: Analysis of Annual Survey of Industries (ASI) Data for MMR (2003-04)

NIC Code	Sub-sector	Gross Value Added (Rs. Billion)	Highest district shares within MMR
23	Manufacture of coke, refined petroleum products and nuclear fuel	Rs. 102 billion	<ul style="list-style-type: none"> • 79% - Raigad • 20% - Mumbai
24	Manufacture of chemicals and chemical products	Rs. 56 billion	<ul style="list-style-type: none"> • 43% - Raigad • 37% - Thane • 20% - Mumbai
27 & 28	Manufacture of basic metals and fabricated metal products	Rs. 26 billion	<ul style="list-style-type: none"> • 64% - Raigad • 27% - Thane
29	Manufacture of machinery and equipment including electrical machinery	Rs. 21 billion	<ul style="list-style-type: none"> • 65% - Mumbai • 24% - Thane
36	Manufacture of furniture	Rs. 13.4 billion	<ul style="list-style-type: none"> • 98% - Mumbai
17 & 18	Manufacture of Textiles and apparels	Rs. 11.3 billion	<ul style="list-style-type: none"> • 50% - Thane • 44% - Mumbai

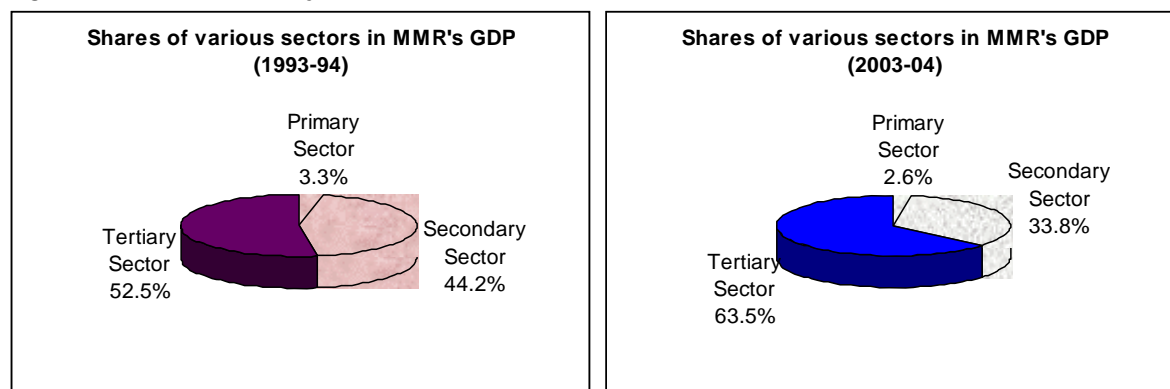
Source: Directorate of Economics & Statistics, Govt. of Maharashtra

As a result of the aforementioned growth rates of secondary and tertiary sectors, there have been significant changes in the structure of MMR's economy during the period 1993-94 to 2003-04 (figure 1.11 provides the shares of the various sectors in the Gross Domestic Product of MMR at constant prices):

- The tertiary sector grew at a CAGR of 7.6% over the period 1993-94 to 2003-04 and its share increased from about 52.5% in 1993-94 to 63.5% in 2003-04
- Apart from contributing to economic growth, the tertiary sector's share in GDP is also the highest (63.5% in 2003-04). This is followed by the secondary sector, which formed about 34% of GDP in 2003-04.
- On the other hand, the contribution of the secondary sector to MMR's GDP declined from about 44% in 1993-94 to 34% in 2003-04 (the decline was quite marked during the period FY2000 to FY 2002, though there are signs of revival in 2002-03 to 2003-04).
- The primary sector contributes a very small share of GDP (2.6% in 2003-04, reduced further from its already low share of 3.3% in 1993-94). The CAGR for this sector was about 3.4% over the period 1993-94 to 2003-04. The sector's share has been declining, especially from 2001-02 onwards.

³ The Gross Value Added (GVA) data based on ASI statistics does not correspond directly with the GDP data for MMR and therefore no attempt has been made to compare GVA with the GDP figures.

Figure 1.11: Share of major sectors in GDP of MMR (1993-94 and 2003-04)



Source: Department of Economics and Statistics, Government of Maharashtra

1.6 Conclusions

From the above sections, the following conclusions may be drawn:

The Mumbai Metropolitan Region's share in the state's GDP in 2003-04 was as high as 40%. Within MMR, a large proportion of the population and economic activities is accounted for by Greater Mumbai, which alone contributes to 63% of the population of MMR (2001), 67% of GDP (2003-04) and 76% of employment (1998). Although there has been some population shift towards the outer regions of MMR in the recent times, Greater Mumbai still claims the largest share. This shows the importance of Greater Mumbai in the context of MMR and the state.

Within MMR's economy:

- The mainstay of MMR's economy over the past decade has been the tertiary sector, which is now typical of major metropolitan economies, both nationally and globally.
- The share of the secondary sector, although declining in the last 10 years, is still substantial and cannot be neglected in the overall economic context of MMR. MMR still contributes to 50% of Maharashtra's manufacturing GSDP and over 8% of India's manufacturing GDP. Greater Mumbai accounts for about 60% of MMR's manufacturing GDP.
- Both the secondary and tertiary sectors will have to be given impetus to achieve 12-15% growth of MMR's economy on a sustainable basis. Within these broad sectors, there are clearly some sub-sectors that hold greater promise in terms of higher growth or greater employment generation potential and therefore these sectors should be focused on. These are covered in greater detail in section 3 on sector analysis.
- The contribution of the primary sector will continue to be insignificant to MMR's GDP (hence, primary sector is not analyzed further in this report).

In order to further catalyze economic growth, there are a few critical areas that need immediate attention of state government and policy makers:



- Migration has contributed in a significant manner to population growth in Greater Mumbai: To some extent, this is inevitable given Mumbai's position as a major economic center. However, the increase in population has put severe pressure on the city's civic infrastructure, especially housing stock;
- There has also been a large increase in slum population, with about 38% of the population of urban MMR, and approximately half of Greater Mumbai's, population living in slums in 2001 – areas of unregulated, poor quality structures with little or no sanitation;
- This points to the necessity of catalyzing economic growth and spreading it more evenly throughout MMR, so as to enable outer areas to develop and also reduce pressure on Greater Mumbai;
- The tertiary sector has emerged as the largest contributor to MMR's economy, with a 64% share in GDP which is in the range typical in developed countries (60-75%). On the other hand, the secondary sector (especially manufacturing) has been in a decline phase;
- This calls for proactive steps from the state government to rejuvenate the manufacturing sector and intervene in order to boost tertiary sectors such as banking & insurance, communications and trade, hotels & restaurants.

The following chapter builds on the findings of this chapter and sets out our vision for the Mumbai Metropolitan region.

2. VISION AND FRAMEWORK FOR ACHIEVING VISION

2.1 Vision - MMR

With a population base of about 22 million in 2006, the Mumbai Metropolitan Region (MMR) is the largest urban conurbation in India, one of the largest in the world. Traditionally it has also been India's strongest and most diverse metropolitan economy, but over the past decade two issues motivated its leaders to call for the "transformation" noted earlier. First, its economic growth rate had declined in relation to the national average and, in particular, in relation to booming hi-tech centers like Bangalore and Hyderabad. Second, its quality of life was deteriorating (as evidenced by serious infrastructure deficits and the fact that 49 % of its population lives in slums).

Our overall vision for MMR is therefore:

1. To enable economic growth of 12-15% per annum while ensuring more even growth throughout MMR;
2. Supplement this economic growth by facilitating superior quality of 'life' factors to the citizens of MMR; and
3. To ensure equitable participation in economic growth by all segments of society.

If this vision of a 12% economic growth rate can be achieved for the MMR, GDP will grow to Rs. 4,65,186 crore in FY 2020 – a six-fold increase over its FY 2004 level of Rs. 75,882 crore. We have considered two scenarios to estimate the share of various sectors and the requisite growth rates of these sectors to achieve 12% GDP growth per annum.

Scenario 1: Structure of the economy remaining almost constant

The first scenario assumes that the structure of the economy remains almost similar to what it is today; i.e. that the major sectors continue to maintain the same share in MMR's economy in FY 2020 as in FY 2004.

- The primary sector's share is assumed to remain constant (share of 2.5% in FY 2020) and the sector would therefore need to grow at a CAGR of 11.6%
- The secondary sector is assumed to have a share of 30% in MMR's GDP in FY 2020. Accordingly this sector will need to grow at a CAGR of 11.2%
- If the primary and secondary sectors grow at the rates mentioned above and maintain their respective shares, the tertiary sector's output would need to grow at a CAGR of 12.4% and, in the process, its share of total GDP would reach 67.5% in FY 2020

Scenario 2: Structure of the economy changes depending on the growth rates of the three sectors

In this scenario, we have assumed that the shares of the three sectors in FY 2020 will be dependent on their respective growth rates. Hence, this scenario entails varying assumptions about performance.

- The primary sector is assumed to follow a linear trend (CAGR of 2.2% – the primary sector grew at CAGR of 3.4% during the period FY94 and FY04)

- The secondary sector is assumed to grow at a CAGR of 7%-8% (the secondary sector grew at a CAGR of 2.8% during the period FY94 and FY04)
- Consequently the tertiary sector would need to grow at 13.9% (13.7% in case the secondary sector grows at 8%) in order to obtain an overall 12% growth rate of GDP of MMR
- Consequently, the shares of the primary, secondary & tertiary sectors in 2020, respectively, would be 0.6%, 16.3% (18.9% if the secondary sector grows at 8%) and 83.1% (80.5% if the secondary sector grows at 8%).
- In this scenario the structure of the economy changes significantly with the shares of the primary and secondary sectors decreasing and the share of the tertiary sector increasing to over 80% which is more in the range typical in developed city economies.

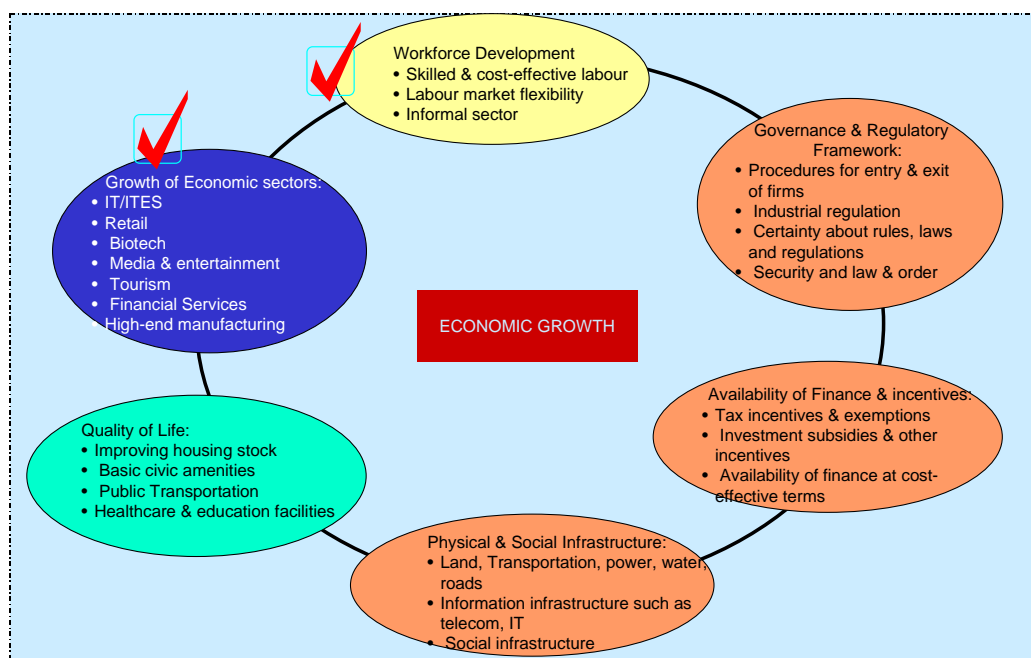
2.2 Framework for Achieving Vision-MMR

The economic growth must result in improving the 'quality of life' of the citizens. How then is economic growth to be promoted? A decade ago, the concept of local economic development often focused on the provision of subsidies in an attempt to 'steal' industries away from competitive regions. Today, it is recognized that a much more effective strategy for economic growth involves two themes:

3. Improving the local investment climate; i.e. reducing the general costs of doing business in the city.
4. Providing specialized support to key growth industries

1. *Improving the local investment climate.* This entails a variety of activities that facilitate, and reduce the costs of doing business in general in Mumbai. It includes (see figure 2.1):

Figure 2.1: Economic growth framework



- Providing adequate physical and social infrastructure
- Creating an efficient land/property market,



- Strengthening the system for workforce development
- Creating an effective regulatory environment (and reducing corruption)
- Rationalizing the system of taxation
- Improving access to market financial resources

2. Support key growth industries. Some economic industries are more important to the economy than others. While history has proved that it is inefficient to try to plan industrial development in detail, it is possible for local leaders to find special ways to support industries that have the highest potential. This can mean, for example:

- Making special efforts to market and promote them nationally
- Giving higher priority to specific land and infrastructure projects they need
- Giving higher priority to reducing regulatory barriers most important to them
- Working with Universities to provide special research and training programs that will bolster their competitive positions
- Providing subsidies where high payoffs are likely to be gained

Other subgroups in the Task Force are considering the broader programs needed to improve the investment climate namely, physical infrastructure, housing, and social infrastructure. This report focuses on the second topic: supporting key growth industries.

In this work, we take an “economic cluster” approach rather than one that focuses on traditional industries. A traditional approach would look at the process of manufacturing a particular product individually. In contrast, the cluster approach recognizes that the manufacturing activities are themselves supported by a host of activities that occur in other sectors as conventionally defined. These might include, for example, specialized legal and accountancy firms, specialized university institutes, particular shipping and transport facilities, etc., that support (are often vital to) the ultimate delivery of that particular product. In other words, the approach explicitly attempts to identify backward and forward linkages.

To this end, we short-listed specific industries in MMR’s economy, where MMR has comparative advantages, and which we believe will create opportunities for employment as well as enable the economy to grow at the targeted rate of 12-15% per annum. In order that they fulfill their potential, these industries should be given adequate focus and attention from the state government and other stakeholders. In particular, the manufacturing sector (where low cost production is increasingly preferred) needs to be given attention in order that this sector undergoes revival and contributes to economic growth.

The focus of this report from this point onwards⁴ is to outline specific interventions required in order to effectively target a few potentially high-growth industries. Further, the companion report on mainstreaming the informal sector workforce analyzes the labor market of Maharashtra and MMR and makes specific recommendations to build capacity of the labor force with special emphasis on integrating the informal sector labor force with the mainstream economy.

⁴ The other investment climate issues are being addressed by a concurrent study being carried out by World Bank

3. SECTOR ANALYSIS

3.1 Transition of City Economies

Supporting selected economic growth industries/clusters is a key element of the proposed strategy for economic growth. It is critical to identify such high growth industries that have the potential to drive the region's economy on a high growth path.

Globally, it has been witnessed that economic transition tends to follow a developmental progression from a heavy reliance on agriculture, toward the development of industry (e.g. automobiles, steel, textiles, etc.) and finally toward a more service based structure. United Kingdom was the first economy to follow this path in the modern era and many more economies have subsequently made this transition.

An appropriate case study for MMR and specifically Mumbai city is New York City. Historically, New York City developed because of New York Harbor, widely considered one of the finest natural ports in the world. Since the 1950s, most shipping activity in the area shifted to Port Newark-Elizabeth Marine Terminal in New Jersey. But despite changes in international shipping, trade and the tertiary sector have always remained the real basis of New York's economy (See box: "what drives New York city's economy"). Manufacturing first became a major economic base for New York City in the mid-nineteenth century with the advent of industrialization and the railroad. New York, like Mumbai, was formerly a national center for clothing manufacture; however, manufacturing gradually declined (like international shipping) in the late-twentieth century with rising land values.

What drives New York City's Economy?

- New York City is the **chief center of finance in the world economy** with Wall Street in Lower Manhattan's Financial District. Financial markets in the city include New York Stock Exchange, NASDAQ, American Stock Exchange, New York Mercantile Exchange, and New York Board of Trade.
- New York is the center of many of the service sector industries in the U.S., with **more Fortune 500 companies headquartered in the city than anywhere else in the country.**
- The city is an important center for **American mass media, journalism and publishing.** Manhattan's Madison Avenue is synonymous with the American advertising industry
- Seventh Avenue is nicknamed "Fashion Avenue" and serves as an important **center for the fashion industry.**
- New York also has the most important scenes for **art, music, and theatres** in the U.S., with an increasingly active artist's community. New York City is the home of the four major television networks, ABC, CBS, the Fox Network, and NBC, and while the local film industry is dwarfed by that of Hollywood, its billions of dollars in revenue make it the second largest in the nation.
- The city also has a **large tourism industry** – Empire State Building, Times Square, Radio City Music Hall, Statue of Liberty, Ellis Island, Wall Street, UN Headquarters, American Museum of Natural History, St. Patrick's Cathedral and the Brooklyn Bridge
- Shopping is another attraction for the tourists - Fifth Avenue (shopping corridor for luxury items), Macy's (**nation's largest department store**), and the surrounding area of Herald Square (destination for more moderately-priced goods). In recent years 23rd Street has become a major location for "big-box" retailers. In southern Manhattan, Greenwich Village is **home to hundreds of independent music and bookstores.** The "diamond district" is the city's main location for **jewelry shopping**, and SoHo, formerly the center of the New York art scene, is now famous for **high-priced clothing boutiques**, and the **art galleries** are now concentrated in Chelsea.
- New York is a **city of "great museums"** with the Metropolitan Museum of Art's assemblage of historic art, the Museum of Modern Art and Guggenheim Museum's 's 20th century collection, and the American Museum of Natural History and its Hayden Planetarium focusing on the sciences. Apart from these museums, the city is also **home to a vast array of spaces for opera, symphony, and dance performances.** The Lincoln Center for the Performing Arts houses 12 separate companies, including the New York Philharmonic, the Metropolitan Opera, the New York City Opera, the New York City Ballet, and Jazz at Lincoln Center. Other notable performance halls include Carnegie Hall, Radio City Music Hall, and the Brooklyn Academy of Music.

Study of developed metropolitan cities like London, Geneva, Dubai, etc. reveals that tertiary sector is the mainstay of the city's economy. For example:

- **London's economy contributes around 17% of the UK's total GDP** and is individually larger than many major cities elsewhere in Europe. In the recent decades, **contribution of manufacturing and production has declined to about 11% of London's GDP and 8% of the UK's manufacturing output**. The tertiary sector is driving the city's economy with the **financial and business services employing about one-third the total Greater London workforce**. With more overseas company listings than any other exchange, the London Stock Exchange is the largest in the world, accounting for more than 32% of global turnover - more than the combined contribution of New York and Tokyo. The sector is concentrated in the City of London, which with around 500 foreign banks and numerous insurance and other business service companies, is rightly recognized as a dominant force on the international financial stage. London is also a **major center for European e-commerce** and several other thriving industries including **arts and fashion, film, media, design, law and computing**. Around 85% of UK fashion designers and 70 % of the UK film and television companies are based in London. **Tourism is another important industry for London** with typical yearly expenditure by tourists being in the region of £7-10bn (\$11.7 - \$16.8 billion).
- **In Geneva, the tertiary sector employs 84% of Geneva's working population while the primary and secondary sectors employ 1% and 15% respectively**. Within the tertiary sector, public administration, healthcare and business services are all-important segments but the city is known for its banking and financial services. The concentration of banking and financial institutions in Geneva is much higher than the national average and accounts for approximately 40% of the total chapter of assets under management in Switzerland and 14% of worldwide cross border assets under management are directly or indirectly controlled from the city.
- Dubai's GDP is divided into oil and non-oil GDP, with the latter representing the overwhelming part of Dubai GDP. **The share of non-oil GDP in total GDP increased from about 90% in 2000 to about 93% in 2003**. This trend is on the rise due to the increasing importance of the non-oil production in Dubai economy. During the period 1999-2003, **the average share of the primary sector in Dubai total GDP was 9%, the secondary sector was 16% and the tertiary sector was 75%**. **Among the tertiary activities, four segments, viz., Wholesale, retail trade and repairing services; transports, storage and communication; financial services (banks, insurance, and finance) and Real estate and business services contributed more than 50% of the tertiary sector's share of the total GDP**.

Mumbai City and MMR are quite similar to the cities illustrated in this section. The need for multiple 'hooks' as part of the city's economy is quite well demonstrated by the New York City case study. In the last fifty years, New York has managed to achieve high economic growth by positioning itself as a centre for financial services, tourism/leisure and entertainment, media, fashion, retail, sports, etc.

Similarly, the Mumbai Metropolitan Region (MMR) too needs to make a transition to the services sector and high-end manufacturing industries⁵ for achieving the requisite economic growth as stated in the vision.

⁵ Industries that have potential for high value addition



3.2 Identifying Key Industries

As mentioned in the previous chapter, economic industries deserve special attention for different reasons. This report identifies two main groups of industries and these are often not the same.

- Export-oriented industries most likely to draw in resources from outside of the region and, therefore, contribute to overall growth.
- Industries that have the highest capacity to absorb labor.

Key Growth Industries: In very large economies, like India as a whole, growth can be generated by internal demand as well as by exports. For a specific metropolitan region, however, GDP growth is more dependent on exports (exports to other parts of the country for the most part – not just international exports). This does not only mean the export of physical goods. In fact, Mumbai will increasingly be dependent on the export of services. Exports occur (and funds are drawn in from outside to contribute the growth) for example, when customers from outside obtain services from specialized Mumbai bankers, attorneys, or hospitals or when tourists from outside visit Mumbai.

To identify key growth industries, we examined data on all economic activities in the region. Two factors were emphasized:

- Evidence of a high potential for future growth nationally
- Evidence of a strong competitive advantage for the sectors in the MMR

National studies and experts were consulted to obtain evidence of growth potential. To rate local competitive advantage, we interviewed local industry experts and reviewed data on location quotients (refer Annex C) which show the comparative concentration of various industries locally. The location quotient for banking services in Greater Mumbai, for example, was 2.67 in FY 2004, which means that banking services share of total GDP here is 2.67 times its share in India as a whole. High current concentrations are important, but they should not be looked at exclusively. Industries should also be considered that may not yet have achieved high concentration but, for a number of reasons, seem likely to have the potential to reach higher concentration in the future (tourism is a good example in Mumbai).

As a result of this research, the following local sectors were identified in the key growth category:

- Information Technology (IT) and Information Technology Enabled Services (ITES)
- Biotechnology
- Media and Entertainment
- Hospitality and Tourism
- Financial Services
- Manufacturing (Textiles, Chemicals & Petrochemicals, Fabricated Metal Products)

Key Labor Absorption Industries: Key growth industries provide jobs directly, but often more important they provide jobs indirectly through multiplier effects. The financial services sector, for example, does not have a high direct ratio of employment to GDP generated. However, the new resources brought in by financial services create more jobs in other sectors; for example, as financial service workers spend their expanded incomes in malls, pharmacies, and personal service establishments. Our analysis shows that two sectors deserve special attention because of their labor absorptive capacity (hospitality and tourism and would also fit into this category, but it has already been selected as a key growth industry):

- Retail trade
- Construction

3.3 Profile of selected key growth industries

Out of this short list, the following industries are profiled in the following sections.

- Information Technology (IT) and Information Technology Enabled Services (ITES)
- Media and Entertainment
- Hospitality and Tourism
- Biotechnology
- Manufacturing (Textiles)
- Retail trade

A few select short listed industries have been profiled covering the following areas:

- Industry size & growth trends,
- Critical Success Factors for the industry,
- Maharashtra's current industry base,
- Why Maharashtra/MMR
- Interventions required to promote the industry

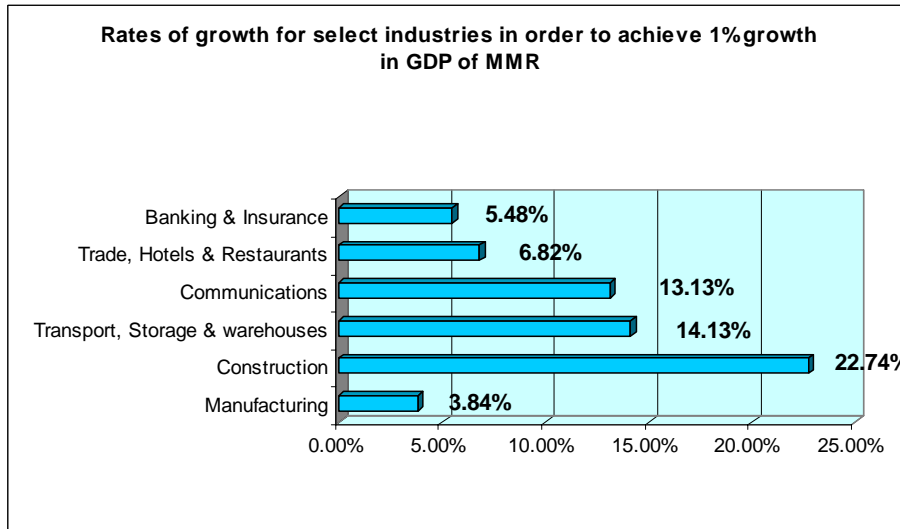
(Financial services is certainly a promising key growth sector for Mumbai. We do not profile it here only because a thorough analysis has already been done – see Bombay First, 2000).

3.4 Impact of selected industries on MMR's economy and employment

Going forward, the selected industries are expected to contribute significantly to MMR's economy and employment over the medium term. The potential GDP impact of each sector has been estimated for these sectors by way of calculating the required rate of growth in the sector in order to lead to a 1% growth in overall GDP and is summarized below (see figure3.1).

Most of these, especially manufacturing, construction and banking and insurance have contributed to the growth of MMR's economy, especially in the last two years. The six segments mentioned in the figure accounted for 90% of total GDP growth in MMR in 2002-03 over 2001-02 and 85% in 2003-04 over 2002-03.

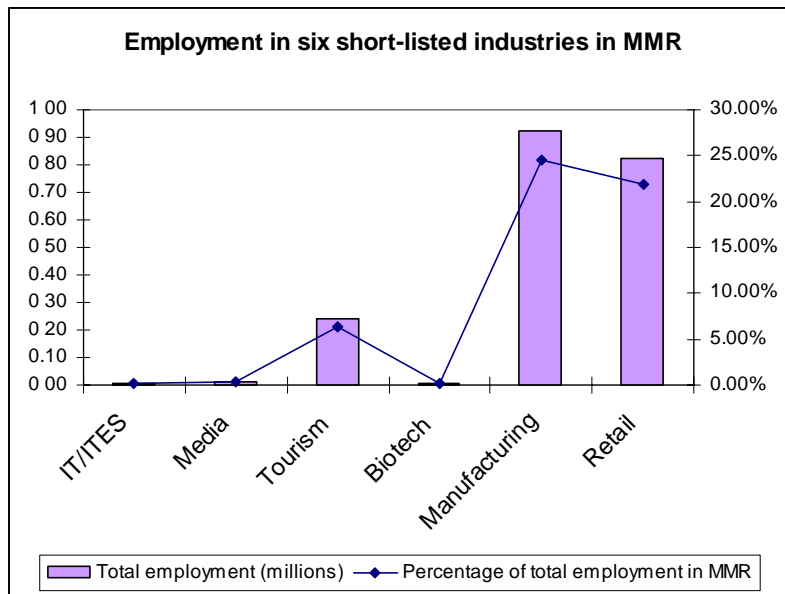
Figure 3.1: Potential contribution of key industries to GDP



Source: IMaCS analysis

Even in terms of employment potential, the six short listed industries mentioned above accounted for about 53% of total workforce employed in MMR (Refer Annex 1.3 for sector wise break-up of employment pattern as per the economic census-1998)⁶. The estimated employment in MMR in 1998 for these short-listed sub-sectors is shown in figure 3.2.

Figure 3.2: Employment in six short-listed industries in MMR (1998)



Source: Economic Census 1998

⁶ This is the most recent employment census, which was carried out in year 1998. The field study of the next round of employment census – 2004 has been completed and the results are expected to be published by June 2006.

The absolute numbers of employees give a fair idea about the leading employment segments in MMR in 1998. The only significant changes in the last seven years would have happened in case of IT/ITES and Media & Entertainment industries. These two industries saw sharp growth since 1998 and perhaps would have larger numbers in the 2004 Employment Census.

3.5 Methodology for preparation of industry profiles

The industry profiles were developed by:

1. Assembling and analyzing secondary data on the Indian and global industry (and specifically in MMR/Maharashtra) from a variety of relevant reports and publications including ICRA sector reports on selected sectors.
2. Reviewing a number of sector development approaches (international and national case studies, i.e. steps taken by countries and other Indian states– see list of references in Annex E).
3. Consulting experts on the development strategy for key sectors selected as the focus of the work in Mumbai.
4. Interviewing professionals and industry experts (in both the private and public sectors) about the workings of the local economy and possible strategies and actions to promote growth.
5. Past work such as sector/industry competitiveness studies and city vision/cluster development studies in both India and abroad undertaken by The Urban Institute, ICRA Management Consulting Services (IMaCS), and ICRA Ltd.

3.6 Information Technology (IT)/Information Technology Enabled Services (ITES)

Background

Maharashtra has a substantial existing base in the IT/ITES sector. One in five registered international ITES-BPO companies in India are located in Maharashtra, either in Mumbai or Pune. These companies represent a balanced mix of customer contact and processing services across captive and third party service providers. The presence of large captive and third-party service providers has helped the state to contribute around 17% of the country's IT/ITES exports.

Mumbai is classified as a Tier I city for ITES (the other Tier I cities include Bangalore and Delhi). Since 1999, most large overseas IT companies offshoring work to India (e.g., GE, IBM and Microsoft) have first set up operations in these cities, because they provided the largest and most qualified labor pool, suitable infrastructure, and appropriate real estate formats.

Most of the manpower and skills required for IT/ITES are found clustered in select areas of Maharashtra such as Mumbai and Pune. The state has strengths in the following areas for the IT/ITES sector:

- Quality of educational institutions, large workforce with proficiency in English language and IT skills
- Scale of urbanization and gateway to international markets through the international airport
- Employment and IT/ITES preference
- Government support for IT/ITES in Maharashtra

However, this strong base of skilled resources with infrastructure faces increasing pressures from factors such as high cost of skills, high attrition rates and retention challenges, difficulty in attracting manpower,



inadequate/erratic power supply and other infrastructure problems, lack of sophisticated real estate, high cost of living, etc. Hence, many industry leaders are changing their strategy and are moving from Tier-I cities to the Tier-II cities. These alternate locations offer similar labor quality at a cost advantage compared to Tier-I cities. **Thus retaining its position as a key destination for IT/ITES is one of the challenges faced by the MMR.**

In fact, availability of large land parcels and skilled workforce are important determinants of the growth of the IT/ITES industry in a particular location. In FY 2005, fresh stock of about 23 million sq. ft of Grade-A 'space' was developed, distributed across the following cities:

- Bangalore – 8 million
- Hyderabad – 3.6 million
- Chennai – 3.5 million
- NCR – 3 million (of which 70% was in Gurgaon)
- **MMR – 2.75 million**

Almost all of this land was developed by the private sector and the government's role was only to provide land or facilitate/attract private sector investment.

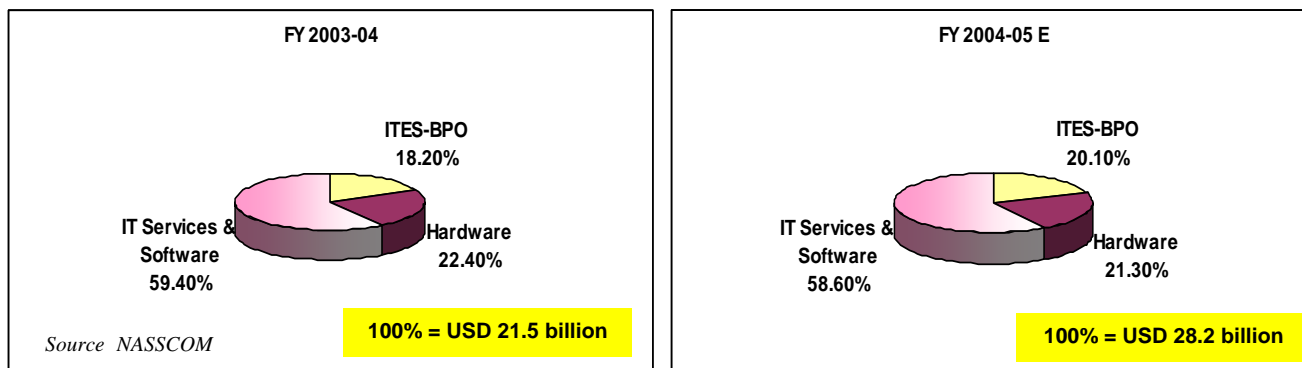
Because other states are seemingly being more proactive in terms of providing land and infrastructure for the development of the IT/ITES industry, Maharashtra needs to overcome some of the constraints relating to availability of skilled workforce and suitable land for this industry.

In this context, Navi Mumbai has the potential to become a major hub of IT and ITES industries. Given its proximity to Mumbai, companies there would have access to the quality workforce of Mumbai with much lower land cost. At the same time, just like Gurgaon (in NCR), Navi Mumbai could leverage the locational advantages and the infrastructure facilities that Mumbai offers at a cost advantage to these companies.

Statistics and growth trends for the industry

In the past one decade, the information technology (IT) industry has grown exponentially and continues to be one of the fastest growing industries, both globally and in India. The IT/ITES industry in India has shown double-digit growth, with industry aggregate revenue for 2004-05 expected to reach USD 28 billion (NASSCOM estimates) (figure 3.3). The industry's contribution to the national economic output has nearly tripled: from 1.2% in FY 1997-98 to 3.5% in FY 2003-04. The earnings from IT-ITES exports were USD 13.3 billion (61.9% of total industry revenues) in 2003-04 and about USD 17.9 billion (63.7%) in 2004-05.

Figure 3.3 Composition of Indian IT/ITES industry (FY 2003-04 and FY 2004-05 (E))



The Indian IT-ITES industry is broadly categorized into IT services and software, ITES-BPO and Hardware segments, of which IT services & software is the key contributor to the industry's revenues. Key drivers of growth include the growing adoption of IT outsourcing and the rapid expansion in the scale and breadth of ITES-BPO offerings by Indian vendors.

Following several years of flat to negative growth, global spending on IT-ITES is estimated to have grown by 6.4 % over CY 2004, reaching a total of USD 1,410.2 billion by the end of that year. Although currently accounting for less than 2 % (by value) of the global IT-ITES industry, India is ahead of its peer group and is fundamentally well equipped to tap the growing demand for offshore outsourcing.

Globally, North America and Western Europe were the major spenders, together accounting for more than three-fourth of the global IT-ITES spend. The US alone accounted for 47 % of the global IT-ITES spends in CY 2003.

Critical Success Factors (CSFs) for the industry

The following key factors determine the success of the IT/ITES industry:

- Availability of a resource pool with requisite skills for IT/ITES operations;
- Facilitation efforts by the Government to make the requisite skilled labor available;
- Existing low cost land and infrastructure to sustain IT/ITES operations;
- State IT policy and incentives provided by the state vis-à-vis other locations;
- Presence of other companies operating out of the location being considered.

We feel that availability of a resource pool of skilled, low-cost talent is the single-most important determinant of the growth or success of the IT/ITES industry in a particular location.

Suggested interventions

While the state government has already taken several initiatives to promote the

Maharashtra's IT & ITES Policy, 2003

The Government of Maharashtra in its IT & ITES Policy 2003, commits itself to the following:

- **Institutional framework for policy implementation** through setting up an Empowered Committee headed by the Chief Secretary
- Provision of 'unique info infrastructure' including **IT parks and appropriate infrastructure** such as power supply and road connectivity
- Developing a **pool of skilled globally employable manpower** by encouraging training programmes by schools and higher & technical education departments and private training institutions
- Providing an **industry-friendly and supportive environment** especially with respect to labor laws and other working conditions
- **Fiscal incentives** such as stamp duty exemptions for setting up IT & ITES units including in IT Parks and sales tax exemptions
- Support to IT & ITES units by Urban Local Bodies such as **exemptions from octroi/entry tax**, provision for additional FSI (100% additional FSI made available to IT/ITES units in public IT Parks), etc.
- **Rewarding outstanding performance** of IT & ITES units through presentation of state awards, etc.



IT/ITES industry, it may consider the following additional interventions:

- **Direct Marketing Efforts:** We feel that Maharashtra (specifically MMR) could be promoted as a location for high-end analytic services, given its talent, industry and entrepreneurial spirit. The government should position the state as the preferred destination for knowledge-processing outsourcing (KPO) services.
- To this end, the state's IT department should participate in road shows across the country and pitch the state's advantages to industry, especially in cities such as Gurgaon, Kolkata. The state could also tap into its numerous Indian expatriates to invest in its proposed venture capital funds. It should also interact and explore options with organizations such as The Indus Entrepreneurs (TiE) to attract NRI investment in the state. A one-stop development agency is recommended (see point below) and this could also be given the mandate of building a value proposition for the sector and aggressively marketing the state to domestic and foreign investors. The agency should be given a dedicated budget for marketing and promotion
- **Facilitate development of IT Parks** at Navi Mumbai and Thane with requisite infrastructure and land development through public-private partnerships and innovative financing in order to counter competition from Tier-II cities and leverage MMR's strengths. The Government of Maharashtra already provides several incentives for setting up units at IT Parks (see Box: Maharashtra's IT & ITES Policy, 2003). Other states such as Karnataka offer similar incentives for IT Parks
- **Promote development of physical infrastructure:** Since employee and employee travel costs account for almost half of the ITES industry's operating costs, any government interventions aimed at making inter-city and intra-city travel easier and safer would reduce travel-related costs. Hence, improving connectivity of Navi Mumbai with other parts of MMR will make the location attractive to IT/ITES companies
- **Facilitate availability of requisite workforce:** Given the high number of educational institutions in the state, GoM needs to orient its education toward the IT/ITES industry in order to expand the pipeline of people willing to join the industry and improve the quality of the potential and current workforce. Further, to assess the capabilities of its graduates, GoM should emulate Karnataka and Andhra Pradesh (AP) that conduct assessment tests such as B-SAT (BPO Skills Assessment Test) and Graduate Employability Test (GET) respectively for certification of employability to ITES/BPO industry. For designing similar certification tests, GoM should explore options to partner with institutions such as NIIT and APTECH
- **Set up a one-stop development agency to assist investors.** This agency would be a single point contact agency for BPO investors, act as a certifying authority, facilitate approval and liaise with government departments. There are several examples of successful state government initiated development agencies in India. APFIRST for instance was created as a special body by the Government of Andhra Pradesh to promote investment and development in key sectors including offshore IT and BPO
- **Catalyze ITES investments through e-governance:** Government investments in innovative e-governance projects would help catalyze investments and building of skills in IT/ITES (such as AP's experience with the launch of E-seva). Another notable example in this regard is Rajasthan, which has embarked on a Government-to-Citizen initiative called E-mitra for transparent governance
- Provide adequate security to prevent data piracy and train state police in cyber laws to handle cyber crime and data piracy
- Ensure good law and order to prevent any disruption of the ITES business (as it is a time-sensitive business). Law and order is critical in the ITES industry, especially from the viewpoint of women staff working at night

3.7 Entertainment & media

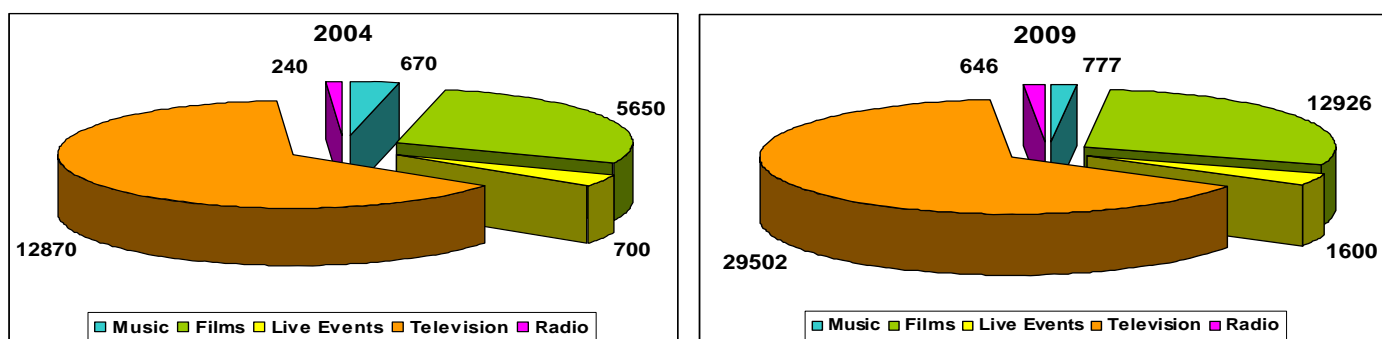
Background – Industry Segments

The Indian entertainment and media (E&M) industry is one of the fastest growing sectors of the Indian economy. Economic growth and rising income levels in the past few years have boosted the growth of this sector. When incomes rise, proportionately more resources get spent on leisure and entertainment.

The various segments that constitute the Indian E&M industry are: filmed entertainment, television, music, radio and print. Nationally, the industry was estimated at over Rs. 20,000 crore (USD 4.5 billion) in 2004 and is expected to grow at an annual rate of 18% over the next five years to reach over Rs. 45,000 crore (USD 10 billion) by 2009⁷.

The largest contributor to the growth of the industry has been the **television segment, followed by the film segment** (Refer figure 3.4).

Figure 3.4: Indian entertainment industry: 2004 (actual) and 2009 (projected) (In Rs. Crore)



Source: "The Indian Entertainment Industry – An Unfolding Opportunity", FICCI

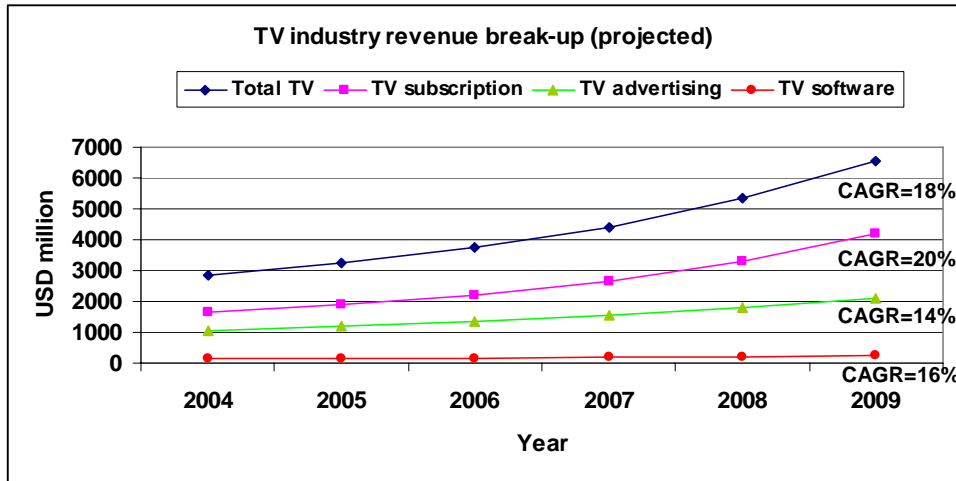
Note: Above figures include only the legitimate sales in each segment; revenues from the animation & gaming segments are included in the entertainment industry size as these have traditionally been included in the Indian IT and software revenues

Television

Broadcasting in India has flourished since the state television's monopoly was broken in 1992, and the number of stations and channels continues to grow. The television industry broadly has three streams of revenue: subscription, advertising, and software content. These are respectively projected to grow at 20%, 14% and 16%, and overall TV industry revenue is expected to grow at an 18% CAGR over the next five years (figure 3.5). The shares of subscription, advertising and software revenues in total industry revenues are therefore projected to change from 58%, 37% and 4% respectively, to 64%, 32% and 4% respectively (the share of TV subscription showing significant increase).

⁷ Source: "The Indian Entertainment Industry-An Unfolding Opportunity", FICCI

Figure 3.5: Projected TV revenue break-up



Source: Report on Entertainment & Media by IBEF

India is the third largest television market in the world, and given the low penetration percentages (42% cable TV households to total TV households and 25% cable TV households to total households in India), there exists huge untapped potential for growth in this industry. The chief area of growth in the Indian TV industry is cable and satellite services, especially in the rural and semi-urban areas.

Films

Size of industry industry

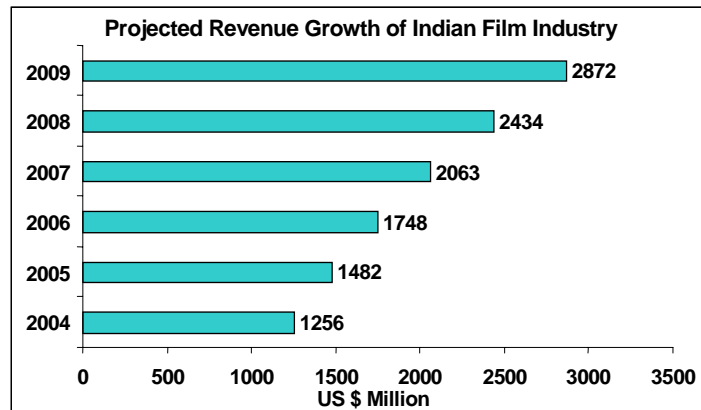
The Indian film industry is the largest in the world in terms of the number of films produced annually (approximately 900 films were produced in 2005). The projected revenues of the Indian film industry are shown in figure 3.5. Revenue is projected to reach a figure of close to USD 3 billion in 2009, which implies a CAGR of 18% over the period 2004-09.

Growth drivers

For the filmed entertainment segment, the likely **growth drivers** in the next five years include:

- Better realizations in box office collections,
- Growth in collections from the overseas markets as a result of better marketing and distribution set-ups, and
- Emergence of the home video market linked primarily with the purchasing power of the consumers.

Figure 3.5: Projected revenues of Indian film



Source: Indian Brand Equity Foundation

Key trends

- Increasing move towards corporatization. Corporatization involves a host of processes that go beyond just getting legitimate financing. Companies such as UTV, Adlabs, Sahara One and Pritish Nandy Communications have set up processes whereby plans for movies for the next two years form part of the pipeline. These projects are at various stages of completion with several teams and project heads for each process. Corporatization helps to average out revenues and bring in transparency and accountability. The trend may be attributed in part to the rise of marketing and evolution of distribution activities
- Emergence of integrated film companies and public issues of several companies related to movies (such as UTV Software and Shringar Cinemas)
- The advent of multiplexes, resulting in an increase in the number of moviegoers
- Emergence of smaller size theatres, which has provided the incentive for low-budget niche films and experimental cinema
- This has also resulted in a number of alternate revenue streams for film producers such as satellite TV rights, radio broadcasting, home videos, direct-to-home services, mobile phone services and broadband
- Substantial growth in revenues from overseas collections, consequent to an emerging growth in the number of prints being released for overseas theatres

Music

The Indian music market, which was earlier completely dominated by film music, is increasingly being driven by the success of music videos and non-film albums. The industry is estimated to be worth about USD 149 million currently (2004) and is projected to grow at 3% per annum over the next five years.

Radio

Indian radio today reaches out to 99% of the population and is currently the most cost-effective mass communication medium in the country. The size of the industry in India is currently estimated at USD 53 million and is projected to grow at 22% per annum over the next five years (to reach USD 44 million by 2009). The sector has been privatized recently and is undergoing substantial change with new radio licenses being issued, new channels being broadcast and the radio audience profile undergoing a change. The latter is mainly due to FM broadcast, and the Government of India is substantially enhancing FM coverage (the second round of bidding for phase-II expansion of private FM radio stations has recently been completed).

Gaming & Animation

The gaming and animation market⁸ also has huge growth potential. As per a NASSCOM study on the Animation and Gaming industry in India:

- The global market size of the animation industry (from the developers' perspective) is expected to increase to USD 35 billion by 2009 from USD 25 billion in 2005
- The size of the Indian animation market (from the developers' perspective) was estimated at USD 285 million in 2005. It is expected to witness a CAGR of 35% from 2005-2009 and increase to USD 950 million by 2009

⁸ Traditionally included in IT and software revenues



- The market for gaming development is expected to witness a CAGR of 78% and reach USD 300 million by 2009 from USD 30 million in 2005

The entertainment industry seems poised for steady growth. An indicator of the importance of the Indian market is the sharp competition in the broadcasting space between various international majors for a slice of the Indian pie. The box (Initiatives taken by the Indian government) summarizes the Indian Government's initiatives for this sector.

Critical Success Factors (CSFs) for the industry

Key factors that determine the success/growth of the M&E industry in a region include:

- Macroeconomic and demographic factors, such as an expanding economy and presence of a population base with high literacy and growing purchasing power, a significant proportion of which is spent on entertainment
- Increasing urbanization, which again leads to an increase in spending power
- Availability of studios, recording/dubbing and other production facilities
- Enabling government initiatives (such as clear and integrated legislation governing broadcasting operations and adequate anti-piracy measures) that are forward looking and take cognizance of the growing convergence in the information and broadcasting space

Initiatives taken by the Indian Government

- In 2001, 'industry' status was given to films making them eligible for financing from banks and financial institutions. This has the potential to lower the cost of production.
- In 2002, the Indian Government allowed 100 % FDI on automatic basis in the film industry with no entry-level pre-conditions. It also allowed foreign holdings up to 26% in news related publications
- The Indian Government is moving towards signing a number of co-production treaties with countries such as Canada and Italy.
- The Government reduced the basic import duty from 35% to 25% on certain digital studio equipment.
- Various tax incentives are being offered to investors investing in multiplexes in the non-metros.
- Several initiatives have been taken by the Government and industry to tackle the problem of piracy.
- In 2004 the Government of India issued a directive to include broadcast and cable services within the ambit of the existing telecom regulator TRAI.

Maharashtra's advantages

Mumbai has long been home to the film based entertainment industry in India and has contributed to its development in a significant way. The city accounts for a major proportion of the industry's revenues. The digital revolution has enabled tech-savvy companies to distribute content across various platforms. The Maharashtra Government recognizes the importance of this fast growing industry and has become a vital enabler to provide the industry with long-term stability. The Industrial Development Bank of India (IDBI) set up the country's first film fund worth Rs. 1 billion. Moreover, Mumbai is also the creative center of India (capital of the media and advertising industry) and attracts a lot of talent (performers, technical and creative talent) from the rest of the country.

Figure 3.6: Key players in Indian film industry and presence in Mumbai

Figure 3.6 shows some of the key players in the Indian film industry and their presence across the areas of production, distribution, exhibition, retail, music and home video. All of these companies (with only one exception) are based in Mumbai.

Source: Businessworld survey on the Indian film industry, Jan 06 and IMAcS research

Players	Production	Distribution	Exhibition	Retail	Music	Home Video	Based in Mumbai?
Adlabs Films	✓	✓	✓	✓	×	×	✓
Yash Raj Films	✓	✓	×	×	✓	✓	✓
Percept Picture Co.	✓	✓	×	×	×	×	✓
UTV	✓	✓	×	×	×	✓	✓
Pritish Nandy Communications	✓	✓	×	×	×	×	✓
Dharma Productions	✓	×	×	×	×	✓	✓
Sahara	✓	✓	×	×	×	✓	✓
K Sera Sera	✓	✓	×	×	×	×	✓
Shringar Cinemas	✓	✓	✓	✓	×	×	✓
PVR Cinemas	×	✓	✓	✓	×	×	×
Inox Leisure	×	✓	✓	✓	×	×	✓

However, other regional movie hubs, such as Hyderabad and Chennai are becoming popular destinations for production and post-production activities. Apart from this competition within India, several other countries are also attracting Indian film makers to their country, which is also part of their tourism promotion strategy (See box: Synergy with Tourism Industry).

In this context, Mumbai can also adopt a similar strategy and work with the tourism department to attract film makers from other parts of the world.

Synergy with Tourism Industry

Mumbai/MMR should attempt to attract production companies from other countries. For example, Warner Brothers is producing "Superman Returns" at the Fox Studios Sydney (built with government incentives). Warner Brothers' decision is based on the favorable exchange rate, the Australian government's 12.5 % rebate on all production expenditures (no cap), and a broad infrastructure of crews, equipment and ample stage space.

Several states/countries offer tax credits and incentives for films and TV shows. New Zealand for instance offers production expenditure grants to large budget film and television productions as part of the long-term development of the New Zealand screen industry. A 12.5 % production expenditure grant has been made available for both local and overseas screen productions that meet the qualifying criteria. This grant scheme is an encouragement to attract and maintain the net economic benefits of hosting and producing major film and television projects in New Zealand.

New Zealand is also aggressively targeting Indian filmmakers since 1995. Since then, more than 90 films have been produced entirely or in part in the country. The influx led not only to short-term employment in New Zealand but also to a major growth in Indian tourism. The number of Indian tourists increased from 400 in 1995 to 25,000 in 2001 only because of the awareness among the Indians created by the Indian film industry.



Suggested interventions

The following interventions by the state government are suggested for the entertainment industry:

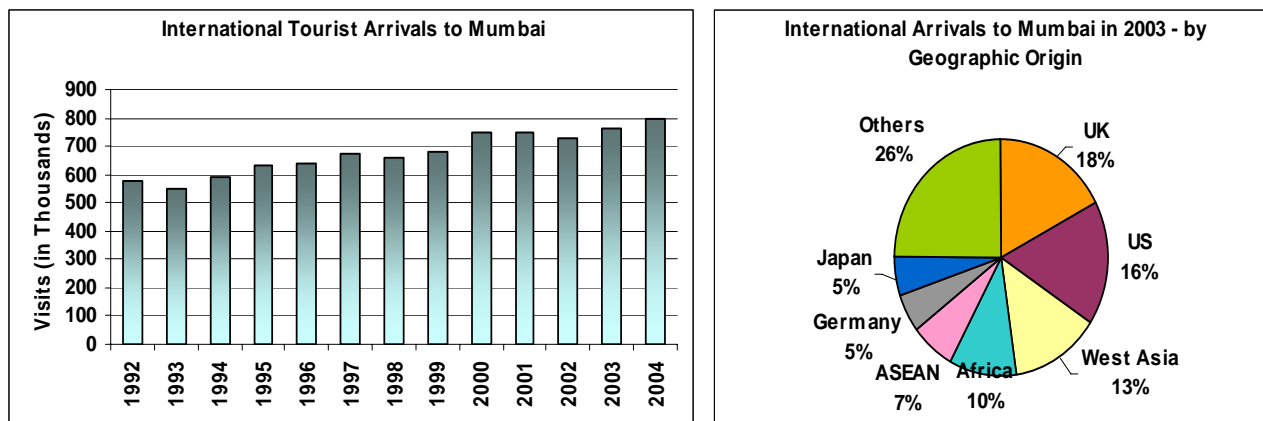
- Work in tandem with **department of tourism** to promote Mumbai/MMR as a 'film tourism' destination and attract foreign production companies offering shooting locations and post production works
- Facilitate **development/upgradation of studios and post production facilities** for attracting television and film companies
- Undertake improvements in the existing **film city** and redevelop it as an integrated facility for national & international companies on lines of Ramoji Film city in Hyderabad
- Facilitate **specialized courses** at the university level on various technical and creative aspects of movies, television, music and animation software to ensure availability of skilled manpower for this industry
- Address the issue of **piracy** by: constituting a regional anti-piracy force to carry out investigations and provide requisite information to the police; conducting anti piracy campaigns; creating public awareness and enforcing the Copyright Law; promoting digital technologies for assisting rights owners.
- **Rationalization of entertainment tax rates** in order to attract large entertainment companies and live events to Mumbai
- Set up an ongoing committee of private sector leaders with knowledge of the sector, specifically involved in furthering the media & entertainment sector

3.8 Tourism

Background

Mumbai is the "Gateway to India" for vast majority of international travelers. In 2004, the city received 813,092 international visitors, out of which 34% were from US and U.K. The international arrivals to Mumbai grew at a CAGR of 2.7% between 1992 and 2004 (figure 3.7). This is because of the presence of the international airport in the city as well as its position as a center for finance in India.

Figure 3.7: International tourist arrivals to Mumbai and break-up by geographic origin



Source: Government of India, Department of Tourism

However, despite such a large number of international tourist arrivals, Mumbai region has not been able to become a tourist destination along the lines of London, Paris or even Kuala Lumpur and Singapore. These cities, apart from attracting business tourists, also attract a large number of leisure tourists.

At present, most of the international tourists coming to India prefer to move on to visit destinations such as Kerala, Goa and Rajasthan because there are not enough attractions in and around Mumbai to hold them here. Though the city has historic and natural advantages as a “gateway” to the country, it has not been able to leverage these either in order to position itself as a major tourism destination or to become an attractive destination for the wider “visiting friends and relatives” market.

Industry Size and Growth Trends

Many developed cities consider tourism to be a vital driver of the economic, social, cultural and environmental well being of their city/country. In the conventional model, Governments looked at providing visitor accommodation facilities and promoting visitor attractions like museums, galleries and cultural heritage sites. However, in the new paradigm, there is a great deal of emphasis on events, festivals and evening-based economic activity driven by theatres, cinemas, restaurants, etc., all of which attract tourists and day visitors as well as residents.



The industry also provides “quality of life” benefits through the varied range of visitor attractions and entertainment facilities offered, and by providing substantial economic activity and employment opportunities. In fact, tourism has a significant multiplier effect on the economy. It is estimated that each rupee spent (by a tourist) changes hands 13 times, and that every hotel room generates direct employment to three persons and indirect employment to eight persons.

In addition, tourism facilities can be important catalysts for, and components of, regeneration schemes that improve areas both for residents and tourists alike.

Travel and tourism is the world's largest industry. International tourism receipts accounted for approximately 6% of worldwide exports of goods and services. When considering service exports exclusively, the share of tourism exports increases to nearly 30 %. Many governments are recognizing the economic potential of tourism and thus formulating focused strategies and action plans to give a boost to this sector. (See box: Tourism Action Plan of London)

Tourism Action Plan of London

Identifying Tourism as a growth vector, the London Development Agency in association with the Mayor of London and 'Visit London' (the official website for London), developed the short-term London Tourism Action Plan for the period 2003-4 to 2005-6. The strategic objectives identified in the Action Plan include:

- Leadership and Promotion;
- Market development;
- Evidence and intelligence; and
- Product development.

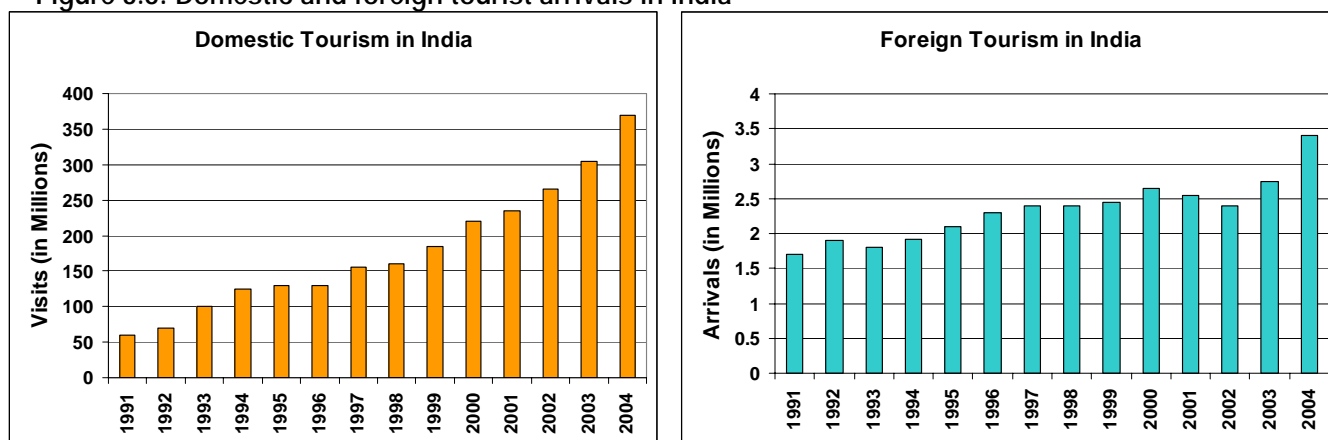
Some of the action initiatives outlined in the Plan include:

- Provide clear leadership and a voice for London in the Tourism Sector
- Marketing and promotion of a “World-Class City”
- **Develop a sense of “Welcome” to London for the arrival of business and leisure visitors**
- Develop public/private partnerships to maximize investment in tourism
- Ensure a step change in marketing through a clear integrated five-year marketing framework for the overseas and domestic markets
- **Develop the business tourism market**
- Promote the distribution of benefits of tourism across London
- Develop the Visiting Friends and Relatives market
- **Develop “Gateway” Partnership and Initiatives**
- **Explore the feasibility and development of an International Convention Center**
- Encourage the increase in supply and improvement in quality of visitor accommodation in London
- Develop an integrated London Visitor Information Strategy
- Web development and new technologies
- Provide business support to SMEs in the tourism sector to help improve quality of service and competitiveness
- Support the management of London's Late Night Economy and 24 hour city concept
- Identify and Develop Integrated Visitor Destinations in areas outside Central London.

According to the World Travel & Tourism Council (WTTC), India's travel and tourism industry generated USD 38.8 billion of total demand during 2004, directly accounting for 2.6% total employment and 2% of the GDP of the country and directly & indirectly for 5.6% of employment and 4.9% of total GDP.

Domestic tourist traffic in India has been growing at a pace of about 15% per annum over the period 1991-2004 (figure 3.8) and is estimated at over 350 million visits per annum (in 2004). International tourist arrivals to India on the other hand have been estimated at about 3.4 million in 2004. However, international traffic has been growing at a slower (and less steady) pace (5.48% p.a.) than domestic traffic and has only recently picked up (growth rates of 23.6% and 14.4% over 2003-04 and 2002-03 respectively).

Figure 3.8: Domestic and foreign tourist arrivals in India

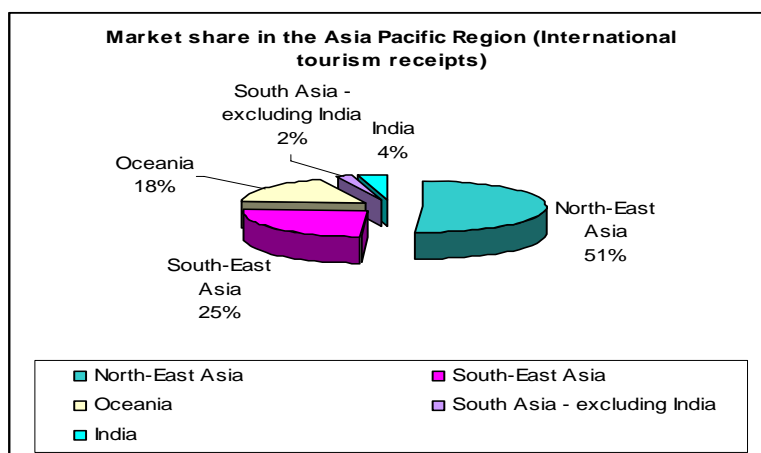


Source: Government of India, Ministry of Tourism

The growth in domestic tourist traffic may be ascribed in part to the rise in disposable income levels and availability of cheaper air travel. International tourist arrivals to India have been increasing partly due to an increase in the number of business travelers.

Figure 3.9: Market share in Asia Pacific Region

However, India currently accounts for a small 2.2% share of the region (Asia and the Pacific) in terms of international tourist arrivals and a 3.8% share in terms of international tourism receipts (figure 3.9), which indicates the tremendous potential for growth in international tourist traffic to the country. In fact, the number of foreign visitors into the country according to WTTC is expected to grow by over 7% per annum over the next decade and an attempt needs to be made to ensure that this growth rate is not only met but exceeded in the MMR.



Source: World Tourism Organization (WTO)

Critical Success Factors (CSFs) for the industry

The key factors that impact the growth of the tourism industry and enhance the tourism potential of a site include:

- Tourist site “products” that can attract tourists and enhance the overall quality of experience at the tourist site
- Adequate infrastructure facilities including:
 - Primary tourist facilities and services (the value and quality of accommodation/hotels, restaurants, and travel and tour services);



- Secondary tourist facilities and services (shopping, recreation, entertainment and visitor information services);
- Tertiary tourist facilities and services (health services and care, emergency and safety services, financial services and personal services).
- Adequate access infrastructure to tourist location and to tourist sites within the location, i.e. connectivity by road/air/rail
- Support urban infrastructure at tourist locations
- Access to adequate and good quality information to the tourists

Maharashtra's advantages

Figure 3.10: Share of top ten states/UTs in domestic tourist visits in 2004

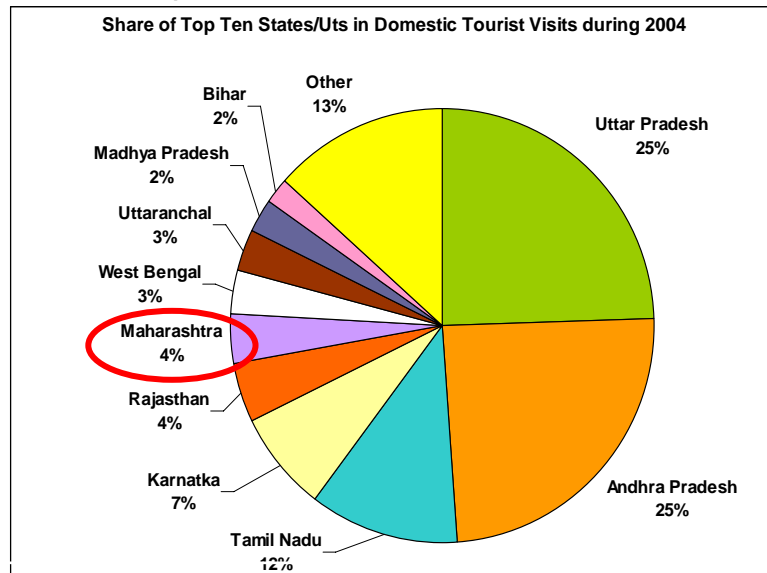
Maharashtra today accounts for 4% of the total domestic visitors in the country and ranks at sixth in terms of share in domestic tourist visits in India in 2004 (figure 3.10).

This is a very small share given the region's potential in almost all tourism segments, which are as follows:

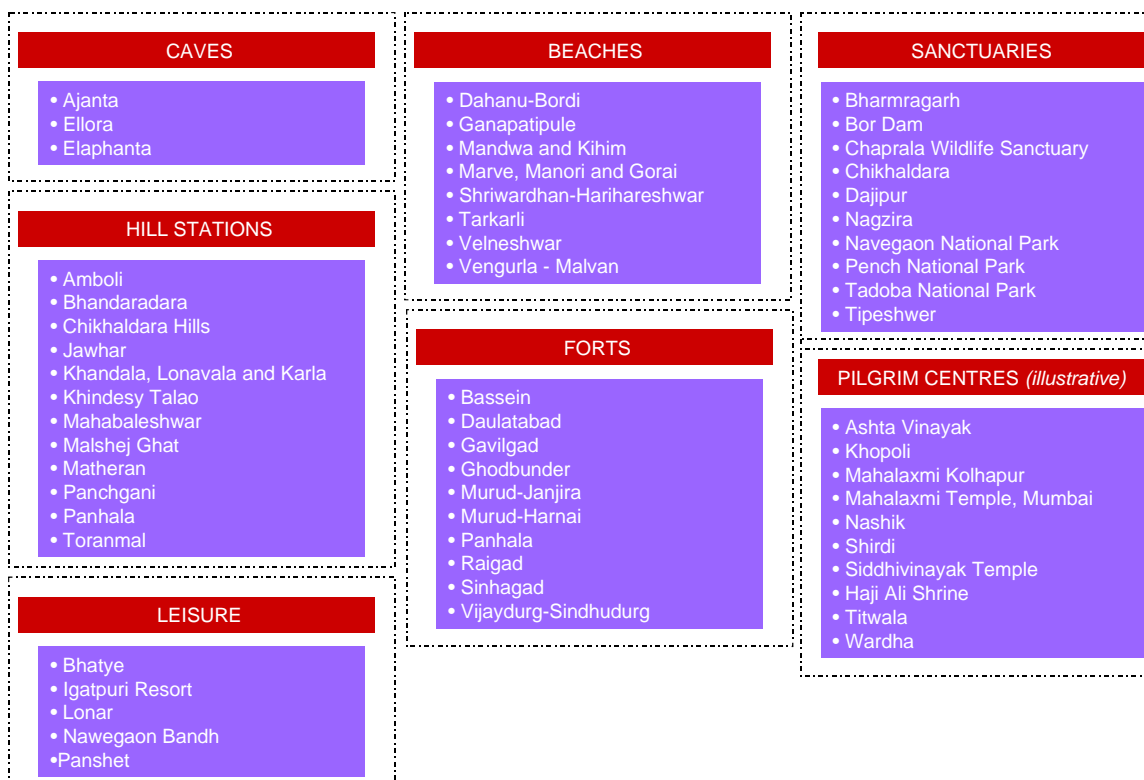
- **Leisure Tourism**, with its natural beaches, caves, forts, hill stations, sanctuaries, pilgrim centers. Some of the places of tourist interest are shown in the exhibit below.

- **Heritage Tourism**

specifically, Ajanta and Ellora caves as well as Chhatrapati Shivaji Terminus (formerly known as Victoria Terminus) and Elephanta caves, which have been declared as 'World Heritage Sites'.



Source: Government of India, Department of Tourism



- **Business Tourism** - Mumbai, also being the business/commercial and entertainment capital of India, can be positioned as a **destination for conventions, exhibitions and conferences**. The city can take cues from Mexico, which focuses on business tourism and has positioned itself as a “conventions destination”. (See box: **Mexico Tourism Board’s focus on Business Tourism**”).

Suggested interventions

Given tourism’s potential in Maharashtra and specifically MMR, and the sector employment generation and growth potential, the state government should take steps in order to increase the number of tourists visiting MMR, prolonging stay (and therefore also money spent) and enhancing the overall tourist experience. To this end, the following interventions are suggested:

Mexico Tourism Board’s focus on Business Tourism

Between 1999 and 2002, the number of conferences and conventions held in Mexico increased by 551% and the number of exhibitions by 93%. Mexico’s business tourism infrastructure is ideal for organizers – 56 conference and convention centres, 245,000 rooms available for people attending events and access to over 70 international and national destinations.

Identifying this area as a niche segment for promoting tourism, the Mexico Tourism Board launched Tasa Cero in February 2004 to increase the amount of business tourism coming into the country. Tasa Cero, or Zero Tax, is an amendment to the VAT law for international meetings, conventions, fairs and exhibitions, which exempts such events from VAT.

Mexico is the first country in the world to introduce initiative of Zero Tax, the latest in a line of initiatives between the Mexican Government and private sector to improve business tourism following the opening of the Office for Conferences and Conventions in Mexico City in October 2003. The initiative aims to make Mexico more competitive in the international events market.

Following the passing of this amendment, congresses, conventions and meetings are now considered an export service by the Mexican Government. High profile international meetings hosted recently in Mexico include

- 5th Ministerial Conference of the World Trade Organization (WTO) in Cancun,
- United Nations Conference on Funding for Development at Monterrey,
- Asia Pacific Economic Cooperation (APEC) conferences in Los Cabos, and
- In September 2003, Mexico hosted its first ever **world tourism exhibition** at the Business and Trade Centre (Banamex Centre) in Mexico City.



- Develop a co-ordinated marketing and promotion strategy (along with short, medium and long-term action plans) for appropriate **branding and marketing of the region** as a “Gateway” to India”. For this, it is important to strengthen private and public sector engagement. Mobilize well known industry leaders to play a larger role in promotion of the state and consider setting up an ongoing committee of private sector leaders specifically involved in furthering tourism. A possible strategy which capitalizes on MMR’s strengths and existing position as a key gateway for tourists (especially international travelers visiting India), is to focus on business tourism and/or.
- Develop **tourist attractions (“products”) within MMR** in order to improve MMR’s offer and prolong average stay in the region. Specifically, evaluate the feasibility of setting up a **Bollywood City (similar to Universal Studios), Recreation center (like Sentosa Island) and/or World class Amusement Park (like Disneyland) and an International Convention Center**. The latter is especially important if MMR is to be positioned as a business tourism hub as availability of high quality business facilities is an essential pre-requisite for the same. Also consider promoting sporting events, golf courses, etc. to generate tourist interest.
- Support the development of **destinations near Mumbai on a fast track mode**: There is potential for developing destinations near MMR as tourist attractions for one-day trips. This is similar to a “hub-and-spoke” model and could serve to extend the length of time tourists spend in MMR. For example, there is a proposal for development of “Gorai-Manori-Uttan’, which is a few kilometers away from Mumbai, as a ‘Special Entertainment Zone’ or Recreation Island. Other potential destinations include Khandala, Lonavala and Karla hill stations, which are close to Mumbai. This would support the development of emerging destinations as well as help distribute the benefits of tourism across MMR. The state government should identify and address any development needs (provision of infrastructure, accommodation, other amenities) in these areas in order to allow them to grow as visitor destinations
- Develop a tourism marketing framework with **emphasis on targeting joint/repeat leisure visits with family and friends** and identify innovative ways to create business tourism packages which combine travel and accommodation packages with MMR’s unique attractions
- Improve the **quality of visitor accommodation** and increase the quality of visitor information/services by effectively engaging the private sector in these activities (for example in running tourist information centers). Building public-private partnerships would maximize investment and improve the overall quality of visitor experience. For this purpose, the state government should begin by identifying potential lead agencies/partners
- Ensure that these emerging visitor destinations are supported with promotional campaigns and included in relevant sources of visitor information
- Cities such as Pune, with their proximity to MMR could also be developed as **tourist ‘circuits’ with MMR as the base**. Pune in particular is now easily accessible from Mumbai and could be developed as a center for adventure tourism
- Improve the (qualitative and quantitative) research capability within the tourism department, to monitor and forecast changes, as well as support the marketing frameworks and measure the effectiveness of marketing campaigns

3.9 Biotechnology

Statistics and growth trends

Biotechnology, which means use of biological processes (‘bio’) to solve problems or make useful products (‘technology’) is amongst the fastest growing industries in the global economy. The global biotechnology

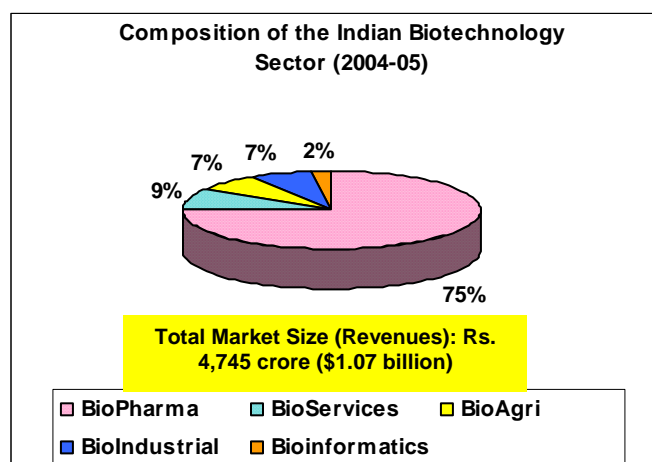
industry based on financials of public companies generated revenues of USD 46.6 billion in 2003 according to Ernst & Young. The largest share of global biotechnology revenues is generated by the US (77%) followed by Europe (16%), Canada (4%) and Asia-Pacific (3%).

The Indian biotechnology sector is currently nascent and accounts for a mere 1% of the global biotechnology market. However, in the last few years India has also emerged as a significant player in the global biotech industry. According to the BioSpectrum-ABLE⁹ industry survey 2005, the Indian industry recorded 36.6 % growth in 2004-05, to reach revenues of Rs. 4,745 crore (\$1.07 billion), up from the previous year's revised figure of Rs. 3,475 crore (\$788 million) (figure 3.11).

Figure 3.11: Composition of the Indian Biotechnology Sector (2004-05)

Of the total market size, the share of various segments has been estimated as follows:

- **BioPharma** comprises vaccines, therapeutics, diagnostics and animal health care products and accounted for over 75% of the market and is the single largest contributor to the total business. The segment registered close to 30% growth, primarily driven by the vaccines business
- **BioServices** (market share of 8.96%) comprises clinical research, contract research and contract manufacturing. The BioServices segment registered 54.6% growth
- The **BioAgri** market, which consists of Bt cotton in the seeds category and bio-pesticides and bio-fertilisers, had a market share of 6.95 %. This sector was the fastest growing, with a growth rate of nearly 154%
- The **BioIndustrial** (market share of 6.74 %) segment includes enzymes, organic amino acids, and yeast and yeast-based products. Registered 34.45% growth
- **Bioinformatics** (the science of informatics as applied to biological research) had a share of 2.11%. Registered 25% growth



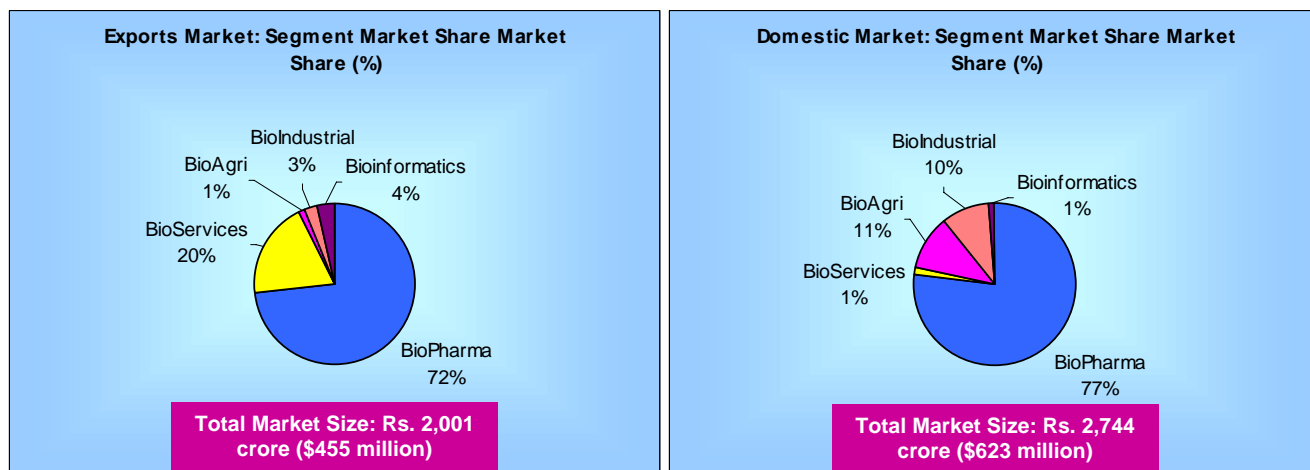
Source: BioSpectrum-ABLE industry survey 2004-05

Biotech exports (valued at Rs. 2,001 crore) contributed 42.2 % of the total biotech business in 2004-05. The BioPharma sector accounted for the largest share (73.2%) of exports. This was followed by the BioServices segment (19.5% share), and then by Bioinformatics (3.6%), BioIndustrial (2.6%) and BioAgri (1.2% of total exports).

The domestic business was mainly driven by BioPharma sales (76.8% share). This was followed by BioAgri (11.2% share) and BioIndustrial (9.8%) segments. Bioinformatics and BioServices are as yet small markets for domestic business and accounted for 1.0% and 1.2% share of the total domestic market respectively (figure 3.12).

⁹ Association of Biotech led Companies

Figure 3.12: Segment market share in domestic and exports market



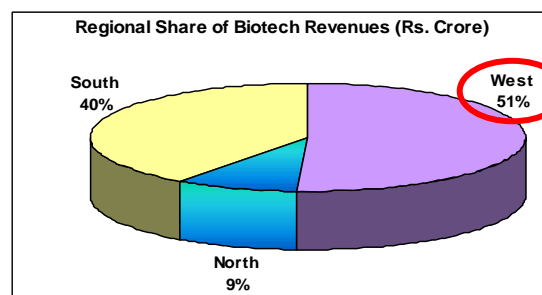
Source: BioSpectrum-ABLE industry survey 2004-05

The industry is well spread across the country and comprises 280 companies that are directly involved in the biotech business and another 120 that supply technology products to these biotech companies. Several states have announced biotech policies and provide incentives to set up biotech parks to promote the industry.

The biocluster in the Western region is the largest in terms of revenues generated. It is centered around Aurangabad, Ahmedabad, Mumbai and Pune. The southern cluster comprises Bangalore, Hyderabad and Chennai while the northern cluster is primarily located in the Delhi-Gurgaon-Noida region (figure 3.13).

Cities such as Bangalore and Hyderabad have become important destinations for biotech companies because of proactive and supportive state governments, a strong pharma base, and an entrepreneurship-driven culture (see box: Initiatives taken by the Andhra Pradesh Government).

Figure 3.13: Regional share of biotech revenues



Source: BioSpectrum-ABLE industry survey 2004-05

Initiatives taken by the Government of Andhra Pradesh

The Andhra Pradesh Government has identified biotechnology as one of the key potential growth areas. 'Genome Valley' is the first state-of-the-art biotech cluster in India for life sciences research, training, and manufacturing activities. The state has taken the following initiatives for this sector:

- Set up a venture capital fund with a corpus of \$30 million (Rs. 150 crore) for promoting biotech companies. The AP biotech venture fund had a seed capital of Rs. 10 crore, besides contributions from APIDC and Dynam Venture East, USA.
- An international life sciences institute is coming up in Genome Valley for excellence in industry-driven life sciences research. ICMR also plans to set up a national animal house for bio-medical research in collaboration with National Institute of Health, USA. The state government has also embarked on setting up an agri biotech park in the ICRISAT campus near Hyderabad and a marine biotech park at Vishakapatnam.
- The state has also become home to the rice genome sequencing project by the University of Hyderabad and the buffalo genome project by CCMB, while an umbilical cord stem cell bank has been set up by Pacific Health Care Holdings, Singapore.

Biotech parks have also been set up in a number of states and some examples of parks that have been set up (or are in the process of being set up) include:

- ICICI Knowledge Park situated near Hyderabad, developed by ICICI Bank Ltd. in partnership with the Govt. of Andhra Pradesh
- Shapoorji Pallonji Biotech Park set up as a joint venture between Shapoorji Pallonji Co. Pvt. Ltd. and the Govt. of Andhra Pradesh, situated in Genome Valley, Hyderabad
- Women's biotechnology park, Chennai sponsored by Tamil Nadu Government, Department of Biotechnology (Govt. of India), Tamil Nadu Industrial Development Corporation and M.S. Swaminathan Research Foundation in order to harness the benefits of biotechnology to provide self-employment openings to women entrepreneurs
- TICEL Biopark Ltd. set up by the Tamil Nadu Industrial Development Corporation Ltd. (TIDCO) in Chennai
- Punjab Biotech Park, which is a joint effort by Beckons Industries Ltd. and Punjab State Council for Science & Technology (PSCST) and focuses on catalyzing SMEs
- Biotech Park Lucknow, being sponsored by Department of Biotechnology (DBT), Government of India and Department of Science & Technology, Govt. of UP
- Biotech Parks at Sitapura, Jaipur; Boranada (Jodhpur); Bhiwadi (Alwar) developed by RIICO (Rajasthan State Industrial Development & Investment Corporation Ltd.)

Some examples of Biotechnology Park and medicinal plant park initiatives by developing countries are summarized in table 3.1.

Table 3.1: Examples of Biotechnology Park and Medicinal Plant Park initiatives by developing countries

Country	Feature(s)	Location
Brazil	Promote R&D in biotech business through transfer of technology and research expertise to the private sector	Polo Bio Rio Park, Rio de Janeiro
China	Biotechnology Financing Zones planned in Taiwanese science parks with focus on development and commercialization of high-quality biotech products:--Hepatitis B vaccine, diagnostic kits, herbal and medicinal drugs Development of a Biotech Valley Concept for food, medicine, floriculture, agribiotech, bioprocessing of raw materials	<ul style="list-style-type: none"> • Changwa coastal industrial park • Hsinchu science park • Tainan science park • Tainan technology park • Yunlin technology industrial park Yunnan area which includes the Kunming Hi Tech Incubation zone, and the Kunming Economic zone with planned biotech corridor that links up research centers and several industrial parks
	Institute of Medicinal Plants established in 1983	Medicinal plant farms in Yunnan, Hainan and Guangx provinces



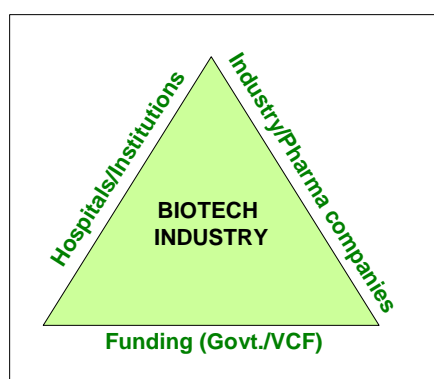
Country	Feature(s)	Location
Egypt	Commercialization of Biotech research results for targeted end-users	Establishment of a specialized BIOGRO Unit at the Agricultural Genetic Engineering Research Institute (AGERI), Giza, to interact with the Genetic Engineering Science Unit (GESU) for speeding up commercialization of high-quality products and services
	Transfer of research into resource businesses and products; biotech markets need to be developed	Development of biotechnology in bio-based incubators established in Assiut, Banha, and Mansoura University; science industrial parks planned
	Use of best practices in management of medicinal plants in St. Katherine's protectorate in the Sinai Farmaya Laboratory	Conservation of medicinal plants in arid ecosystems; management of endangered plants; establishment of small /medium -scale enterprises; protection of intellectual property rights in medicinal plant parks
Guatemala	Farmaya Laboratory	Organic cultivation of medicinal plants, pharmacological research, production of plant-derived pharmaceuticals, development of protocols for safe use and screening of 700 different plants. 15 pharmaceutical products developed using traditional knowledge of indigenous and rural groups
Malaysia	Emerging Technologies-manufacture of medical and scientific instruments; advanced biomaterials; contract R&D services Herbal and medicinal plant	Kulum Hi-tech Park. Kuala Lumpur
Nepal	Ayurvedic medicine	Medicinal plants cultivated in Doti, Shivpuri, Tistung, Tarakav and Urindavan herbal farms
Singapore	Pharma Zone for biotech and pharmaceutical companies	Agri-Bio Park -six agrotechnology parks being established to produce ornamental flowers, plants, food fish, ornamental fishes, and vegetables
Sri Lanka	Inventorization of plant genetic resources, medicinal plants and taxonomic data analyses	Establishment of a Women's Biotechnology Park foreseen
South Africa	Agricultural engineering, Plant production and animal wildlife healthcare	Porsequor Technopark, Pretoria

Country	Feature(s)	Location
	Catalyse R & D interaction between biotech companies and universities in the Western Cape; natural products research	Technopark in Stellenbosch with focus on agriculture, food, aquaculture and marine products Conservation and use of east and southern Africa's medicinal plants

Source: Electronic Journal of Biotechnology and IMAcS Research

The three pillars that would facilitate the development of the biotech industry are (a) medical and educational institutions that would provide support in the form of training and facilitating product development; (b) industry including pharma companies who develop the real life product; and (c) finance, which may come from various sources including the state government and venture capital funds (figure 3.18).

Figure 3.14: Framework for study of biotech industry



Specifically, the role of hospitals and educational institutions is to provide research support to industry. Several universities in the US (the University of North Carolina being one example) receive federal and state government grants which they invest in a variety of programs (see box: The North Carolina Biotechnology Development Centre) such as funding the development of innovative content and new ways of delivering the content, and also in training programs both for students, and also for teachers to teach about biotechnology in the classroom.

The North Carolina Biotechnology Development Centre

- The Biotechnology Center at the University of North Carolina is a private, not-for-profit organization created over 20 years ago, initially as part of state government, but very quickly spun out
- The Centre receives an appropriation from the state government every year which they initially invested in a variety of programs, mainly for infrastructure support.
- Over the years, as discoveries that had some commercial potential were being made in these universities, the centre started sharing the resources and putting in place some funding programs to help pull those technologies out of the universities. Loan programs were created to provide very favorable terms to help start companies and the centre worked closely with partner organizations in the community.
- *"Our job is really to help bring everybody together to move things along or to provide funding where we can to stimulate economic development"*.
- The Centre has three types of partnership programs:
 1. **Collaborative funding grants** – these are grants that are funded at the Biotech Centre and proposals are invited which are designed to stimulate collaboration between industry and the universities
 2. **Intellectual exchange groups** – these groups are completely targeted at facilitating discussion among academic scientists at all levels and many of the people who come are at the graduate student level and industry scientists
 3. **Biomufacturing training network** – this is an integrated training network developed in partnership between the Biotechnology Center, their university partners, and the community colleges that will "take post high school students through appropriate certificate programs all the way up to PhD level scientists"

Source: Speech ("Graduate Education: Building Public Partnerships") by Leslie Alexandre, President and CEO, The North Carolina Biotechnology Center

Going forward, the availability of people with the right skills to be able to deal with the complicated processes required to develop biologics and complicated new therapeutics and diagnostics will be a key factor that will determine the shape of the industry. This is just one of the areas where partnerships – between institutions, industry and government/venture capital – are likely to prove crucial. In Maharashtra's



context, it will be useful for the state to leverage the presence of a variety of medical and educational institutions on the one hand and pharma companies on the other hand.

Critical Success Factors (CSFs) for the industry

The key success factors for development of the biotech industry in a region include:

- Presence of a strong base of pharma and biotech manufacturers and rich biodiversity
- Availability of a large number of high caliber scientists and technologists
- Availability of funding (private equity, government funds and tax-free benefits, venture capital)
- Existence of a large number of research institutes/R&D establishments and educational institutions in biosciences and IT
- Support from state governments in the form of funding for basic research, policy support, special incentives
- Existence of a strong technology base
- Risk taking culture that encourages entrepreneurship
- Protection for intellectual property and a regulatory system that fosters confidence in the safety and efficacy of new products
- Presence of an existing, heterogeneous biotech cluster which enables companies with interests in diverse areas to set up operations and existence of biotech parks which promotes cluster advantages

Maharashtra's current industry base

Mumbai is home to some of the leading pharmaceutical companies such as Roche, GlaxoSmithKline, Aventis and Pfizer. The Serum Institute of India Ltd., which is the second largest biotech group in the country, is established in Pune along with the Venkateshwara Hatcheries group. Hindustan Antibiotics Ltd. set up its Penicillin plant in Pune in 1954. Other leading pharmaceutical companies such as Wockhardt, Cipla, Lupin and Nicholas Piramal are also based in Maharashtra.

The State Government announced the Maharashtra Biotech Policy in 2001. It is understood that a revised policy is under the consideration of the government. The 2001 policy included various strategic initiatives in order to develop the biotechnology industry in the state, which are as follows:

- Institutional mechanisms
 - Establishment of a Maharashtra Biotechnology Board to ensure timely implementation of the policy and liaise with the central government
 - Setting up of a Biotechnology Development Fund with an initial corpus of Rs. 50 crore
 - Establishment of the Maharashtra Biotechnology Commission, the key implementation body, for effective utilization of the Biotechnology Development Fund
- Financial incentives
 - Power tariff at industrial rates to biotechnology industries engaged in the production of high-end products and at agricultural rates to agricultural biotechnology companies
 - Exemption from paying electricity duty
 - Captive power generation permitted

- Special incentives as per the incentive scheme 2001, in terms of capital subsidy, exemption from payment of stamp duty and registration fees and refund of octroi and similar levies
 - Twice the permissible Floor Space Index (FSI) for biotechnology units in parks promoted by MIDC and other public bodies
 - Land at concessional rates to “Centers of Excellence” which cover aspects of cutting edge research and development in the areas of life sciences and technology, i.e. bioinformatics
- Incentives for promoting biotechnology parks
 - Equity stake by the government (in the form of land allotted for the projects) in such ventures
 - Units engaged in agricultural biotechnology ventures to be designated as agricultural industries, with the extension of all incentives, exemptions and benefits accruing to that industry to these units
 - Land allotment by MIDC at industrial rates to such industrial units in areas under its jurisdiction
- Infrastructural Support
 - Biotech parks to offer facilities such as Business Facilitation Centers (BFCs) which will be equipped to provide services such as technical assistance, technology transfer and access services, networking, information and support; physical infrastructure; connectivity with academic and research institutions; land for building residential complexes
 - Creating a Biotechnology Resource Center, a reference center for certification of products after testing them; and an experimental animal facility
- Intellectual Property Rights (IPR)
 - Government to launch programmes to create awareness about IPRs among users
 - A special manpower training programme to be developed at the University of Pune; special course at postgraduate level in HRD to be introduced to cover aspects of IPR; revise and create new curricula for the law faculty to incorporate patent law and international IPR related law courses

A Maharashtra Biotech Board and a 13-member Maharashtra Biotech Commission have been set up following the 2001 policy. The website of the Maharashtra Biotech Commission (www.mahabiotech.org) provides useful information on the biotech industry in Maharashtra.

The Government of Maharashtra is promoting a biopharma park at Hinjewadi in Pune and a bioagri park at Jalna near Aurangabad. The 100-acre biopharma park at Pune is a joint venture between the Maharashtra Industrial Development Corporation (MIDC) and The Chatterjee Group (TCG) in which TCG holds 88% stake and MIDC holds the balance. It is hoped that proximity to the Information Technology Park will attract the bioinformatics sector to this park. Thirteen of 19 plots have already been allotted and the park is expected to be fully functional in a year's time.

The bio-agri park at Jalna has been set up by MIDC in collaboration with Maharashtra Hybrid Seeds Company (Mahyco). Mahyco has already set up a biotech center at Dawalwadi near Jalna. The Mahyco Research Foundation (MRF) and its promoters are helping in the conceptualization, design and implementation of the park. MRF will also establish a research facility in the park which will be available for use by other biotech companies. The production as well as research facilities of some major bioagri companies, such as, Mahyco, Syngenta, Seminis, Monsanto, Mahendra Hybrid Seeds, Nath Seeds, and Ajeet Seeds Ltd. are already based in the Jalna belt.



Opportunities for Maharashtra State

Maharashtra is ideally placed to attract investments in biotechnology because of the presence of top international and national pharmaceutical organizations and research centers in the state. The state is home to 20% of the 20,000 pharmaceutical companies in India and accounts for 40% of the turnover of the national drugs & pharmaceutical industry. Apart from this, the state's strong base of agriculture and pharmaceutical industry should offer tremendous growth opportunities for biotech industries in the state.

The state also offers excellent intellectual infrastructure – about 1,000 institutions producing about 163,000 trained technical personnel each year. The Government is also promoting IT and biotech parks, R&D centers and pilot plant facilities for contract research. The presence of a large number of colleges (including Pune University which has one of the best bioinformatics programs in the country) and research institutes (such as The Serum Institute and the National Chemical Laboratory), gives Pune a natural advantage in forming a successful bio-cluster in the state. There is scope for developing Mumbai-Pune as a strategic corridor for the biotech sector, essentially enabled by the presence of a large number of pharma companies in this corridor. To this end, a biotech park has been envisaged at Kalamboli (Navi Mumbai) by City and Industrial Corporation of Maharashtra (CIDCO).

The presence of a large pharmaceutical sector in the state is expected to generate interest among the potential investors in the bio-pharma and medicinal biotech segments. Similarly, the presence of a strong IT infrastructure suggests potential in bioinformatics and IT applications. Internationally, future areas of opportunity for biotech have been identified as follows (table 3.2):

Table 3.2: Scope and opportunities for biotech

S. No.	Sector of application	Scope and opportunities
1.	Agriculture and allied sector	Development of disease resistant & pest repellent high yielding plant & crop varieties, high breed animals of improved genetic character, fast multiplication of improved genetic material of uniform quality, production of bio-fertilizers and bio-pesticides
2.	Industry sector	Production of organic acids, organic solvents, fine chemicals, enzymes, antibiotics, amino acids, vitamins, etc.
3.	Food and Beverages	Production of fermented foods and drinks, single cell protein, sweeteners, flavors and flavor enhancers, dairy products, food enzymes, mushroom, etc.
4.	Medical and health	Production of vaccines, immobilized enzyme based biosensors, monoclonal antibodies based diagnostic kits, growth hormones, etc.
5.	Environment and energy	Treatment of industrial and municipal waste water, methane from agro-based or organic content rich industrial wastes, biological hydrogen, alcohol as fuel, development of suitable plant as environment protector, etc.

Source:
IMaCS research

Attractive segments for Biotech in India

For India, attractive segments are medical biotech (given the strengths in pharmaceuticals), agri biotech (second largest food producer, rich biodiversity and skilled and low cost human-power) and services segment. The reasons for the anticipated growth in the services segment include:

- With an increasing number of pharmaceutical companies finding it difficult to conduct the entire drug discovery process in-house they are looking for ways to minimize costs. India has become a very attractive base as the cost of infrastructure is relatively lower compared to other nations
- Foreign companies also benefit from the cheaper qualified workforce available in India
- India produces enough qualified graduates each year thus companies looking to expand their operations can easily do so without facing a shortage in labor

It is estimated that vaccines, contract research, agriculture and human health sectors comprise two thirds of the total market. It is further estimated that **health care products** would dominate the Indian biotech market, accounting for roughly 40% of the total market by year 2010, followed by **agriculture** at about 30%. It is also estimated that contract research and bioinformatics would pick up and account for as much as 25% of the biotech market. An estimation by the Confederation of Indian Industry (CII) shows that the agri-biotech segment would see growth rates of as much as 60%, diagnostic and therapeutics of about 25% and vaccines of about 15%.

Maharashtra should also focus on the bio-pharma/medical segment given its strengths in these areas. It could increasingly look at opportunities in the contract research and bioinformatics segments as well. Contract opportunities are likely to arise both in clinical trials (which is more of a chapters game) and in high end research (which is more high-value and high-investment). While clinical trials related work will lead to creation of more jobs, research will help Maharashtra differentiate itself. Therefore we suggest that the government start by focusing on clinical trials and in the longer term aim at a mix of both clinical trials and high end research.

Suggested interventions

The Government of Maharashtra has identified biotech as a high growth opportunity for the state. Maharashtra's biotech policy lists several initiatives that the state plans to take to accelerate the growth of this sector. The state's role is envisaged as an enabler and facilitator and emphasis is given to protection of intellectual property rights. The policy lists various financial incentives to be provided to biotech units.

Institute of Bioinformatics and Applied Biotechnology (IBAB),

Bangalore

The Government of Karnataka in association with ICICI has established the Institute of Bioinformatics and Applied Biotechnology (IBAB) in ITPL at Whitefield, Bangalore. The objectives of this institute are:

- Offer masters and doctoral programs in bioinformatics and applied biotechnology
- Carry out R&D in the field of bioinformatics and related areas
- Undertake short-term training programmes
- Promote and run incubation centers

The IBAB expects to be financially self-sustainable through fees for start-up incubation, contract research and its bioinformatics courses, and, in the long run, through generation of Intellectual Property.



We understand that the revised Biotech Policy is under preparation and we suggest the following additional interventions:

- Set up a **strategic corridor from Mumbai to Pune for the development of the biotech industry** which would capitalize on the strengths of both regions
- **Promote the state** and especially the Mumbai-Pune corridor as an attractive destination for biotechnology research and manufacturing
- Provide assistance for setting up more **biotech parks** in the state by e.g. by providing land or by taking an equity stake in the project and providing basic infrastructure for the park
- **Focus on academic infrastructure:** Specifically to enable availability of skilled specialized labor for the industry, set up a dedicated institute of bioinformatics and applied biotechnology to facilitate R&D, undertake training programs and set up incubators. The Government of Karnataka has set up such an institute in association with ICICI (see box: Institute of Bioinformatics and Applied Biotechnology (IBAB), Bangalore). Also, introduce courses in biotechnology, biomanufacturing and bioinformatics at the graduate and post-graduate levels throughout the state in order to build a future supply of trained workers. Provide initial funding assistance in the form of grants and take steps to facilitate partnerships between the institute(s) and industry both for training programs and development assistance
- **Encourage venture capital funds** to operate in the state and consider forming joint ventures with some venture capital funds that fund biotech start-ups
- Set up a university of medical life sciences to facilitate research in pharmaceuticals and disease prevention and cure and provide opportunities for clinical drug testing and drug development
- Provide incentives for setting up institutes of training within biotech parks for training and extension for farmers and technicians in the area of biotechnology
- Create supporting institutions for the industry for industry-driven life sciences research by providing grants for setting up private R&D facilities in universities and also help develop outside companies with specific expertise, i.e. contract research organizations (CROs) with good manufacturing practices
- Ensure single window clearance for quick clearances to projects in biotech
- Simplify labor and other laws in biotech parks e.g. by exempting biotech units from the provisions of the Contract Labor Act, allowing three-shift operations, permitting flexibility in opening and closing hours, setting up special industrial tribunals for settlement of disputes that arise in units located in biotech parks
- Provide adequate IPR protection and simpler patenting norms. Establish a special cell to develop an online database on patents and advise entrepreneurs on how to file patents and protect IPR. Also take steps to cover aspects of patent law and international IPR related law in law programs as stated in the 2001 policy

3.10 Textiles

Background

As part of our overall recommendations on economic growth, one of the key recommendations is about reviving manufacturing in MMR. In this context, this section presents key recommendations to revive Textiles (more as an illustration) industry in MMR. Within MMR, the textile industry is currently concentrated in Thane (accounts for 69% of value added in the sector) followed by Mumbai (23%) and Raigad (8%).

Maharashtra state has been a traditional stronghold in the textile industry, as is evident from the following:

- Has **strong industry presence across the value chain** - yarn, fabric, process houses, garments.
- Accounts for about 65 million kg. of cotton production, which is 25% of the country's total. The production of cotton yarn is 272 million kg., which is 12% of the country's total. The state has an installed capacity of 16.6 lakh spindles, which is 17% of country's total. It also has the largest number (560) of 100% EOUs.
- Has one of the best available skilled labor force in textiles due to the existence of **traditional textile centers - Mumbai, Sholapur, Amravati etc.**
- Has one of the highest state domestic products and is host to a burgeoning middle class, which makes it one of the **largest consumption centers**.

However, with the closure of several textile mills in Mumbai due to combination of social, political and business viability reasons, the contribution of textiles in Mumbai's economy has declined over the years. This sub-section outlines the opportunities that have emerged with the phasing out of the multi-fibre agreement (MFA), which set export quotas on all textile manufacturing nations, has shaped the global garment trade over the last three decades. The MFA has been phased out with effect from 1st January, 2005 (and replaced with the Agreement on Textiles and Clothing). This presents an opportunity for Indian firms (and also firms in MMR) to increase exports in sectors where they have revealed competitive strength, and also enter into market segments where they had not previously been able to compete.

The size of the Indian textile market is estimated at around \$45 billion, out of which exports contribute \$15 billion. The global textile and clothing industry is estimated to be worth USD 395 billion plus, with clothing accounting for 60% of the market and textiles the balance 40%. While the US and EU together account for 64% of the clothing and 39% of the textile market, with dismantling of quotas, the global textile trade is at an inflection point. In the post MFA era, projections¹⁰ indicate that the Indian textile sector is likely to grow to a size of \$100 billion by 2010 including exports of \$50 billion. With increased thrust on low cost outsourcing by retail giants such as Wal-Mart, JC Penny, Tommy Hilfiger, TESCO, it is expected that India's current 3.5% share of global trade will double over the next five years.

The Indian textile and apparel sector is also expected to create about 10 million job opportunities, of which 5 million would be direct jobs and another 5 million would be created in textile-related allied sectors. This shows the opportunity for growth, and sets the context for a massive reforms and modernization drive for the Indian textile sector.

At the same time, the phase-out of quotas will present numerous challenges and increased competition from countries such as China and Pakistan. The World Trade Organisation (WTO) predicts that within two years China could control about 50 % of the world's textile market. However, India could still be the second largest beneficiary after China, scoring over peers such as Pakistan, Bangladesh and Sri Lanka, if it capitalizes on its strengths and the emerging opportunities.

A host of policies and regulations relating to firm size, product composition, labour and taxation; combined with inadequate export infrastructure and cumbersome customs procedures have limited the capacity and incentives of textile firms to pursue adjustment and modernisation. The necessary efficiency gains require both very large private modernization investments and extensive government regulatory changes.

¹⁰ 'Textile sector of India: Strengths, weaknesses, opportunities and threat in the quota-free regime' conducted by the Associated Chambers of Commerce and Industry (Assocham)



Critical Success Factors (CSFs) for the industry

The key success factors for development of the textiles industry in a region include:

- Presence of a **strong base of producers across the textile value chain**
- **Low cost sourcing of cotton**
- Availability of **skilled labor force**
- Wide product range and **superior quality standards**
- **State of the art manufacturing plants** with large capacities and **fully integrated facilities**
- Availability of a **large consumer base** and presence of large consumption centers
- **Strong relationships with global retailers** and fashion brands for capitalizing on the textile outsourcing boom
- Designing and fashion capabilities
- Focus on production of good quality fabric, which is a direct result of the size of the average firm in the industry, i.e. **consolidation/economies of scale** is likely to be a CSF for producing better quality fabric and therefore leading to growth of the industry
- **Relaxation in government regulations** and indirect taxes & other costs affecting the sector

Suggested interventions

MMR should leverage the huge opportunities in global trade following the phase-out of the multi-fibre agreement (MFA)

- This could be done by an increased focus on **new product development**, which would help producers to move up the value chain and capture a greater global market share. This requires a focus on:
 - Newer specialized fabric - Smart Fabrics, Specialized treatments, etc.
 - Faster turnaround times for design samples
 - Investing in design centers and sampling labs
- Another recommended step is an **increased use of Computer Aided Design (CAD)** to develop designing capability in the organizations and develop greater options.
- The Government of Maharashtra should provide **incentives for setting up more textile and apparel parks and provide labor law flexibility in these parks.**
- It should also encourage a **cluster development approach** mainly for small and medium enterprises (SMEs) in the sector, for the production and marketing of handloom products in order to improve overall fabric quality and production/technology standards.
- GoM should also consider setting up a **technology upgradation fund at state level** on the lines of the Technology Upgradation Fund Scheme (TUFS) at the central level in order to facilitate investment in technology and overcome lack of specialized machinery and therefore speed up the production process.
- In order to help firms to focus on quality and innovation and invest in new product development, the government should **assist them in setting up design centers and sampling labs.** While there is scope for private initiative in these ventures, private initiative by itself may not be forthcoming because of issues of commercial viability. Therefore GoM could consider providing assistance including taking an equity stake in some of these initiatives.

3.11 Retail

Background

Mumbai has a strong economic base. The average household expenditure of more than 44% of the population is in the range of Rs. 70,000-150,000 p.a. while that for over 290,000 people is greater than Rs. 200,000 p.a. The city's market size is estimated at over Rs. 31,000 crore, making it the prime catchment for leading retailers in the country¹¹.

The retail market in Mumbai (similar pattern as in India) is a mix of organized, semi-organized and unorganized formats. It may be classified as:

- Traditional prime areas: Fort and Crawford markets
- Top-end retail activity centers in South Mumbai: Breach Candy, Pedar Road, Warden Road, Kemp's Corner
- Suburban high-end retail activity centers: Bandra, Juhu, Andheri
- Emerging markets: Regional shopping malls

The focus of retail has traditionally been South Mumbai with Bandra being the only exception, and until recently, characterized mainly by stand-alone shops and shopping complexes. However, the opening of the "Crossroads" mall at Haji Ali in 1999 revolutionized the concept of retailing in Mumbai. Since then, a large number of malls have been announced and planned. The largest number of upcoming malls in Mumbai is concentrated in the western suburbs of Andheri, Goregaon, Malad, Kandivali and Borivali, mainly due to the growing population with sufficient disposable income and a complementary lifestyle, and availability of industrial land at affordable rates.

Overall, despite being the largest market in the country and an early adopter of the "mall culture", mall development in Mumbai has been fairly sluggish, mainly due to lack of adequate real estate, and high prices. Current developments re-emphasize the significance of location, with the focus of mall development being on western suburbs due to the potential of the catchment.

Mumbai: Poised for growth

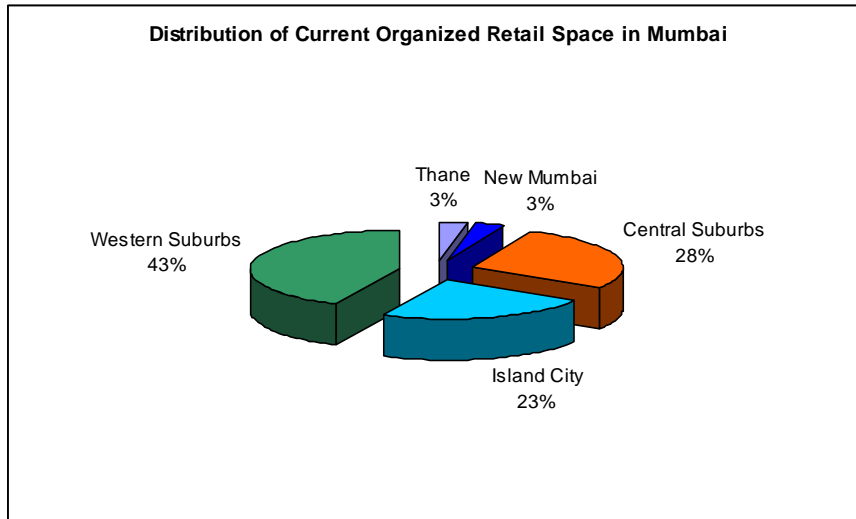
The current mall stock in Mumbai is 3.4 million sq. ft¹². It is estimated that by the end of 2006, Mumbai will have more than 25 fully functional malls occupying an area of around 4.8 million sq. ft¹³ and approximately 9.1 million sq. ft. of organized retail space by 2007. The Supreme Court's judgment to allow mill land development is expected to contribute around 8-10% of the total future supply. Encouraged by the enormity, scale, success and scope of the developments in the Parel area, some mill owners plan to redevelop their properties with a strong retail base. As mentioned, organized retail development is now shifting towards western and central suburbs due to availability of industrial land at affordable rates (see figure 3.15 for distribution of current organized retail space in Mumbai, which already is predominantly in the suburbs).

¹¹ "Retail Real Estate Malls in India", An Images Study

¹² "Mumbai Real Estate Review, Jones Lang LaSalle, 3rd Quarter 2005

¹³ "India Property Market Review", August 2005, Colliers International Asia Pacific Research Report

Figure 3.15: Distribution of current organized retailing space in Mumbai

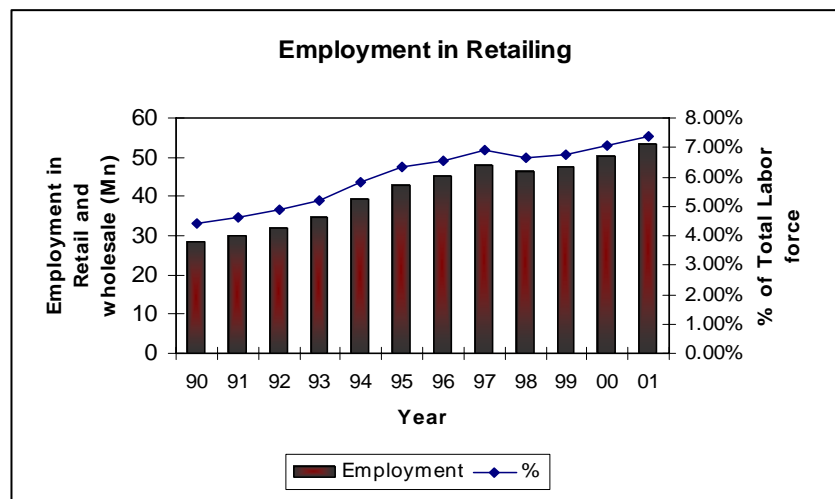


Source: "India Property Market Review", August 2005, Colliers International Asia Pacific Research Report

Areas such as Bandra-Kurla complex (BKC), Juhu, Lokhandwala, Thane and Vashi are likely to emerge as "specialty malls" which cater to particular product lines. Research indicates that introduction of modern well organized retail format helps to reduce cost by at least 10%, with promise of high quality products and services.

Figure 3.16: Employment in Retailing in China

Figure 3.16 alongside shows the immense potential for employment generation in the retail industry – the employment increased from about 29 million to over 50 million in the retailing sector in China over the period 1990-2001. In the process, the share of the labor force in retail sector increased from less than 5% to 7.5% during the corresponding period.



Source: China Statistical Yearbook 2001

Therefore as mentioned earlier, we have short-listed the retail sector because of the sector's labor-absorptive nature and its ability to generate a large number of jobs both directly and through indirect multiplier linkages. According to a recent article by The Economist¹⁴, every direct retail job creates another at the "back end" and also among suppliers in industries such as food processing. The retail industry also addresses the great concern about "jobless economic growth" that India has witnessed in the last few

¹⁴ "Coming to Market", A special report on Retailing in India, The Economist, April 15th 2006

years. Experts believe that that a large proportion of the jobs created in the next one decade would be contributed (directly or indirectly) by the retail industry.

Further, compared with the way the retail sector operated earlier, a modernizing retail sector creates many more high level jobs (e.g. supply chain management) that create more promising paths for career advancement. This is the context for promoting retail trade as a key sector for the MMR economy.

Critical Success Factors (CSFs) for the industry

Key factors that determine the success/growth of the retail industry in a region include:

- Macroeconomic conditions (demand): Economic growth, presence of a large and growing population base with sufficient disposable incomes and higher literacy levels/brand consciousness
- Land market: Availability of sufficient quality retail space for development and redevelopment, with adequate parking space and affordable lease rentals
- Infrastructure: Availability of good quality roads, electricity supply, transport links and other urban infrastructure especially in suburban areas
- Ease of “doing business”: Simplification of central, state and local government rules and regulations, including labor laws and tax systems
- Availability of people with good communication skills and the willingness to work in the organized retailing sector
- Industry: Availability of sufficient anchor tenants to occupy the malls being planned
- Capital market: Easy availability of finance at competitive rates
- Product market: Exposure to international best practices in mall management through presence of global retailers
- Related industry: Adequate and cost effective sourcing links/availability of a developed upstream industry

Opportunities in Retail

Segments in the retail market in India

The size of the organized retail market in 2004 was Rs. 28,000 crore, or 3% of the total retail market. Moving forward, organized retailing is projected to grow at the rate of 25-30% per annum and is estimated to reach Rs. 100,000 crore by 2010. Its contribution to total retail sales is likely to rise to 9% by the end of the decade.

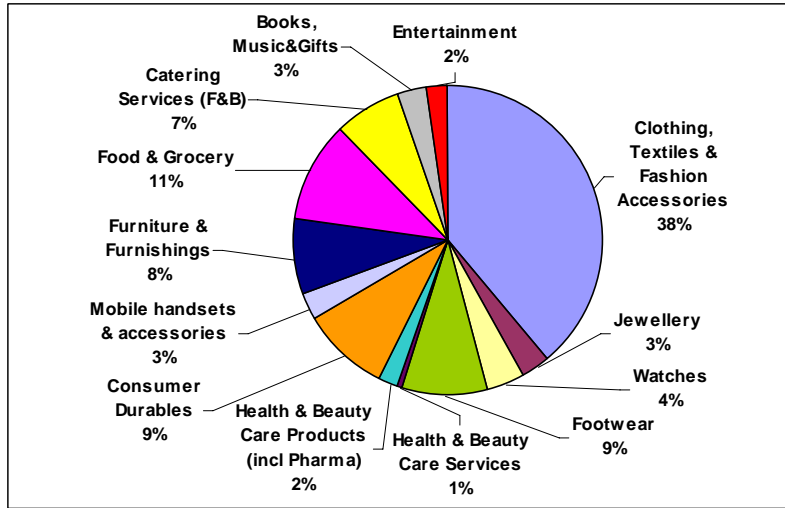
Of the Rs. 930,000 crore retail market, **Food & Grocery retail** is the single largest block estimated to be worth Rs. 615,000 crore, but more than 99% of this market is dominated by the neighborhood Kirana stores. Clothing, Textiles and Fashion accessories constitute the second largest block and the biggest segment for organized retailing, with about 39% share of the market (figure 3.17).

Retailing in India

Retailing in India is one of the significant contributors to the Indian economy and accounts for 35% of GDP. The size of the industry was estimated at Rs. 930,000 crore (USD 205 billion) in 2003-04 and it is expected to grow at 5% per annum. The sector is in a fragmented state with over 15 million outlets operating in the country and only 4% of them being larger than 500 sq. ft in size. This is in comparison with 0.9 million outlets in USA, catering to more than 13 times the total retail market size.

Globally, retailing is the world's largest private industry exceeding USD 7 trillion; 47 of the global Fortune 500 companies and 25 of Asia's Top 200 companies happen to be retailers.

Figure 3.17: The Organized Retailing Pie - 2004



Considering all fashion and lifestyle segments, such as, jewelry, watches, health & beauty care services, and mobile handsets & accessories as one common group along with clothing, textiles and fashion accessories, then Fashion as such would constitute almost 60% of the organized retailing pie. This segment is likely to be the key driver of growth of organized retail market in the next few years.

Source: India Retail Report 2005, An Images KSA Technopak Study

Foreign Direct Investment (FDI) in the retail sector

The Central Government is still debating on the policy decision to allow FDI in retail; but whenever it happens, it is likely to have a strong effect on organized retail development. In January 2006, the Central Government announced its decision to allow FDI of up to 51 % for retail trade in 'single brand' retail outlets. This move will allow multinational companies, big or small, to invest in setting up production facilities, distribution network and retail outlets of their own. Industry experts believe that this will attract premium brands like Nike, Louis Vuitton, Gucci, Reebok etc, into the country.

Foreign companies will be allowed to invest up to 51 % in ventures and the rest will have to come from Indian investors. However, retailing of goods of multiple brands, even if such products are produced by the same manufacturer, are not yet allowed. Similarly, the entry of resellers (mainly multibrand stores) is also barred. However, foreign firms such as Wal-Mart, the world's biggest retailer, Tesco and Carrefour, amongst others are eagerly awaiting the opening of the Indian market and they argue that the entry of foreign players would benefit the Indian economy.

Impact of FDI in Retail

According to the article by The Economist on retailing in India cited earlier, a report by Wal-Mart describes the experience of Thailand, which opened up to foreign retailers in 1997. In the short term, the report describes that "the entry of foreign players in a recessionary economy adversely affected all segments – wholesalers, manufacturers and domestic retailers." However there were also benefits. The foreign invasion led to the development of organized retailing (now 20% of the Thai market); producers had to become more efficient; foreign retailers started buying more Thai goods.

Wal-Mart argues that the same would happen in India. At present it has 120 people in Bangalore, buying about ten categories of Indian products for its shops. Were it to have outlets in India, its procurement would naturally increase. Suppliers would become familiar with its requirements, and exports would also increase. In China Wal-Mart accounts for nearly 10% of all exports to America.

Suggested interventions

Suggested actions for the state government include:

- Address **land market barriers** that create an artificial scarcity of land (repeal of ULCRA, revising FSI norms, recycling of industrial land – the Supreme Court's judgment allowing development of mill land is

a positive development) in order to increase the availability and affordability of land for retail purposes especially in the central areas of Mumbai. This is perhaps the single biggest factor influencing the growth of the retail industry as is also seen in the case of Chennai, where the easy availability of commercial space at low cost and transparency in real estate transactions are often cited as the main factors that have driven the growth of the industry

- **Facilitate development of storage/logistics infrastructure (such as, integrated logistics parks, container handling facilities, warehousing)** in the region to help retail industry players in better supply chain management.
- Ensure **flexibility of labor laws** similar to those offered for ITES/BPO industry
- Allow **single-window clearance and one-time licenses** for multiples stores of retail chains so as to reduce regulatory hassles
- Focus on getting a larger share of the **clothing, textiles and fashion accessories market**, which is the largest segment of the retail market nationally. Mumbai also has inherent strengths in this area, being a traditional hub of textiles and an important center for the fashion industry in India

Annex A: Additional population and GDP statistics on MMR

Population statistics

The population and resident workers¹⁵ data for Urban MMR is shown in table A.1. The main workers/total resident workers proportion for Greater Mumbai is about 36% which is however lower than that of Bhiwandi-Nizampur and Thane municipal corporation areas but higher than that for urban MMR as a whole.

Table A.1: Population and resident workers in Urban MMR - 2001

S. No.	Unit	Total Population	Main Workers	Marginal Workers	Total Workers	Main Workers/Total Population
Municipal Corporations						
1.	Greater Mumbai	11,914,398	4,272,902	255,024	4,527,926	35.86%
2.	Thane	1,261,517	393,413	25,891	419,304	31.19%
3.	Kalyan-Dombivali	1,193,266	381,702	21,735	403,437	31.99%
4.	Navi Mumbai	703,947	238,259	17,196	255,455	33.85%
5.	Mira Bhayander	520,301	185,979	7,101	193,080	35.74%
6.	Bhiwandi-Nizampur	598,703	243,073	6,990	250,063	40.60%
7.	Ulhasnagar	472,943	145,721	9,447	155,168	30.81%
	Sub-Total (A)	16,665,075	5,861,049	343,384	6,204,433	35.17%
Municipal Councils						
8.	Thane District (Sub-Total (B))	771,367	249,360	18,227	267,587	32.33%
9.	Raigad District (Sub-Total (C))	266,319	82,308	8,613	90,921	30.91%
Census Towns						
10.	Thane District (Sub-Total (D))	86,541	32,222	2,911	35,133	37.23%
11.	Raigad District (Sub-Total (E))	56,633	16,072	2,028	18,100	28.38%
	Urban (A+B+C+D+E)	17,845,935	6,241,011	375,163	6,616,174	34.97%

Source: Population and Employment Profile of Mumbai Metropolitan Region, MMRDA

¹⁵ Resident worker in MMR means a person who resides in MMR and is reported working

GDP statistics

Table A.2 presents the break-up of MMR's GDP for Greater Mumbai, Thane and Raigad, for selected time periods. Figures in brackets are the district-wise percentage break-ups of MMR's GDP.

Table A.2: District-wise break-up of MMR's GDP (Rs. Crore)

GDP	1993-94	1998-99	2003-04
Greater Mumbai	28752.33 (65.14%)	41387.50 (65.54%)	46025.83 (67.38%)
Thane	10944.53 (24.80%)	16314.21 (25.84%)	19662.29 (25.91%)
Raigad	4441.86 (10.06%)	5442.34 (8.62%)	5092.83 (6.71%)
TOTAL GDP (MMR)	44138.70	63144.05	75881.91

Source: Directorate of Economics & Statistics, Govt. of Maharashtra



Annex B: MMR Employment Statistics by Sector

In this table, the industries have been clubbed in three categories of sectors, namely,

- Export-Oriented Key Growth Sectors
- Traditional Sectors
- Local Service Oriented Sectors

The specific industries under each broad sector are based on NIC-87, as this is the classification used for this employment census - 1998. Tables A.3 and A.4 provide the number of employees in each of the industry in Greater Mumbai, Raigad, Thane and MMR.

Table A.3: Industry-wise employment in Greater Mumbai, Thane and Raigad

Sector	Total Labor in Greater Mumbai	Total Labor in Raigad	Total Labor in Thane	Total for MMR
Data in nos.				
Export-oriented key growth industries				
IT/ITES	6372	68	673	7113
Finance	179312	4053	14763	198128
Business services	150496	1969	7323	159788
Media	10767	564	1754	13085
Tourism	188406	11388	39571	239365
Biotech	2726	119	612	3457
Health	108808	4912	25848	139568
Logistics	151638	2984	14000	168622
Traditional Industries				
Primary sector	8677	14065	28324	51066
Manufacturing sector	440529	69993	413014	923536
Local service oriented Industries				
Utilities & postal	30037	2287	3600	35924
Construction & real estate	39420	5588	17237	62245
Retail	598169	41923	186247	826339
Public administration	476082	35417	94576	606075
Other services	94346	12086	32329	138761
Private household production	140090	9771	50959	200820
Total Employed	2625875	217187	930830	3773892

The following table provides the employment share (in %age) of each industry in Greater Mumbai, Raigad, Thane and MMR.

Table A.4: Industry-wise employment share for Greater Mumbai, Thane and Raigad

Sector	Total Labor in Greater Mumbai	Total Labor in Raigad	Total Labor in Thane	Total for MMR
Data in %				
Export-oriented key growth Industries				
IT/ITES	0.24%	0.03%	0.07%	0.19%
Finance	6.83%	1.87%	1.59%	5.25%
Business services	5.73%	0.91%	0.79%	4.23%
Media	0.41%	0.26%	0.19%	0.35%
Tourism	7.17%	5.24%	4.25%	6.34%
Biotech	0.10%	0.05%	0.07%	0.09%
Health	4.14%	2.26%	2.78%	3.70%
Logistics	5.77%	1.37%	1.50%	4.47%
Traditional Industries				
Primary sector	0.33%	6.48%	3.04%	1.35%
Manufacturing sector	16.78%	32.23%	44.37%	24.47%
Local service oriented Industries				
Utilities & postal	1.14%	1.05%	0.39%	0.95%
Construction & real estate	1.50%	2.57%	1.85%	1.65%
Retail	22.78%	19.30%	20.01%	21.90%
Public administration	18.13%	16.31%	10.16%	16.06%
Other services	3.59%	5.56%	3.47%	3.68%
Private household production	5.33%	4.50%	5.47%	5.32%
Total Employed	100.00%	100.00%	100.00%	100.00%

Annex C: Location Quotient (LQ) Analysis of Secondary and Tertiary sectors

Location quotients are used to determine the relative share of each industry in the local economy compared to a reference economy. We have developed a framework for the LQ-Growth matrix (figure A.1), to identify growth sectors, where sectors have been mapped with respect to both LQ (indicating existing concentration) and past growth rates (CAGR of the sector over 1993-94 to 2003-04).

The Location Quotient (LQ) technique compares the local economy to a reference economy, in the process attempting to identify specializations in the local economy. It is a ratio between the local economy and the economy of some reference unit. The LQ of a particular industry would be defined according to the following formula:

$$LQ_i = \frac{R_i/R}{E_i/E}$$

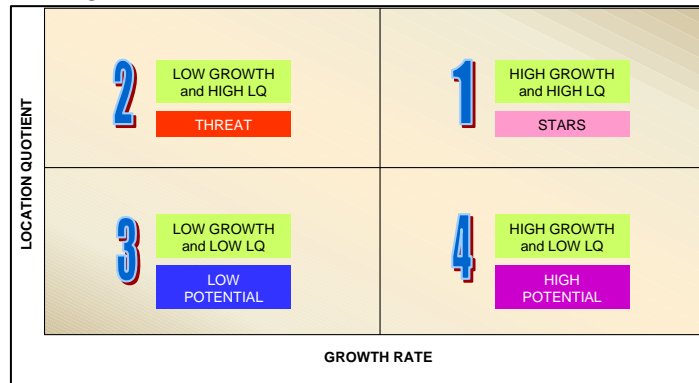
Where:

- LQ_i is the location quotient for industry i;
- R_i is production or employment in industry i in the region;
- R is production or employment in all industries in the region;
- E_i is national production or employment in industry i;
- R is national production or employment in all industries.

Location quotients may be interpreted as follows:

- If LQ > 1, this indicates a relative concentration of the activity in the region, compared to the reference economy;
- If LQ = 1, the region has a share of activity in accordance with the reference region;
- If LQ < 1, the region has less of a share of the activity than is more generally, or nationally, found.

Figure A.1: Framework for LQ-Growth Matrix



In this framework,

- sectors in quadrant 1 (“stars”) are key sectors with an existing concentration which are also doing well;
- sectors in quadrant 2 (“threat” sectors) have existing importance to the region but are losing gradually due to declining growth rate;
- sectors in quadrant 3 (“low potential” sectors) have low LQ and low growth rates, and therefore have low future potential;
- sectors in quadrant 4 (“high potential”) are not yet important but are growing, indicating a “new” industry or one with high future potential¹⁶.

Secondary Sector in MMR

Within the secondary sector in MMR (refer figure A.2), manufacturing accounts for about 77% of output in year 2003-04. Construction and electricity, gas & water supply contribute to 13% and 10% respectively of

¹⁶We have used LQ=1 as the cut off point on the Y axis and growth rate=5.5% (close to the MMR GDP growth rate over 1993-94 to 2003-04) as the cut off point on the X axis

secondary sector output. The share of manufacturing to total secondary sector output has declined from about 85% in 1993-94 to 77% in 2003-04.

Results of LQ Analysis

The location quotients of various sub-sectors within the secondary sector (table A.5) indicate the following:

- LQ>1 at the aggregate secondary sector level as well as for individual sectors except for construction.
- However, LQs have been declining in most of the cases except for electricity, gas and water and a marginal increase in LQ for construction.

Figure A.2: Break-up of secondary sector in MMR's GDP (1993-94 to 2003-04)

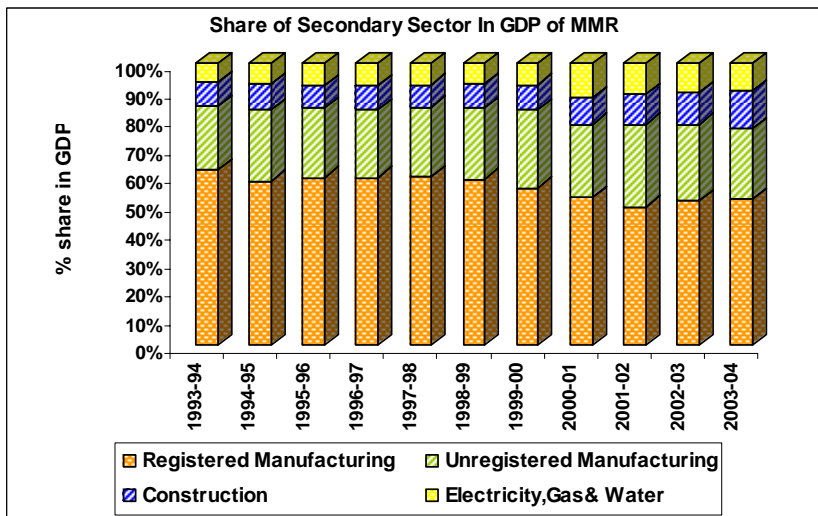


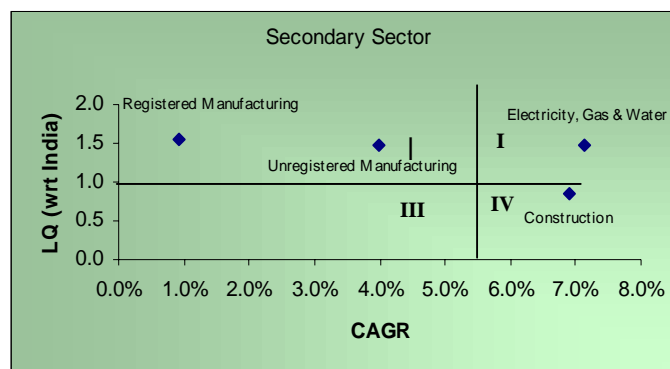
Table A.5: Location Quotients of Secondary Sector for MMR

Sector	LQ with respect to India	
	1993-94	2003-04
Secondary Sector	1.87	1.38
Registered Manufacturing	2.63	1.56
Unregistered Manufacturing	1.77	1.48
Construction	0.75	0.84
Electricity, Gas and Water	1.20	1.47

Source: Department of Economics and Statistics, Government of Maharashtra

Figure A.3: Growth-LQ matrix for the secondary sector

In the secondary sector (figure A.3), the electricity, gas and water sub-sector has a high LQ as well as growth rate, indicating its importance for MMR's economic growth. Manufacturing (both registered and unregistered) is clearly a threat sector with a slowing growth rate, which needs interventions from the state government (e.g. creation of industrial infrastructure and attracting fresh investments in the manufacturing segment). Construction is another segment where the state needs to focus and increase MMR's share, given the high growth potential.



Tertiary Sector in MMR

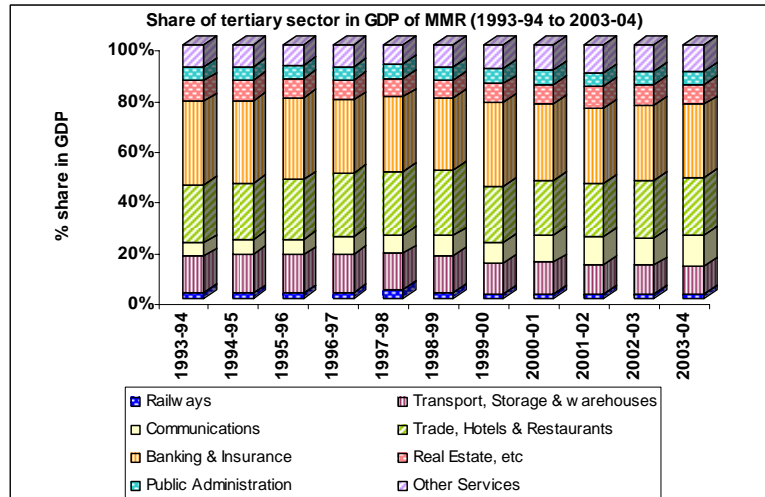
04)

In the year 2003-04 (refer figure A.4), banking & insurance forms the single largest share of the tertiary sector contributing to about 29% of tertiary sector output. This is followed by trade, hotels & restaurants, which contributes about 23% to tertiary sector output.

During the period 1993-94 to 2003-04, the communications sub-sector led the growth in tertiary sector output thereby increasing its share from 5% to 12% at a CAGR of 17%.

On the other hand, the shares of banking & insurance (sub-sector) and transport, storage & warehouses (sub-sector) declined from about 33% and 14% respectively in 1993-94 to their shares of 29% and 11% respectively in 2003-04.

Figure A.4: Break-up of tertiary sector in MMR's GDP (2003-



Results of LQ Analysis

Table A.6: Location Quotients for Tertiary sector for MMR

Sector	LQ with respect to India	
	1993-94	2003-04
Tertiary Sector	1.23	1.24
Railways	0.87	0.94
Transportation & Storage	1.85	1.58
Communications	2.27	1.77
Trade, Hotels and Restaurants	0.94	0.94
Banking & Insurance	3.26	2.67
Real Estate etc.	0.70	0.84
Public Administration	0.50	0.58
Others	0.72	0.89

The location quotients of various sub-sectors within tertiary sector given in table A.6, indicate the following:

- LQ > 1 for the tertiary sector at the aggregate level as well as for transportation & storage; communications; and banking & insurance.
- LQ for banking & insurance is the highest amongst all sectors but it has shown a declining trend.

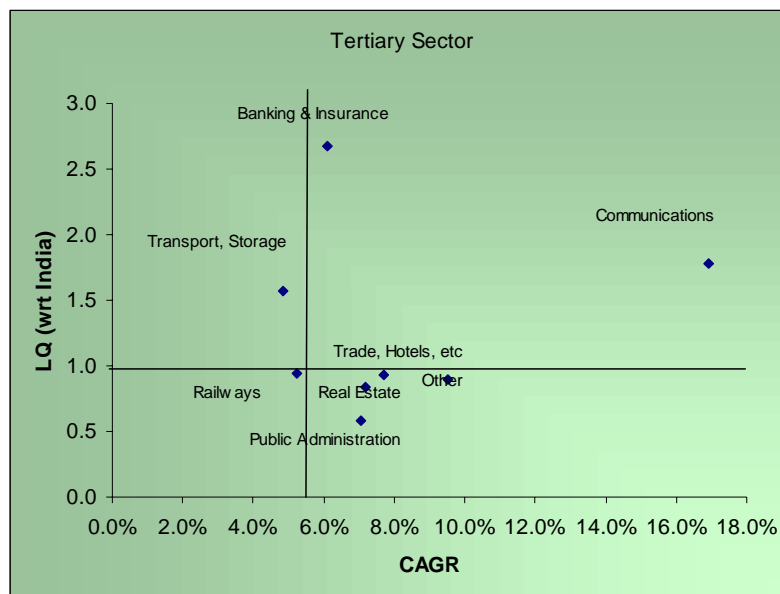


Figure A.5: Growth-LQ matrix for the tertiary sector

For the tertiary sector (figure A.5), many of the sectors are clustered together at boundaries with LQ close to 1 and growth rates higher than the regional average.

- However, banking & insurance and communications are clearly the star sectors. However, the growth rate of the communications sub-sector is the highest, while banking & insurance has a slowing growth rate which puts it at the risk of becoming a 'threat' sector – this also highlights that the state government needs to take steps in order to retain MMR's pre-eminent position in this area.
- Trade, hotels & restaurants lies somewhat on the margin (its LQ with respect to India is slightly less than 1). However, the sector has been growing at a fast rate and therefore it does seem to have future potential as one of the prominent contributors to MMR's economy.

Real estate similarly appears to be a high potential sub-sector, while transport & storage is a threat sector and both these sub-sectors need interventions from the government for their sustainable development.



Annex D: Analysis of select ASI data for MMR – District Shares

NIC Code	Sector	Mumbai	Thane	Raigad
17 & 18	Manufacture of Textiles and Manufacture of Wearing Apparel, Dressing and Dyeing of Fur	44.34%	50.25%	5.42%
23	Manufacture of coke, refined petroleum products and nuclear fuel	20.37%	0.82%	78.81%
24	Manufacture of chemicals and chemical products	19.95%	37.19%	42.86%
27 & 28	Manufacture of basic metals and Manufacture of fabricated metal products, except machinery & equipment	9.66%	26.87%	63.47%
29 & 31	Manufacture of machinery and equipment and Manufacture of electrical machinery & apparatus	65.4%	23.78%	10.82%
36	Manufacture of furniture	97.81%	1.96%	0.24%

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III. CHAPTER 2: WORKFORCE DEVELOPMENT AND MAINSTREAMING THE INFORMAL SECTOR

Section 1

INTRODUCTION AND SUMMARY

INTRODUCTION

In 2003, Bombay First and McKinsey & Company published a report offering a vision for transforming Mumbai into a world class city, developed through a collaborative process with Mumbai's business leadership. The Government of Maharashtra then established an interagency Task Force, with a Citizens Advisory Group, to design and implement a strategy that would elaborate the vision and translate it into reality. (See Chief Minister's Task Force for Mumbai Transformation, 2004).

The task force operates through five subgroups: strategic planning, housing, economic growth, physical infrastructure, social infrastructure and governance. In 2005, USAID commissioned the Urban Institute to conduct research to support the work of the subgroup on economic growth. In April 2006, the team¹⁷ completed its first report which reviewed overall economic prospects for the Mumbai Metropolitan Region (MMR) and offered analysis and recommendations concerning key economic sectors (Mahendra, et al., 2006). This is a companion report. It offers findings and recommendations on themes increasingly recognized as critical to the region's economic health: workforce development and mainstreaming the informal sector.

The report is based on a review of relevant publications on these topics (see Annex A), but more importantly, on interviews with government and private industry representatives knowledgeable about the demand for labor in metropolitan Mumbai and a number of professionals involved in the area's current workforce development system (Annex B). Case studies of workers in the informal sector were also conducted (Annex C).

MAIN FINDINGS

The Importance of Workforce Development and the Informal Sector

In today's global economy, the *quality of the local labor force is increasingly recognized as perhaps the most critical determinant of a city's attractiveness for future investment*. In particular, given the

expanded importance of high level services to the economy overall, human talent and labor force productivity have come to outpace traditional physical assets in influencing future economic growth. Service sector accounted for 64% of the MMR's total GDP in 2003/04 and for 79% of its GDP growth over the preceding decade.

While employees with advanced technical skills are the leading edge in this new environment, the quality of the remainder of the labor force is also critical and that component is now dominated by informal sector workers. The informal sector does not generally operate in isolation from the current formal economy as is often supposed. Rather, informal activities are integrated into the direct activities and support structures of all leading service and manufacturing industries in the formal economy.

The points above, suggest that *work force development – increasing the capacities and productivity of all workers, including informal sector workers – must become a central theme of the region's economic development strategy*. Whereas writings about the informal sector have traditionally almost always looked at it from a social welfare point of view, we emphasize its critical role as a contributor to the growth of the broader economy.

There is another argument for a new focus on the informal work force from the economic development perspective, let alone the perspective of social justice. *If informal workers are not integrated in development so they also benefit from the growth of the region's GDP, widening disparities are sure to heighten the risk of social unrest which will, in turn, diminish the region's ability to attract and retain a high skill work force, and thus its ability to attract further investment.*

This does not mean, however, that the informal workforce should be singled out from other employees in sectoral development planning. Such planning should consider ways to upgrade worker skills and productivity at all levels in ways that take advantage of the unique features of the sector at hand and address the full range of its needs.

The Challenge for the Mumbai Metropolitan Region

Effective training must be provided to an enormous backlog of MMR residents – estimated at around 3 million, mostly youth – who want and need to work but are untrained or inadequately trained to secure productive jobs in today's economy. In 2001, the Greater Mumbai overall unemployment rate was 11.5% (low compared to rural areas but quite high compared to healthy urban economies internationally), but the rate for youth aged 15-24 was 28%, more than 2.5 times the average. In urban Maharashtra overall in that year, 13% of the workers in urban areas were illiterate, 35% were literate

¹⁷ The original team included staff from the Urban Institute and two subcontractors: ICRA Management Consulting Services (IMaCS) and the International City and County Managers Association (ICMA). In 2007, staff from the Tata Institute of Social Sciences (TISS) also contributed to this report.



but had not completed secondary school (10 pass), 33% had matriculated but not graduated from a college or university, and the remaining 20% were college graduates. In the growing finance and service sectors, however, secondary and college graduates accounted for 62-85% – a successful economy in the future will surely require a marked improvement over the current rate of only 52% of the work force having graduated from secondary school.

In addition, regular education and training will have to be vastly expanded to prepare new entrants to the workforce – it is estimated that the MMR economy, growing at the rate targeted by the Task Force, will require a net increase of 1.65 lakhs of jobs per year from 2005 through 2020 – an ambitious goal to be sure. This set of estimates shows the MMR population growing from its 2001 level of 18.9 million to 21.5 million in 2005 and then to 29.7 million in 2020 and employment growing from 6.44 million in 2005 to 8.92 million in 2020.

The Problem with the Informal Sector

The most important thing that defines the informal sector is that it is made up of activity that occurs outside of the framework of adopted laws and regulations. This means that, on one hand, informal activity benefits from unfettered flexibility and the fact that it does not pay taxes. But on the other hand, it receives none of the protections provided by sound systems of laws and social policies. It is estimated that the informal sector in the MMR probably accounts for from 30% to 45% of NDP and from 55% to 65% of employment. ***A large informal sector itself is a detriment not only to worker protections but also to effective economic growth.*** Informal activity is inherently risky and risk deters investment. It does not create incentives that steer investment toward the most productive opportunities, it deprives the public sector of needed tax revenues to support basic societal needs and infrastructure required for economic growth, and it provides no protection or benefits to workers.

Still, the high end of the formal sector is also subject to important inefficiencies. Frequent criticisms relate to an onerous regulatory environment that prevents managers from adapting to changing market realities and requires substantial administrative time and cost in routine compliance. Well meaning regulations designed to provide maximum protection for workers may, in fact, lead to a smaller employment base overall and a larger number of workers being unemployed. Accordingly, the goal should not be to move the informal sector into the formal sector as now defined. ***The search should be for some middle path that creates incentives for efficient economic activity and provides reasonable protections for workers.***

The Status of Existing Education and Workforce Development Systems

While improvements to current education and training systems in the MMR are in process, the challenge is enormous. It is clear that much more fundamental changes will be required before these systems can begin to address this challenge in full.

Colleges and Universities. A few of India's institutions of higher learning are recognized as among the best in the world technically; but these are exceptions. Most Indian colleges and universities are not responding well to the dynamically changing work force requirements of the economy. The most popular degree has been the "BA Pass," a liberal arts program with modest requirements that pays little attention to possible roles in the market economy. Efforts are being made to make college-level education more career oriented, but these will need to be scaled up substantially to have a major system-wide effect.

Primary and Secondary Education. Efforts have also been underway over the past decade to vastly expand public education for younger children. "Education for All" has been the slogan of a thrust toward universalization of basic education and budgets have been substantially expanded of late. There has been considerable dissatisfaction with the quality of public secondary education in India, particularly in that it does not orient students to the world of work or provide basic skills needed to succeed in it. A recent response has been a government decree to "vocalize" schooling at this level but a massive effort will be required to develop new curricula and methodologies and, in particular, to retrain teachers to achieve this goal.

Government-Supported Technical and Vocational Education. Government offers four main options for technical and vocational training: Industrial Training Institutes (ITIs), vocational colleges, apprenticeships, and distance learning (Open Universities). The Open Universities are popular and are expanding rapidly. The ITIs and some of the other vocational colleges have been criticized for not working closely with private industry and adapting rapidly enough to changing industry needs. Government is working to address issues that have been identified but it is generally recognized that, taken together, the volume of services offered through these options remains low in relation to the need.

Training farther removed from government. While there are notable exceptions, employer training is not well established and needs to be given more emphasis. There are outstanding examples of career guidance and employability training programs provided by NGOs – some of which have proven very effective for unemployed and untrained youth. However, these efforts remain fragmented and do not now have the capacity to address the magnitude of present, let alone, future needs.



RECOMMENDATIONS

Bold action will be required to address the challenges outlined above and everything cannot be done at once. We suggest that the Chief Minister's Task Force for Mumbai Transformation, with active participation by its Citizen's Advisory Group, focus its efforts in three areas.

Mainstreaming the Informal Sector. We urge a middle path in structuring economic activity – one that avoids the extremes of both the formal and informal sectors as now defined. The recommended approach centers on efforts by government (with support from private business leadership) to ***incrementally legalize aspects of current informal sector activities and to encourage other behavioral innovations in informal activities – restructuring - that will offer strong incentives for efficiency and growth.*** The Task Force should prepare a strategic plan for this work and mobilize staff as needed for effective implementation.

Example activities include: implementing an existing policy to legalize and provide authorized space for street hawkers; providing secure tenure for small business operators in slum areas; encouraging the development of new businesses that organize formerly independent informal workers (e.g., as has been done for security guards and maintenance workers); helping informal workers organize themselves (e.g., as has been done for rag-pickers and in other fields); working with industry representatives to more radically restructure lines of business formally dominated by the informal sector (e.g., the initiative to create a new high-quality taxi service in the MMR).

Creating an Emergency Response System for Youth Left Behind. This initiative deals with perhaps the highest priority need identified above: creating an effective system for providing career guidance, motivation, training, and support to address the enormous backlog of youth that are without basic training and have lost connection to the mainstream economy. Good models of NGO-provided support along these lines already exist. ***We suggest the Task Force focus on expanding the implementation of the Ek Mouka model, which has been implemented in Mumbai and is illustrative of many sound principles essential to success.***

Features of the approach include: realistic market analysis that guides all program planning; community sensitive outreach that motivates high levels of participation by youth; relatively short and low-cost initial training and placement that gets youth into sound non-exploitative jobs quickly; training that emphasizes trainees' responsibility for their own careers but provides support from mentor/facilitators with similar backgrounds; emphasis on general employability training that orients youth to sensible long term career management and life-long learning, rather than only the first job; training modules that emphasize basic literacy and numeracy, critical thinking skills, inter-personal skills, communication skills, team work skills

and computer skills; follow-up surveys and support that results in high probabilities of transitions to higher levels of training, education and employment.

Expediting Improvements in the Existing Workforce Development System. Government is already embarked on a number of improvements to Maharashtra's current systems for education and workforce development. We suggest that the Task Force focus on supporting and expediting three of them: *(1) the implementation of a vocational education orientation and curriculum in secondary education; (2) further reforming and strengthening the MMR's vocational training institutions (particularly the ITIs); and (3) promoting expanded efforts by private businesses to train their own employees.*

ORGANIZATION OF THE REPORT

Section 2 begins by outlining the reasoning that supports the importance of workforce development as a component of economic development. It then reviews the recent history of demographic and employment growth in the MMR, defines the challenge for workforce development (in terms of growth in the labor force and the current backlog of residents who are inadequately trained to secure productive employment). Finally, it defines the informal sector and explains why, as currently structured, it represents a drag on economic development in the region.

Section 3 reviews the status of the current education and training systems in the region covering colleges and universities, primary and secondary education, government supported technical and vocational education, and training farther removed from government.

Section 4 presents an assessment of the evidence and strategic recommendations for the Chief Minister's Task Force for Mumbai Transformation, giving emphasis to the themes noted above: mainstreaming the informal sector, creating an emergency response system for youth left behind, and expediting improvements in the current education and workforce development systems.

Annex A presents the literature referred to in the analysis and Annex B presents synopses of each of the 15 key informant interviews conducted to support this study. These synopses are presented in alphabetical order according to the name of the organization or individual interviewed. Annex C presents the case studies of workers in the informal sector.



Section 2

CONTEXT: THE WORKFORCE AND THE INFORMAL SECTOR

This section begins by explaining why addressing the workforce development needs of metropolitan Mumbai should be seen as among the most critical elements of the region's economic development agenda. It then reviews demographic and economic conditions in the metropolis to consider the nature and magnitude of its workforce development challenge. Finally, the section presents an assessment of the problems generated by the dominance of the informal sector in the MMR economy.

WHY WORKFORCE DEVELOPMENT IS CRITICAL

With a 2001 population of 18.8 million, metropolitan Mumbai is the largest urban conurbation in India, one of the largest in the world. Traditionally it has also been India's strongest and most diverse metropolitan economy, but over the past decade two issues motivated its leaders to call for the "transformation" noted earlier. First, its economic growth rate appeared sluggish in relation to that of the nation and, in particular, in relation to those of booming hi-tech centers like Bangalore and Hyderabad. Second, its quality of life was deteriorating (as evidenced by serious infrastructure deficits and the fact that 49% of its population lives in slums).

Clearly, the first issue, economic growth, must be addressed to make it possible to improve the second. How then is economic growth to be promoted? A decade ago, the concept of local economic development often focused on the provision of subsidies in an attempt to steal industries away from competitive regions. Today, it is recognized that a much more effective strategy is working to improve the local investment climate; i.e., taking actions that reduce the costs of doing business in your city. Most important, this means providing adequate infrastructure, reducing land costs, reducing inefficient regulatory burdens, and

assuring the provision of an adequately skilled work force. In other words, providing a reliable public power supply, for example, may save entrepreneurs much more than the provision of a modest subsidy. (See approach suggested for Metropolitan Mumbai in Mahendra et al., 2006.)

The World Bank's most recent assessment of investment climate for manufacturing industries in India (2004a) indicates that many of these factors have been improving notably in the country over the past few years and that entrepreneurs rate Maharashtra as one its "best climate" states. However, the State, and Mumbai in particular, still have serious problems. For example, the ratio of land cost to per capita GDP in Mumbai is more than five times the comparable ratio in most major non-Indian cities in Asia and one third of survey respondents rated Maharashtra's infrastructure inadequacies as a "major or severe obstacle."

The lack of an adequate labor force (with respect to both quantity and quality) is also recognized as a serious problem. It is not rated as severe as land and infrastructure by manufacturers at this point, but there are good reasons to expect that it may well become even more critical over the next decade.

First, workforce quality is much more important to high value services industries (e.g., banking, IT/ITES, media/entertainment) than it is to manufacturing; high level services are now seen as the most promising bases for economic growth in Mumbai. Indeed the service sector accounted for 64% of the MMR's total GDP in 2003/04 and for 79% of its GDP growth over the preceding decade (Mahendra et al., 2006).

More developed economies have moved even more dramatically to dependence on service industries of late. In the U.S., for example, the quality of the local labor force is increasingly recognized as the most critical determinant of a city's attractiveness for future investment. One analyst (Florida 1997), sees a city's ability to attract and retain a significant share of its nation's best educated and most creative young people (a group he calls the "creative class") as the best indicator of its future economic performance.

A second reason that workforce development is critical is that it is the mechanism by which low-income workers either will or will not develop the capacity to earn higher incomes and be brought into the economic mainstream. If these workers are not integrated in development so they too benefit from the growth of the region's GDP, widening disparities are sure to heighten the risk of social unrest, which will, in turn, diminish the region's ability to attract and retain a high-skill work force, and thus its ability to attract further investment.

Addressing workforce development needs in metropolitan Mumbai over the coming decade, however, will be an enormous challenge, as will be explained below. There are two issues. At present, not enough jobs are being provided and workers are not well enough prepared to fill the jobs that are coming on stream.



CONDITIONS AND TRENDS IN METROPOLITAN MUMBAI

Population and the Labor Force

Assessing the scope of the challenge must begin by examining the area's population growth. Table 1 shows that the population of the metropolis (MMR) grew by 43.6 lakhs during the 1990s, to reach a total of 18.9 million in 2001. Population levels in the Island City have actually been declining as those of suburban areas in Greater Mumbai have expanded substantially. However, the portions of the MMR outside of Greater Mumbai (in Thane and Raigad Districts) are now becoming dominant in the growth story – capturing 54% of the net growth in the 1990s, up from only 31% in the 1970s.

Of total MMR growth in that decade 37% was accounted for by migration. This implies that of the total 4.36 lakhs of new residents the metropolis had to accommodate each year in the 1990s, 1.60 lakhs represented net in-migration and the remaining 2.76 lakhs were the product of natural increase (the excess of births over deaths).

Table 2 shows the labor force status of the population age 15 and over in Greater Mumbai in 2001. The labor force is composed of all people who are either working or looking for work. The total was 5.0 million in 2001, out of which 4.4 million (88.5%) had jobs.¹⁸ This implies an overall unemployment rate of 11.5%, which is low compared to rural areas but quite high compared to healthy urban economies internationally.

The most notable contrasts on this table, however, are differences in the unemployment rate by age. Unemployment is a much more severe problem for youth than for older segments of the population.

¹⁸ Of this total (all workers), according to census definitions, 94.6% were "main workers" (worked for six months or more during the year preceding the survey), and 5.4% were "marginal workers" (all others).

Table 1
**Population Growth in Mumbai Metropolitan
 Region**

	Total MMR	Greater Mumbai			Thane/ Raigad
		Total	City	Suburbs	
Population (lakh)					
1971	77.8	59.7	30.7	29.0	18.1
1981	110.8	82.4	32.9	49.6	28.3
1991	145.3	99.3	31.7	67.5	46.1
2001	188.9	119.1	31.3	87.9	69.8
Pct. of total MMR					
1971	100	77	39	37	23
1981	100	74	30	45	26
1991	100	68	22	46	32
2001	100	63	17	47	37
Population growth (lakh)					
1971- 1981	33.0	22.7	2.1	20.6	10.3
1981- 1991	34.6	16.8	(1.1)	17.9	17.7
1991- 2001	43.6	19.9	(0.5)	20.4	23.7
Pct. of total MMR growth					
1971- 1981	100	69	7	62	31
1981- 1991	100	49	(3)	52	51
1991- 2001	100	46	(1)	47	54
Compound annual growth rate					
1971- 1981	3.6	3.3	0.7	5.5	4.6
1981- 1991	2.8	1.9	(0.3)	3.1	5.0
1991- 2001	2.7	1.8	(0.2)	2.7	4.2



Table 2

Population, Labor Force and Workers by Age, 2001
Population Age 15 and above - Greater Mumbai

Age group	Population (thous.)	Labor force (thous.)	Total workers (thous.)	% pop. working	% LF unempl.
Total 15+	8,827	5,001	4,426	50.1	11.5
15-24	2,550	1,250	899	35.3	28.0
25-29	1,256	849	751	59.8	11.5
30-34	1,045	705	661	63.2	6.3
35-39	953	633	603	63.3	4.7
40-49	1,406	931	899	64.0	3.4
50-59	838	471	457	54.6	2.9
60+	778	163	155	19.9	4.9

Source: Census of
India 2001

Source: Census of India,
2001

Among those who want and need to work, a full 28% of those aged 15-24, and 11.5% of those aged 25-29, were unemployed in 2001, whereas unemployment rates for cohorts from 30 to 60 ranged from 2.9% to 6.3%. Bringing unemployment for job seekers in the 15-29 age groups down to 5% (a reasonable rate by international standards) would have required the creation of 344,00 additional jobs. To achieve that difference from 1991 to 2001, net increases in Greater Mumbai employment would have had to be 1.09 lakh per year rather than the 0.75 lakh actually achieved (bringing the total up from 3.67 million to 4.77 million instead of the 4.43 million actually achieved).

Education Levels by Industry

Table 3 shows the 2001 distribution of main workers by education level and industry for urban Maharashtra (much of which is accounted for by the MMR). Overall, 13% of the workers were illiterate, 35% were literate but had not completed secondary school (10 pass), 33% had matriculated but not graduated from a college or university, and the remaining 20% were college graduates.

Table 3
Percent of Main Workers by Education Level and Industry
 Urban Maharashtra, 2001

	Total	Illiterate	Literate but not matric.	Matric. but not grad.	Graduate and above
Agriculture/Forestry/Fish.	100.0	24.2	34.1	25.5	16.2
Mining & Quarrying	100.0	24.8	32.6	28.8	13.8
Registered Manufacturing	100.0	24.3	45.4	22.5	7.7
Unregistered Manufacturing	100.0	11.3	38.5	34.2	16.1
Electricity/Gas/Water	100.0	2.5	28.2	46.4	22.9
Construction	100.0	30.8	41.9	19.7	7.6
Wholesale/Retail Trade	100.0	11.0	39.1	36.3	13.6
Hotels/Restaurants	100.0	13.0	44.5	31.3	11.3
Transport/Storage/Communic.	100.0	8.7	40.3	38.4	12.6
Finance/Insur./Real Estate	100.0	1.6	13.0	33.3	52.1
Public Admin.& Other Svcs.	100.0	12.1	25.4	30.4	32.2
Total	100.0	12.5	34.7	32.7	20.1

Source: Census of India 2001



There were stark differences in these proportions by industry, however. In Finance, Insurance and Real Estate only 2% were illiterate and more than half were college graduates. Workers in Public Administration and Other Services also had comparatively high education levels: the share illiterate was close to the average, but about a third were college graduates. At the other extreme was Construction where 31% were illiterate and only 8% had college degrees. Workers in Agriculture, Mining and Quarrying, and Registered Manufacturing fell next, all with about one quarter of their workers illiterate and college graduates ranging from 8% to 16%.

Studies of the MMR economy indicate that the service sector has been the mainstay of the region's job growth over the past decade and it is likely to be even more dominant in the region's economy in the future (Mahendra et al., 2006). Some sectors expected to grow rapidly will generate many new low-skill job opportunities (e.g., hospitality and tourism, retail trade, construction) but the most important growth engines will be sectors that require higher skills (e.g., IT/ITES, financial services, business services). A successful economy in the future will surely require a marked improvement over the current rate of only 52% of the work force having graduated from secondary school.

The Special Problem of Unemployed Youth

While the job related skills of the MMR workforce overall leaves a great deal to be desired, the problems of its youth are particularly severe. As will be discussed more in Section 3, as India's younger population has soared in the past two decades its educational institutions have been hard pressed to keep up. A large share of youth obtains little or no formal schooling and most that go farther in school find that their education generally has not been oriented to preparation for work. Nationally, only 5% of the labor force in the 20-24 age group have any vocational training obtained from formal institutions (GOI, 2001).

Youth make up a very large proportion of all migration to large metropolitan areas and their training is generally much less adequate than the average. Basu et al. (2006) state that:

More than 80 percent of migrants have no formal education or dropped out before secondary school. Many are unskilled or low skilled laborers seeking any type of work, and usually finding it in the informal sector. There also are skilled and semi skilled migrants, such as construction workers and nurses, who tend to be sourced from specific states. Both are transient, as the construction workers move from site to site and the nurses tend to migrate abroad when they improve their English. . . . Much of the internal migration in India is unorganized. That is, migrants do not have employment secured before they move and they receive no preparatory training or orientation, save from learning from the experiences of their peers.

Untrained youth migrate to survive and they are clearly vulnerable to exploitation. Many young women wind up in the sex trade and young migrants generally are prominent in the transmission of HIV/AIDS. While young migrants generally represent the most difficult cases, it is important to remember that the numbers of unemployed youth are also swelled by school graduates whose schooling has not equipped them with the skills needed to secure and maintain a job.

Magnitude of the Challenge

Two aspects of the challenge are relevant here: the number of new job opportunities that will need to be created in the future and the magnitude of the education and training that will be needed to boost the quality of the workforce to world class standards.

The first of these should be framed by the region's economic and demographic growth targets. Recent analysis (Mahendra et al., 2006) showed that MMR GDP growth has already improved significantly since the sluggish performance of the late 1990s, reaching a rate of 10% per annum over the past three years. Review of this performance has led to recommendations to the Chief Minister's Task Force to adopt a target of 12% GDP growth per year for the MMR through 2020.

Supporting analysis of change consistent with that target (Prud'homme, 2006) shows the MMR population growing from its 2001 level of 18.9 million to 21.5 million in 2005 and then to 29.7 million in 2020. The average annual population growth rate would actually decline, from 2.7% in the 1990s to 2.2% for the 2005-2020 period, but the absolute level of population growth would increase, moving up from the 4.36 lakh average of the 1990s to an average of 5.47 lakh for the 2005-2020 period.

Total MMR employment would grow from 6.44 million in 2005 to 8.92 million in 2020. This implies that the regional economy would have to generate a net increase in jobs of 1.65 lakh per year over this 15 year period – an ambitious goal to be sure.

Supporting such growth alone will be require a formidable increase in the capacity and quality of education and training in the MMR. In addition, however, local workforce development systems must also somehow address the massive backlog in untrained and inadequately trained youth that already reside in the region. Plausible assumptions suggest that the number of MMR residents in the labor force who need and want to work but have not gone beyond the 10 pass level in school and warrant substantial further education and training is in the neighborhood of 3.1 million.¹⁹ And in addition to this, there are the further training needs of

¹⁹ For this estimate, it was assumed that the group needing substantial further education and training includes: (1) 80% of the unemployed (applying the 11.5% unemployment rate of Greater Mumbai in 2001 to the 6.4 million estimated at work in the MMR in 2005, yields MMR unemployment of 8.4 lakh); (2) 30% of workers not matriculated in agriculture, mining and quarrying, registered manufacturing and construction plus 90% of workers not matriculated in all other sectors (calculated by applying the relevant shares from data for urban Maharashtra as of 2001 as per Table 2).



an inestimable number of current workers who have completed secondary school, but whose work related skills are inadequate for the needs of today's economy.

There is evidence that, compared to other countries, India is not facing a serious shortage of high-skill talent at this point in time. A survey of nearly 33,000 employers in 23 countries found that only 13% of Indian employers reported difficulty filling positions compared to a 40% average for all countries (Popli, 2006). However, time is running short. Given the estimates above, it would appear that the MMR needs to give high priority to expanding its education and training capacities if an inadequate work force is not to become a serious constraint on the region's economic vitality in the future.

THE INFORMAL SECTOR

Even if MMR's education and training challenge outlined above can be addressed, there is still another serious workforce related problem that must be dealt with if the region's economy is to perform effectively. Economic activity in the MMR, as in all of India, performs well below its potential because so much of it is a part of the "informal sector."

Defining the Informal Sector

The most important thing that defines the informal sector is that it is made up of activity that occurs outside of the framework of adopted laws and regulations. This means that, on one hand, informal activity benefits from unfettered flexibility and the fact that it does not pay taxes. But on the other hand, it receives none of the protections provided by sound systems of laws and social policies. This creates serious problems for informal sector entrepreneurs. For example, they have no legal recourse if their suppliers fail to meet contractual obligations and they cannot obtain financing on competitive terms. Informal sector workers are even more disadvantaged. Laws on minimum wage and working hours and conditions do not apply and they have no health insurance or other fringe benefits. Informal sector workers are obviously vulnerable to exploitation by employers and corrupt officials.

The existence of the informal sector was recognized in virtually all developing economies in the immediate post-colonial period, and many observers then thought it would vanish fairly quickly as development proceeded. Clearly that has not occurred and the current conventional wisdom does not envision its demise in the near term (SIDA, 2004).

For many years, there have been efforts centered around the International Labour Office (ILO) to define the informal sector in a way that it becomes measurable (see discussion in Charmes, 2000, Hussmans, 2004, and Mitra, 2005), but no consensus has yet emerged. Probably the most comprehensive definition is that

adopted by the 17th International Conference of Labour Statisticians (ICLS) in 2003. This approach (Hussmans, 2004) recognizes the distinction between informal enterprises and informal employment and breaks the latter down into the following main categories:

- *Own account workers and employers working in their own informal enterprises.* These include the most commonly recognized informal workers (e.g., individual street hawkers and casual laborers) but also informal small-scale entrepreneurs (which can represent among the most productive entities in the economy).
- *Contributing family workers* who may contribute their work to either formal or informal enterprises.
- *Employees holding informal jobs.* These can include those who work for an informal enterprise like street hawking or small scale production, but they also include individuals who work for formal establishments but without the benefit of employment contracts and related benefits.²⁰

In India, the term “unorganized sector” is also used, being defined to include all very small enterprises (not all of which are informal). The National Commission for Enterprises in the Unorganized Sector (NCEUS)²¹ continues to work toward formalizing definitions of unorganized and informal sector activity in the Indian context.

Estimating the Size of the Informal Sector

To the best of our understanding, no nation has mounted the extensive type of survey that would be required to provide a fully accurate accounting of informal enterprises and employment in accord with the ICLS definition. Many groups, however, have made estimates, mostly using establishment size as the basis, but these estimates vary widely.

Probably the most thorough estimate of the informal sector share of economic activity in India is that made by Kolli and Hazra (2005), based on an examination of statistics that are indicative of total and formal sector contributions to net domestic product (NDP) for major sectors. Their results are shown in Table 4. For the total economy, they estimate that 59% of NDP in 2001-02 was accounted for by the unorganized sector and, within that, 48% by the informal sector. Agriculture is of course a very large sector, and it is dominated by informal activity. If agriculture is excluded, the data on the table imply that 45% of non-agricultural NDP was contributed by the unorganized sector and 30% by the informal sector. These figures are likely to be more relevant to conditions in the MMR than the national average.

²⁰ Members of informal producers' cooperatives represent a small additional category.

²¹ This Commission was set up in 1994 as an advisory body and a watchdog for the informal sector to bring about improvement in the productivity of these enterprises for generation of large scale employment opportunities on a sustainable basis, particularly in the rural areas. This is pursuant to a commitment made by the government to set up a National Commission to recommend appropriate measures to enhance the competitiveness of the sector in the emerging global environment and link the sector with the institutional framework in areas such as credit, raw material, infrastructure, technology upgradation and marketing. Suitable interventions for skill development for the informal sector have also been under consideration of the Commission.



In a study based on the 1961 census data, Heather and Vijay Joshi (1974)²² found that 65% of the city's workforce was engaged in the organised sector, while only 35% were in the unorganised sector. Subsequent figures from the later censuses indicate that the situation changed rapidly after the 1970s. The draft plan of the Mumbai Metropolitan Region Development Authority (1996) indicates that the shares of the two sectors reversed by 1991. The plan, citing the 1991 census, reports that 65% of the workforce was engaged in activities in the unorganised sector while the organised sector employed only 35% of the workforce.

Between 1971 and 1993, formal employment grew by only 0.2% (CRD 1995: 36).²³ Another important trend during this period is that employment share in the manufacturing sector, which includes large and small manufacturing units, fell from 47.3% in 1983 to 34.7% in 1993 (CRD 1995: 37). While the share of employment in the manufacturing sector declined, there was an increase in the employment share of the services and finance sectors. The services sector share in 1983 was 19.6%, which increased to 25% in 1993, while the finance sector's share was 7.6% in the 1983 and it rose to 11.5% in 1993 (CRD 1995: 3).

Even though it may have some highly productive components within it, one would expect that small-scale informal activity generates much lower labor productivity than average and, therefore, that the informal sector would account for a much larger share of employment than it does of NDP. Looking over a wide range of estimates, SIDA (2004) found estimates of informal employment in urban areas in Asia in the 40%-60% range. In the mid-1990s, the Mumbai Metropolitan Region Development Authority (MMRDA, 1996) attempted estimates for the region using different data sources resulting in a range of from 51% to 66% for 1991; up from a range of 42% to 55% in 1981. More recently, Amin (2002) estimated that 60% of

Both the scale and the potential of informal sector activity in Mumbai can be illustrated by highlights from the case study of Dharavi (see Annex C for details):

- Estimated business turnover of Rs 50 million/day.
- Small manufacturing industries include leather, textiles, plastic recycling, surgical sutures, prepared food, detergent, pottery, kite making, and jewelry.
- Many laborers are recent immigrants to Mumbai and live in housing provided by the factories.
- Labor force is skilled, semi-skilled and unskilled.
- Workers acquire skills on the job.
- Some products – particularly garments and leather – are exported.

Examples of links to the formal sector:

- Retail chains and brands purchase the garments produced
- Papad making for private labels
- Export of WHO-approved surgical sutures

²² See Annex C for reference.

²³ See Annex C for reference.

India's urban non-agricultural employees in 2001 were in the informal sector.

For general policy analysis, there is no need to have precise estimate of the informal sector contribution, but some sense of the order of magnitude is important to guide choice. For the purposes of this report, it seems reasonable to assume that the informal sector in the MMR probably accounts for from 30% to 45% of NDP and from 55% to 65% of employment.

Approaches to Dealing with the Informal Sector

Problems with the formal sector. In India, as in many other countries, the high end of the formal sector is subject to important inefficiencies. Frequent criticisms relate to an onerous regulatory environment that prevents managers from adapting to changing market realities and requires substantial administrative time and cost in routine compliance. Labor laws and regulations are highly protective of the workers but the inability of managers to make market necessitated changes in their workforce is often cited as an important factor that deters further investment. Studies have shown that well meaning regulations designed to provide maximum protection for workers may well, in fact, lead to a smaller employment base overall and a larger number of workers being unemployed; onerous labor regulations are correlated with increasing poverty (Besley and Burgess, 2002).

In India, the Planning Commission has, in fact, identified a number of prior regulations as needing reform, including: the Contract Labor Act 1970, which does not allow temporary or contracted workers; the Industrial Disputes Act 1947, which does not permit retrenchment or bankruptcy; and reservations for small-scale industry, which limit the ability of enterprises to compete effectively.

International scholars have shown that it is in environments like these in which a large informal sector tends to emerge (see World Bank, 2004b). Another factor that spurs informal sector development is unduly high taxation on business (see Capp et al., 2006). Where such conditions exist, and where enforcement is weak, there are powerful incentives for entrepreneurs to stay out of the registered and fully legal economy.

Problems with the informal sector. It is a common observation in India that informal sector businesses are frequently more creative and adaptive than formal ones. Given the problems with the formal sector noted above, why not just allow the informal sector to continue? The reason is that a large informal sector itself is a detriment not only to protection for workers but also to effective economic growth. Informal activity is inherently risky and risk deters investment; it does not create incentives that steer investment toward the most productive opportunities. Informal activity deprives the public sector of needed tax revenues to support infrastructure, education and other basic societal needs (there is an important difference between having to pay unduly high business taxes and paying no taxes at all). Informal activity provides neither benefits nor stable longer term career opportunities for workers.



Business leaders sometimes see the informal sector as outside of their own sphere of concern, but it is not. The informal sector does not generally operate in isolation from the current formal economy as is often supposed. Rather, informal activities are integrated into the direct activities and support structures of all leading service and manufacturing industries. At its current size it is certainly holding back the potential of the MMR economy overall.

The search for a middle path. Trying to push more of the MMR's economic activity into the formal sector as presently defined would clearly be counterproductive in terms of broad societal objectives, but so would allowing a large formal sector to remain and expand. Accordingly, the search should be for some middle path that creates incentives for efficient economic activity and provides reasonable protections for workers: a subject to which we will turn in Section 4.

Section 3

THE CURRENT EDUCATION AND TRAINING SYSTEMS

We have seen that the MMR faces an enormous challenge in preparing its youth for work in today's global economy. This section reviews the current status of the education and training systems, which must serve as the base from which future improvements are made. Much of the material refers to conditions in India overall, but specific references to Maharashtra and the MMR are developed when possible. This review draws most heavily on an overall assessment recently prepared by Basu et al. (2006).

UNIVERSITIES AND COLLEGES

India is working hard to overcome its capacity deficit in college and university education. In 2004/05, the public system had 92.3 lakh students enrolled 18,000 institutions at this level. These include 229 central and state universities, 95 deemed universities, 16,000 colleges, and 16,50 women's colleges, all numbers that had grown significantly over the preceding few years. (Maharashtra accounted for 1.3 million enrollees in 2002/03.)

A few of India's institutions of higher learning are recognized as among the best in the world technically; specifically, the Indian Institutes of Technology (IITs) and the Indian Institutes of Management (IIMs). Mumbai University is also very highly regarded and the MMR can boast of a number of other top quality institutions. The overall problem, however is that these cases are exceptions. Most Indian colleges and universities are not responding well to the dynamically changing work force requirements of the economy.

For example, McKinsey interviewed 83 human resource managers in multi-national firms. Although they praised the work ethic and mobility of Indian college graduates they said they would be interested in hiring only 10% to 25% of them – half the proportion of graduates from Central Europe they rated as suitable. Only 4% of India's university educated workforce hold engineering degrees (compared with 20% in



Germany and 33% in China) and suitably trained middle managers are also regarded as becoming scarce in relation to the burgeoning need for them. (Farrell et al., 2005).

College education generally has not given great emphasis to preparing students for work. In fact, the most popular degree has been the “BA Pass,” a liberal arts program with modest requirements that pays little attention to possible roles in the market economy. Local interviews confirm that the BA Pass is not respected in industry, and many youth with these degrees have considerable difficulty in securing employment.

Basu et al. (2006) state that, “While there has been a dramatic rise in the demand for airline pilots, aircraft maintenance engineers and other support technicians with salaries sometimes reaching six figures per month, those boasting a BA Pass do not have relevant skills and are therefore lucky to find jobs as bus conductors, ticket collectors, telemarketers or file-pushers. . . [In the cities] there are post-graduate institutions where students can further their technical and vocational skills. In many small towns, however, BA Pass is the only option.”

Efforts are being made to make college-level education more career oriented. Many universities have introduced work placement and industry liaison programming. Also, in 1998, the Universities Grants Commission allowed students to earn a university degree that combines academics with vocational skills; this program has been considered successful so far. However, these efforts and others have will need to be scaled up substantially to have a major system-wide effect.

PRIMARY AND SECONDARY EDUCATION

Efforts have also been underway over the past decade to vastly expand public education for younger children. “Education for All” has been the slogan of thrust toward universalization of basic education.

Primary schools. Three programs have been noted as having important impacts in reducing child illiteracy and improving primary school attendance and completion rates: the Sarva Shiksha Abhiyan (SSA) program (and its predecessor the District Primary Education Program, DPEP); the Teacher Education Program (TEP); and the National Program of Nutritional Support to Primary Education (the Mid-day Meal Scheme).

Education budgets have been increased significantly of late. SSA is credited with reducing the number of out-of-school children from 42 million at the beginning of the Tenth Plan to 23 million by April 2003, and to 8.1 million in September 2004. Expansion has resulted in a teacher shortage that has not been fully addressed. One approach in SSA has been to employ unemployed youth as para-teachers. Interestingly,

their performance has often been regarded as better than the regular teachers and it has been proposed that many be upgraded.

Secondary Education. Secondary school matriculation in most states requires that students complete two additional grades (grades 9 and 10; i.e., “10 pass) beyond primary school. All states offer 2 additional years of “higher secondary education.” Given the progress toward universal primary education noted above, and a larger share of students desiring additional schooling, there is now great pressure for expansion at both of these levels.

High drop out rates after primary school in the past led planners to estimate that only 55% of primary school graduates would move on to secondary school by 2005. The actual rate turned out to be 75% and it is now anticipated that the primary-secondary flow will reach 85% by 2010. Secondary school enrollment is now approximately 50 million and it is estimated that 11.5 million secondary school students will graduate in 2005. Estimates are that expansion will require construction of 326,000 new secondary school classrooms and laboratories and the hiring of 358,600 new teachers.²⁴

There has been considerable dissatisfaction with the quality of public secondary education in India, particularly in that it does not orient students to the world of work or provide basic skills needed to succeed in it. A recent response has been a government decree to “vocalize” schooling at this level. It has been recognized that a massive effort will be required to develop new curricula and methodologies and, in particular, to retrain teachers to achieve this goal.

Best practices internationally suggest that it is important to avoid an outcome typical in some countries where a separate vocational curricula is developed and the students who take it are branded as “second class.” Rather, career development and skills needed for success in the work environment need to be a part of the curricula for all students. The emphasis would not be on training for specific jobs as much on the skills required in all types of jobs.

This transformation will not take place quickly and, recognizing that, many parents are sending their children to private schools. The perception that public schools are not doing a good job of English-language training has been a particularly important impetus for this move. As a share of all secondary schools, private unaided schools grew from 15% in 1993/94 to 24% in 200/02. Recognizing the enormous demand to expand secondary education, the current government favors private school expansion and is considering favorable tax and land policies to encourage it. This would leave the government free to concentrate its resources on opening new secondary schools in unserved and difficult areas, organizing second shifts in

²⁴ It should be noted that in addition to the public schools, free education is also provided by an estimated 40,000 Madrasahs that serve male Muslim students in the 10–24 year age group. The Madrasahs operate predominantly in poor rural areas and are run completely on donations from the members of the community.



thickly populated areas and upgrading existing primary schools to secondary schools in specified locations.²⁵

The National Institute of Open Schooling (NIOS). NIOS provides continuing education, including basic education and vocational training to those who have missed the opportunity to complete school. It has an enrollment of 120 million, and 2,500 study centers. The Tenth Plan states that number of study centers has doubled since 2000. NIOS offers basic education certificate programs for grades 3, 5, 8, 10, 10+2 completion and 10+2 combined vocational certificates. It appeals to girls, women, working men and women, youth from scheduled castes and tribes, handicapped and other disadvantaged groups and rural youth. NIOS has accredited 731 training providers to deliver vocational education programs. These included JSS-funded NGOs. Courses may be taken in conjunction with academic subjects.

GOVERNMENT SUPPORTED TECHNICAL AND VOCATIONAL EDUCATION

We have seen that the formal public education system is not now doing an adequate job of preparing young people for work. Although progress in coverage is being made, a still sizeable share of India's youth drop out before or during secondary school and there remains substantial unemployment among those who have completed secondary schools and even among college graduates. Furthermore, a notable number of long-term workers are being displaced as their skill base is no longer supportable in today's rapidly changing labor market. What further training opportunities does the government provide to help people in all of these categories develop or supplement their job skills? There are four main options:

Industrial Training Institutes (ITIs). The ITIs have been established to train people for skilled blue collar trades. Students can enter at grades 8, 10 and 10+2 (pass) covering 98 vocations; 37% are run by government (4.0 lakh students) and 63% are run by the private sector (3.5 lakh students). Courses run for from six weeks to three years. Those who complete their courses and pass a government examination are certified.

According to Basu et al. (2006), a World Bank study found that, in 2003, less than half of ITI graduates nationally have been able to secure formal sector jobs. The study's conclusion are similar to those of Mitra (2005), which include:

- "Much of the training provided in the ITIs is for skills for which there is little demand. The curriculum has not been revised for many years . . . One reason for the lack of attention to market requirements is the lack of involvement by industry in the management of the ITIs.

²⁵ 10th Plan Mid Term review Ch2 Human Development. Government of India, 2005,

- The transfer of skills too needs improvement and the testing process needs to be made more reliable . . . there is a widespread perception amongst employers that students obtain certificates even though the actual skills acquired are very poor.
- The facilities and infrastructure in most ITIs are inadequate . . .
- There is a shortage of suitably trained faculty in most it is.
- There is hardly any follow-up of the trainees.

There are indications that some ITIs in Maharashtra perform better than most and work closely with industry, but even in these, have a hard time obtaining full-time formal sector employment for their graduates.

The government is attempting to respond to these problems. Curricula are beginning to be developed in collaboration with industry; there is a growing emphasis on preparing multi-skilled workers and introducing a framework of part-time courses and open entry and exit for students (Basu et al., 2006).

Vocational Colleges. There are three types of vocationally oriented colleges where students attend classes directly (polytechnical colleges, community polytechnics, community colleges).

- *Polytechnics* are government supported but can be run either by government or the private sector. They offer 1-3 year vocationally orientated diploma programs for students who have completed grades 8, 10, or 12, but offer those who complete the first year a chance to move up to a university program. Although there are some successful private sector examples (e.g., Mafatlal in Mumbai), they are generally considered to be too theoretically oriented and to not give enough emphasis to linkages with local industries.
- *Community polytechnics* are subsidiaries of polytechnics managed by a community board. There are now 672 nationally, mostly in rural areas, providing a mix of academics and vocational/technical courses. They serve youth and adults (14 to 35) and have low entry requirements. Students can earn certificates from short courses. It is reported that they are working well in providing marketable skills to youth who have dropped out of school.
- *Community colleges* are privately run, also with local governing boards of key members of the community and local employers. At 135 in number nationally, they focus on providing an “educational second chance for adult learners.” Normally, they offer market oriented curricula and opportunities for on-the-job vocational and technical training.

Apprenticeships. Central and state governments sponsor apprenticeship programs for graduates of ITIs, college, universities, and post primary technical/vocational schools run by the Ministry of Education. The government’s program is known as the Student Apprenticeship Training Scheme (SATS). Educational institutions such as ITIs are responsible for placing the students in industry.



Apprenticeships are offered to students at least 14 years of age (grade prerequisites vary from grade 8-12). There are three types: engineers with degrees may enter as “Graduate” apprentices; engineers with diplomas may enter as “Technician” apprentices; and vocational education graduates may enter as “Technician (Vocational)” apprentices. Training can last from six months to four years, depending on the occupation. At the conclusion, students are required to take a government-sponsored exam to receive certification. Government covers most of the costs of the program, although students also are required to pay a nominal fee.

Distance Learning. The Indira Gandhi National Open University (IGNOU) is the central Open University for the country, with over 120 million registered students (business administration and information technology are its most popular courses). There also are 11 affiliated state open universities, which enjoy considerable freedom to offer courses in local languages and utilize diverse media delivery systems. Maharashtra’s OU is considered one of the most successful and innovative offering many programs in self-employment and livelihood skills for rural youth.

It is reported that the OUs are very popular with middle class youth who have to find employment after grade 12, but still want to pursue a university degree. Since they are among a very few institutions that offer part time courses, they are a good fit for out-of-school youth who have family responsibilities or hold part-time menial jobs and cannot go to school full time.

Some state OUs are using local TV channels for broadcasts; although efforts to date are considered crude. Radio appears to be working well for all OUs, and is an excellent way to reach the rural population. Nonetheless, India’s distance education system so far has not taken much advantage of the most advanced education technologies such as e-learning and CD Roms.

TRAINING OPPORTUNITIES FARTHER REMOVED FROM GOVERNMENT

Even though a number of the education and training options above are operated by the private sector, they are all predominantly designed and controlled by government. There are three basic routes to skill development where nongovernmental entities play the larger role.

Traditional Family and Village Skill Development. Many youth develop jobs skills by being trained by their parents or relatives, in effect serving in informal apprenticeships. For example, in the construction industry, plumbers, carpenters and brick layers tend to be family trained. Some villages specialize in certain of these construction fields and have well established approaches for passing on skills and techniques (see interview with DLF Universal Ltd.).

Employer-Provided Training. Employer provided training programs are generally not well established in India, particularly not for youth without college degrees. Still, there are some notable exceptions. McDonald's, Pizza Hut, the construction industry, home health care workers, and agencies providing the services of nannies, housekeepers and security workers all offer employment to those with lower levels of education and have established training programs.

Some individual companies have established notable training programs for their workers and few have expanded to serve broader industry needs. Basu et al. (2006) note that the Tata Motors program has become a source of training for an entire automotive supply chain linked to its brand name vehicles. "Originally developed simply to train employees to build quality vehicles, Tata soon realized the need to also train those who supplied the parts, sold and repaired their cars." The Construction Industries Development Council (CIDC), a group of industry and government representatives, "has undertaken a program to assess, build and certify skills of individuals in the construction trades, not for the benefit of one or two companies, but so that the overall industry can have access to skilled labor of certified quality."

NGO-Led Training Programs. Many NGOs provide youth with skill training and job placement assistance. Training and placement efforts tend to be focused on "soft skill" areas such as nursing assistant, sales clerk, hospitality workers, data entry, computer graphics, or automotive repair rather than blue-collar jobs in factories, which are subject to severe labor restrictions. Some NGOs cater to self-employment in the informal sector.

Many NGOs are funded under government schemes such as Jan Shikshan Sansthan (JSS) of the Ministry of Education and Human Resource Development, which subsidizes 158 NGO institutions, and covers 600 districts. JSS-funded NGOs administer non-formal education programs that blend basic literacy with the needs of the skill set being taught. The last section of this report will note a number of high quality NGO programs that have been identified (such as Ek Mouka, MAYA, and CAP Teen Challenge).

The NGO sector also has been active in youth entrepreneurship and helping young people develop micro, small and medium size enterprises (MSME) training. The first formal Indian youth entrepreneur training institution, the Entrepreneurship Development Institute (EDI), was established in 1983 in an NGO environment. It is still a premier center, advising and assisting public and private institutions on SME and MSME training.



Section 4 **ASSESSMENT AND STRATEGY**

OVERVIEW

Section 2 outlined the enormity of the challenge the MMR faces in both generating a high level of employment to support its future population and preparing its workforce to perform effectively in those jobs. Section 3 showed that, while promising improvements are being made in some areas, the current educational and workforce development systems are not meeting the broader challenge.

In addition, however, materials presented in Section 2 make it clear that even a highly effective workforce development system would not be enough to set the MMR on a stable course of economic growth. It also argued that both the current structure of the formal sector and the parallel existence of a large informal sector, in their current forms, represent a serious detriment to the development of a competitive regional economy.

Bold action will be required to address these challenges and everything cannot be done at once. We suggest that the Chief Minister's Task Force for Mumbai Transformation, with active participation by its Citizen's Advisory Group, focus its efforts in three areas.

- ***Mainstreaming the Informal Sector.***²⁶ In Section 2 we urged a search for a middle path in structuring economic activity – one that avoids the extremes of both the formal and informal sectors as now defined. The recommended approach centers on efforts by government (with support from private business leadership) to incrementally legalize aspects of current informal sector activities and to encourage other behavioral innovations in these activities – restructuring – that will offer strong incentives for efficiency and growth. Whereas writings about the informal sector have

²⁶ This term, and apt descriptor of the intent, was suggested by A.K. Jain of the Chief Minister's Task Force.

traditionally almost always looked at it from a social welfare point of view, we emphasize its critical role as a contributor to the growth of the broader economy.

- ***Creating an Emergency Response System for Youth Left Behind.*** This initiative deals with perhaps the highest priority need identified in Section 2: creating an effective system for providing career guidance, motivation, training, and support to address the enormous backlog of youth that are without basic training and have lost connection to the mainstream economy. Good models of NGO provided support along these lines already exist. We focus, in particular, on the Ek Mouka model, which has been implemented in Mumbai, as illustrative of many sound principles and emphasize the need to bring it up to scale.
- ***Expediting Improvements in the Existing Workforce Development System.*** As noted in Section 2, the Governments of India and Maharashtra are already embarked on a number of improvements to Maharashtra's current systems for education and workforce development. We suggest that the Task Force focus on supporting and expediting three of them: (1) the implementation of a vocational education orientation and curriculum in secondary education; (2) further reforming and strengthening the MMR's vocational training institutes; and (3) promoting expanded efforts by private businesses to train their own employees.

MAINSTREAMING THE INFORMAL SECTOR

An important theme in international dialogue about the informal sector of late has been the provision of "decent work." Mitra (2005) notes that the concept has four dimensions: "(1) work and employment itself; (2) rights at work; (3) social protection; and (4) representation and dialogue" (see also International Labour Office, 2005). Providing decent work, however, is clearly difficult within the informal sector as it currently exists; i.e., without some linkage to the framework of law and mainstream society. The concept of *mainstreaming the informal sector* implies giving informal enterprises some legal footing with incentives to move toward more in a way that decent work can be achieved, but without the expectation of full immediate compliance with all of today's formal sector rules and requirements. It also implies efforts to restructure informal sector activity so that it operates in a more effective and "businesslike" manner.

The Task Force should prepare a strategic plan for this work and mobilize staff as needed for effective implementation. The types of activities to be implemented are illustrated by the examples below.

Linking Informal Activity to the Legal Framework

An example in this area is providing *legal recognition and support to informal street vendors*. Street hawking absorbs a tremendous amount of labor in Indian cities. Palnitkar (2005) estimates that Mumbai



has the largest number at 2.3 lakhs (above Delhi at 2.0 lakhs); women typically account for a sizeable share of such vendors. At present they have no legal recognition and are often viewed as disruptive by local officials. Efforts to over-regulate them and, in some cases, to forcibly remove them from the streets have had serious economic as well as social costs.

An alternative, “mainstreaming,” approach has been adopted in the National Policy on Urban Street Vendors (2004) by the GOI’s Ministry of Urban Employment and Poverty Alleviation. The policy is: “(1) to recognize the service rendered by the vendors to the economy and promote a supportive environment for them to earn their living; (2) to recognize their right to livelihood and give dignity to the informal sector; (3) to consider review of legal framework for legitimate street vending; (4) to facilitate use of identified space without obstruction; (5) to regulate street vending through participatory mechanisms; and (6) to strive for promoting social security and financial services . . .”

Mumbai Street Vendors
<ul style="list-style-type: none">- There are approximately 250,000 hawkers in Mumbai- They support other informal workers – the makers of the products they sell (clothes, plastics, food) are often home-based and informal- Vendors are often subject to harassment by authorities; food vendors are particularly vulnerable to being asked for bribes as their products are perishable
(See Annex C for a detailed profile and description of recent legal and regulatory efforts.)

Task Force support for full implementation of this policy in the MMR would bring an important class of workers much closer to the mainstream and should lead to enhancement of productivity and, ultimately, net contribution to municipal revenue. YUVA (Youth for Unity and Voluntary Action) is already working to further this process in the MMR (see interview).

Another productive initiative along these lines would be to **grant security of tenure to entrepreneurs in small establishments in slum areas**. Throughout the MMR, there are properties that were originally occupied illegally, but have since become the sites of fairly productive small businesses; e.g., service establishments, shops and/or small-scale manufacturing facilities. Many of these are already operating in a businesslike manner, occupy physically sound structures and would likely become fully legal, tax paying entities if it were not for the fact that they lack clear title to their properties. Also many of them are located in areas that are not environmentally sensitive or, for any other reason, likely to become candidates for slum clearance or relocation schemes.

Granting security of tenure to these small businesses should lead to important increases in productivity and would likely result in a wave of further investment and job creation as they expand their operations – expansions many had considered before but were unwilling to implement without clear title to their land.

Security of tenure would create the opportunity to use the property as collateral for business expansion loans on reasonable terms. (see interviews with SPARC and ICICI Bank).

In both of these examples, the approach is not to bring informal enterprise into compliance with existing laws and practices. Rather, it is to modify existing laws and practices so that the informal sector can be incorporated in an efficient and effective manner.

Restructuring Informal Sector Activity

One of the most important approaches in this area is simply *organizing previously independent informal workers*. This can occur when a private firm takes on the organizing function. A good example is what has been happening to security guards in Mumbai and other Indian cities – a field characterized in the past by vast numbers of individual informal workers dealing with customers independently. Noteworthy in Mumbai is the Sukhi Security Agency, which employs more than 1,200 guards (see Sukhi interview). The agency recruits the workers (much more efficiently than the fragmented ultimate customers could do), sets and monitors standards for performance and provides basic training (which never happened before), and provides fallback services when problems arise (e.g., providing a back-up guard when the regular guard does not turn up). The guards are paid the relevant minimum wage and the firm provides some insulation that reduces the chance of abusive behavior by customers. In sum, the existence of an organizing intermediary offers the potential of providing a more efficient service to the customers while offering some basic protective net (decent work) for the workers.

A second, similar example is Sanjay Maintenance Services (see interview), which employs more than 5,000 workers (90% of whom are permanent employees). The firm employs people with very low education levels to work in maintenance and housekeeping services for offices. Workers receive training on interpersonal and other soft skills as well as technical skills required for the job and are paid the minimum wage.

Another way that similar benefits can be gained is when the informal workers organize themselves. For example, YUVA has successfully helped a group of women rag-pickers create a cooperative. A key benefit was that the cooperative has been able to cut out the intermediaries (scrap dealers) and enable direct access to large scale purchasers (see YUVA interview).

In addition, MAYA (Movement for Alternatives and Youth Awareness) has created LabourNet: an initiative to network stakeholders in the construction sector, routing workers to jobs, encouraging skill development and facilitating access to social security schemes for construction workers (see MAYA interview). LabourNet takes advantage of a computer database on participating workers and a telephone call-center. More broadly, MAYA advocates organizing informal workers in self-help associations of 20-25 people to facilitate sharing of resources, improving standards and performance, and securing worker benefits and protections.



The MOVE (Market Oriented Value Enhancement) model also deserves comment. This is a form of organizing informal workers that gives emphasis to market orientation. “Value enhancement” is the process of continuously evolving new products and services to cater to customer needs and demand. The approach involves training in market research and entrepreneurship so that groups in the informal sector can continuously adapt the goods and services they provide to meet the market test.

Finally, it is important to note opportunities for *higher level restructuring*. A good example here is the Fleet Taxi Operators/Fleet Taxi Companies initiative already being furthered by the MMR Task Force. This initiative intends to transform the quality of taxi service in the MMR. Companies will be challenged to establish and operate a fleet of vehicles at high standards (acquiring the rights to operate from existing permit holders as needed):

- Fleets are to include all new air-conditioned vehicles at the outset and the policy will be to replace vehicles after eight years of service. Vehicles are to be inspected regularly (for cleanliness and appearance as well as mechanical condition) and maintained at high levels.
- Vehicles are to be equipped so they can remain in communication with the company’s control room at all times and GPS tracking is to be employed. All taxis will also have modern tamper-proof electronic meters with capacity to print receipts, equipment to handle alternative forms of payment (e.g., swipe-cards) and equipment (e.g., videos) to provide entertainment to passengers. Passengers will be allowed to make outgoing phone calls and will have direct access to an emergency response button.
- Drivers are to wear uniforms and are expected to stay well groomed and be able to speak English. All will receive training (including soft skills) and undergo regular health check-ups. Drivers will also receive health insurance and other fringe benefits.
- There will be no smoking in vehicles and tips will be discouraged. At least 20% of the fleet will be in service over night and specially equipped vehicles will be provided to meet the needs of disabled and elderly passengers.

The intent is not just to move away from the present independently operated and run down horde of “black and yellows,” but to transform the sector in a way that will provide higher quality for passengers, improvements in overall sectoral efficiency, and more stable and decent work for the drivers and support staff.

CREATING AN EMERGENCY RESPONSE SYSTEM FOR YOUTH LEFT BEHIND

Section 2 identified the fact that there is now an enormous backlog of untrained and inadequately trained individuals in metropolitan Mumbai (mostly youth) who want and need to work. The number was estimated conservatively at around 3 million. Furthermore, the number increases every day as young migrants pour into the metropolis from villages and towns throughout the nation.

It is clear that the current formal education and workforce development systems are not making headway in dealing with this backlog. They are set up to start with young children and then follow them through an orderly sequence of educational experiences – not to go back and pick up those who have dropped out. The disruption involved with trying to re-engineer the formal system to address this problem would be formidable. Yet the need is urgent. It would seem that a much more practical approach would be to build a separate (although linked) *emergency response system* to take responsibility for the issue.

One reason that this approach looks attractive is that there are already a number of working models that incorporate sensible operating principles and have been successful individually. All of them are spearheaded by NGOs. Mitra (2005) has documented several of them, including: Movement for Alternatives and Youth Awareness (MAYA – also see Maya interview in this report), Development of Humane Action Foundation (DHAN); Skills for Progress (SKIP); and Management of Enterprises and Development of Women (MEADOW). Basu et al. (2006) have described others, including: Business and Youth Starting Together (BYST) and The CAP Project (Linking and Learning Livelihoods).

In this report, however, we have chosen to report in greater depth on only one of these, which exemplifies all of the principles we judge are needed for effective performance and offer the potential of being implemented at the scale needed to seriously address this challenge. This is the approach of Heritage Livelihoods Services Provider (HLSP), the Mumbai model of which is called *Ek Mouka*.

Heritage Livelihoods Services Provider – The Track Record and The Challenges

Headquartered in Hyderabad, HLSP has implemented its approach in a number of cities in India and internationally. In their review, Basu et al. (2006) note that the approach:

. . . is a new-economy livelihood promotion and training program. It is custom-designed for school dropouts, unemployed secondary school graduates, street youth, retrenched workers, migrant youth and resettlement community members from the poorest 15 percent of the Indian community. . . This demand-driven program has trained over 36,000 youth (between the ages of 17 and 25) from economically weak backgrounds and placed them in the salaried formal employment sector. Over 100 major national and international corporations and business organizations and over 4,000 local small businesses and medium enterprises have provided entry level positions to these



program alumni. . . . [Post-placement surveys] show that 74% of the graduates have been placed into non-exploitative, career-oriented jobs; 82% of the alumni further invest within a year through enrollment into higher technical or university education.

These achievements are impressive considering the daunting challenges that any program like this has to come to grips with:

- Seriously engaging and motivating young people who have dropped out of the mainstream
- Providing enough training for them to secure real non-exploitative jobs, but doing so very quickly since they need employment to survive
- Establishing in the training a basis for effective longer term career development and lifelong learning – not just enough to secure the first job
- Building trust and support of the communities in which the trainees reside
- Implementing all of the above at a large scale without diluting quality and effectiveness
- Operating the program at a low enough cost per trainee that it will be fundable
- Securing sufficient funding to pay for the operation, largely from private donors

The Ek Mouka Model

This section discusses the way HLSP has handled each of these challenges. The information was derived from interviews with Ms. Nalini Gangadbaran, Chief Executive Officer of HLSP.

Employability Exchanges. When HLSP enters a new city it sets up an “Employability Exchange” as the center of its operations, staffed by its own employees. Services, however, are delivered through a number of community partners (local NGOs and CBOs, see below). The exchanges are industry accredited. They develop competency based training modules to suit local labor market requirements; operate an employment/placement cell; provide research training and consultancy services to interested partners; and build the capacity of facilitators and program managers. Each Exchange has its own board, made up mostly of local leaders in local business and government.

Market Scans. A unique feature of the model is that HLSP always undertakes research on labour market conditions at the start of its work in any city. This entails reviews of published data and reports but also a number of interviews and focus groups. The purpose is to identify specific occupations and employment opportunities relevant as good targets for placement of their clientele. Questions relate to new opportunities that are emerging and demand not being met. The emphasis is on “competencies” rather than specific traditional jobs. This often results in the identification of new employment niches that have not been

regularly performed in the area before; e.g., “para-nurses” that provide home care. The Scans are written up and presented to all community partners.

Community Partners. A variety of local entities may serve as community partners. HLSP works with them closely to discover their goals, gain their trust, train them in their program roles and work toward their building a sense of ownership for the program. The traditional perspective of many NGO’s has been “charity.” HLSP shifts the image of the operation to one of a businesslike “social enterprise” well linked to the mainstream economy.

Road Shows. HLSP and their local partners put on “road shows” to recruit youth to participate. The community partners play the lead role in designing events in a way that will be most likely to bring out the target group and encourage them to get involved. Popular local leaders (e.g., sports stars, program alumni) participate as speakers.

Induction and Learning Style. Interested youth first go through a four-day induction period where the broader program and learning style are introduced. The trainers are termed “learning facilitators” and they work more as peers and mentors than formal trainers (they are often program alumni – they are paid well but most work at other jobs part-time). The longer term training program is designed primarily by the trainees and trainee self-motivation becomes the theme throughout, although with facilitator guidance along the way. Trainees sign a contract with a program before they move into the longer-term process.

Training. Subsequent training can last from six weeks to four months, depending on the selections made by the trainee (a need to move the trainee into a decent jobs as soon as possible is recognized). There are 32 modules, with much freedom of choice, but all trainees gain orientation on career development planning linked to lifelong learning and basic soft skills required in the workplace, and almost all develop basic computer skills and English-language skills. All are involved in at least four areas:

- **Life Skills Training.** Honest dialogue among trainees and staff; building an ethical code of conduct; team building in an informal environment; facilitating youth on a self-monitored process of individual development.
- **Individual Youth Learning Development Plan.** Assists youth in developing social and livelihood skills, realizing their career ambitions, assessing their strengths and weaknesses in critical areas.
- **Technical Training.** Industry mentored skill acquisition, training curricula ratified by industry, training by industry professionals, participative teaching, practical exposure through hands-on assignments, apprenticeship.
- **Work Readiness.** Combination of emotional readiness and academic abilities, placements of suitably job-ready candidates (so reputation as a quality training institution is maintained).



Program Costs. Because much of the burden is on the learner, program costs are low: total of Rs, 4,500 per trainee in Mumbai. Trainees receive no stipends – the emphasis is on them feeling they are doing it on their own.

Completion and Post Placement Follow-Up. Upon completion of the coursework, youth are introduced to work in their field in an apprentice capacity before being placed full time into industry.

Post-placement surveys assess the success of the training from the graduates' and employers' perspectives. Youth are encouraged to enroll in a higher technical or university education at some point where feasible and, as noted, a high proportion of them do so.

Conclusions and Next Steps

The Ek Mouka model appears to have worked well to date. One important thing is that it looks realistically at the employment demands of today and recognizes that they are very different from those in the past. The need for a more flexible and mobile workforce will require new skills and greater adaptability among youth. Second, it also recognizes that these youth, while similar in their plight, actually differ from each other in many ways, hence community sensitive and trainee specific development paths are essential.

Another critical success factor is that the youth themselves have generally been eager to take advantage of the opportunity that Ek Mouka provides. They realize that they must have specific, relevant qualifications in order to advance, and have been highly motivated to obtain the skills and competencies necessary for employment. HLSP states that, even with their deficit in formal education, most learn and pick up skills quickly, adopt a life-long learning orientation, and evince considerable self-motivation in pursuing further training opportunities.

Sometimes too much planning ahead of time can delay action. The Ek Mouka model is already working in Mumbai. Rather than developing a long-term plan ahead of time, it is recommended that HLSP be asked to expand application of the model to the extent that its experience indicates is feasible over the next two years. HLSP would prepare a brief short-term plan. After review and negotiations, the Task Force should endorse and help find support for these activities.

After the first year, however, the Task Force should conduct a full review of performance to date and then, with HLSP and other NGOs that are capable and interested, develop a longer-term plan for substantially expanding the scale of this activity without weakening its quality.

EXPEDITING REFORMS IN THE EXISTING WORKFORCE DEVELOPMENT SYSTEM

This topic encompasses a potentially very large agenda. We suggest that the Task Force focus its efforts in three areas: (1) implementing a vocational education orientation and curriculum in secondary education; (2) further reforming and strengthening the MMR's Industrial Training Institutes (ITIs); and (3) promoting expanded efforts by private businesses to train their own employees.

"Vocationalizing secondary education" has caught on as an idea but much remains to be done to implement it in MMR's secondary schools. In Section 2, we noted what may be the most fundamental point: the criticality of avoiding establishing vocational education as separate from the regular curriculum such that the students who take it are branded as "second class." Rather, career development and skills needed for success in the work environment need to be a part of the curriculum for all students. The emphasis would not be on training for specific jobs as much on the skills required in all types of jobs – themes similar to those in the Ek Mouka model discussed above. For all, the goal should be graduating students who can problem solve in a work environment, think creatively, and work in teams and who understand the importance of life-long learning and regular upgrading of work skills.

Secondary schools should offer testing services to help students decide which general career paths might be best for them and then offer guidance on how to follow up. Students also need guidance on what is now a necessity for most workers worldwide: effectively preparing to select and secure a sequence of good jobs over their working lives. Once all students have taken the general career orientation courses, they should be able to take more specific alternative vocational courses relating to their specific aptitudes and interests. Some of these should be "blue collar oriented" but others should be oriented to preparation for higher level technical, managerial and professional work.

Reforming and Strengthening Vocational Training Institutes. A number of private industries in Mumbai have recognized that the skills that are being demanded in today's workplace, and certainly in the future workplace, are quite different than those of the past and that government vocational training programs, particularly the ITIs need to be restructured to respond.

The Tata Institute of Social Sciences has issued a report that (2006) that calls for the ITIs to become autonomous societies or be granted autonomy to operate and update their curriculum in accord with industry demands. The report suggests that "educational administrators and the industry need to play a strategic role," and that "Industry should establish benchmark standards of employee quality and high performance, in order to ensure that they get the right kind of workers."

Some ITIs in Maharashtra now have regular reviews with business managers to keep their curricula relevant to industry needs. Steps need to be undertaken to assure that all of them do so. A major effort will be needed to create new courses and provide and prepare trainers who can teach to new skill needs.



Rather than focusing dominantly on job-specific skills, however, the vocational training institutes should also give new emphasis for all students to something that is central in the Ek Mouka model: general employability training. General counseling on career building and life-long learning should also be required in all of these institutions. (See interview with Mr. Dinesh Afazalpurkar.)

An additional issue they should respond to is the provision of training on a part-time basis. The lack of access to part-time continuing education and training has been seen a major constraint to the workforce development of unemployed youth. Many out-of-school youth have family responsibilities or must work part time in menial jobs for survival and, therefore, cannot become involved in any full-time education or training program. It is believed that this could have a sizeable impact on participation.

Another advance will be for the training institutes (and private enterprise generally) to give recognition to workforce skills youth may have developed through real life experience working for their parents or community. Many youth have acquired such skills and they need to be taken into account, among other things, to avoid redundancy in their further training. A new government initiative – the “Artisan to Technocrat Scheme” – provides a sequence of tests and certifications specifically to give formal recognition to these skills and this approach should be endorsed and furthered by the Task Force as well. (See interviews with Higher and Technical Education Department and Mr. Dinesh Afazalpurkar.)

To support recommendations in this area, the Task Force should convene officials responsible for the ITI system and industry leaders and challenge them to develop a definite restructuring plan with clear targets for accomplishment. The Citizens Advisory Group should plan an active role. The Task Force and CAG should then hold annual reviews of performance under the plan to promote accountability.

Promoting Expanded Efforts by Private Businesses to Train Their Own Employees. In our interviews, business leaders emphasize the need for greater employability skills in their workforce. This means basic literacy and numeracy skills, critical thinking skills, inter-personal skills, communication skills, team work skills and IT skills, rather than specific technical skills. It should be the task of Maharashtra’s basic education and workforce development institutions to provide these employability skills, but once that is done, employers themselves should expand their role in providing job specific training. As noted earlier, India’s industries overall provide less on-the-job training than is typical in developed countries.

With its Bombay First heritage and its current CAG, the Task Force should be in an excellent position to convene business leaders to think through ways of encouraging expansion of business action on this issue. Industry has already begun to work more closely with the education sector in the design of workforce relevant education and training programs. With a boost from the Task Force, it should be possible to enhance and accelerate this trend.

BROADER SUPPORT

We have advocated that the Task Force focus on only a few policy initiatives in education and workforce development rather than spread itself too thin. It should, nevertheless, remain aware of broader developments in the field and lend its voice in support of worthwhile efforts and in holding responsible agencies accountable for performance in their improvement and expansion plans.

With respect to the transition of the informal sector, we have emphasized restructuring of activity to make it more economically efficient and building the skills and productive capacity of workers. Better legislation to protect and provide benefits for workers will of course be important over the longer term, but the Task Force should not be diverted by giving that priority attention itself at this point.

It should also be remembered that the root causes of problems of the informal sector are generally found in overly restrictive and cumbersome regulations and procedures. The Task Force should therefore support sensible regulatory reforms that may be proposed.

An example may be instructive. Capp, et al. (2006) offer the following explanation for the dramatic increase in the number of businesses that were formally established in Peru in the 1990s.

The government of Peru . . . concluded that large numbers of the poor were in effect excluded from formal economic activity: a complex and extensive bureaucracy made it hard to open a business legally or to use personal assets in economically efficient ways. This diagnosis led the country to implement a number of measures . . . to make its economy more formal. Registering a business now takes just a single day instead of 300 and costs \$175 rather than \$1,200.



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ANNEX B: INTERVIEW NOTES

MR. DINESH AFAZALPURKAR, IAS (RETIRED), FORMER CHIEF SECRETARY TO GOVERNMENT OF MAHARASHTRA AND FORMER ADVISER TO GOVERNMENT OF MAHARASHTRA IN EMPLOYMENT AND SELF – EMPLOYMENT

1. The available workforce is in mills, factories, domestic workers and so on. But they are not properly trained and hence the quality of skills generally available in the informal sector is poor
2. The requirement is not of fully skilled and well trained workers, but at least semi-skilled labor is required, so as to get a minimum quality of output
3. The major impediments in the system are that either we do not have institutions which can develop such semi-skilled workers or there is no proper recognition to privately operated institutions, so that students coming out of them can be considered for employment in the formal sector
4. Along with the growing requirement for semi skilled workers, there is also an increasing demand for multi-skilled workers. Such people would have better job opportunities or better prospects in self-employment
5. Training institutes need to deliver more vocational and job oriented training
6. One of the major “missing links” of development discourse, policies and practices regarding urban poverty reduction in the context of mainstreaming the informal sector is that any **formal education or training goes only to classes belonging to the formal sector**. The young population from the informal sector always remains deprived of the necessary formal foundation to get into the formal mainstream. Any efforts towards mainstreaming the informal sector should start with this
7. Creating **self-help groups (SHGs) and building various NGOs** is an effective tool for collectively helping out the workforce available in the informal sector. Recent efforts by the Government to start “Artisan to Technocrat Scheme”, deciding handing over of the public distribution system (PDS) retail shops to women SHGs, moving towards formulating a company for taxi drivers etc. could be effective steps in mainstreaming the informal sector
8. As an Adviser to Government of Maharashtra after retiring as Chief Secretary, he had prepared a report recommending various steps for creating self-employment. For example, he had put forward an idea of **citizen facilitation centers to be operated by urban local bodies**. A citizen normally faces problems in finding suitable labor for temporary requirements, such as, plumbing, carpentry, electric and household machine repair mechanics etc. There are three types of problems, one – a citizen is not sure about competencies while hiring such services, two – there is no standardization of rates, and three – in case of dissatisfaction, there is no redressal mechanism available, since this workforce is available from purely informal and unorganized sector

9. An **urban local body**, using funds from one of the poverty alleviation schemes, can provide the minimum required training, issue an identity to those trained, provide small office space with discounted telephone facility, standardize rates for various services and generally create a conducive environment for both service providers and hirers. A few urban local bodies have picked up this concept now, however, efforts are required to spread it further. This alone can generate tremendous self-employment potential and simultaneously assure citizens about the quality of household services
10. The current operations of Industrial Training Institutes (ITIs) also need a fresh outlook. Moving away from functioning like a typical training institute alone, ITIs should grow as **“guidance and counseling centers”**, so that youngsters not only obtain skill enhancements, but also find avenues to use them



Bharti Tele Ventures Ltd, MR. SAGAR DARBARI, HEAD OF SERVICE (STRATEGY AND PLANNING)

Nature of Business:

The largest Indian telecom player (both fixed and mobile phones) in the private sector operating in more than 15 Indian states.

Key Points:

1. The company has a workforce of about 40,000 people with about 9,000 direct employees.
2. The company has the practice of employing separate team of top management for each telecom circle. Each Indian state is a circle except for Mumbai, Delhi, Kolkata and Chennai cities, which are stand alone circles. This top management team (knowledge workers) comprises chief executive officer (CEO), CFO, CTO, CMO and HR head. All these people typically have 15 years of work experience post MBA. However, they often find it difficult to get such people with **telecom domain expertise** for smaller states and hence they also recruit SBU or product heads from **MNCs** (like Coke, Unilever, P&G that also have a strong customer orientation).
3. The “**call centre agents**” form the largest chunk of workforce in the company. These people are graduates, i.e. three years of college education (any discipline) with good communication skills.
4. The **Sales staff** is another major category of workforce. The people are graduates/post graduates but with direct sales experience. The freshers are also recruited and they are attached with a senior for the first few sales calls to give them an understanding of the company's ‘product’ and the ‘sales pitch’.
5. The direct sales agents (DSAs) and the call centre agents constitute 60% of the total workforce.
6. The company is a pioneer in adopting the **outsourcing model** for a few critical functions. The service providers in turn recruit people with requisite functional skills on their payrolls. For example,
 - Collection of telephone dues is outsourced to franchisees (and their DSAs).
 - Payroll processing is outsourced to HR Associates
 - Billing system and also the related infrastructure is managed by IBM
 - Network deployment and operations is managed by Ericsson and Nokia – they employ both degree and diploma holders in the engineering disciplines of electrical, telecommunications and electronics for the network operations. Additionally, they also recruit mechanical and civil engineers for managing the telecom towers.
7. The direct sales agents (DSAs) and the call centre agents constitute 60% of the total workforce.
8. The company dictates the norms for number and profile of staff needed to the franchisees. These franchisees maintain the database of customers and are the customer interface of the company. Hence, they often have high bargaining power.
9. The company realizing the risk of losing customers to competition (as these franchisees may sell the customer database to competitors), the company has initiated a new wholly owned subsidiary (Bharti Comtel) that will **recruit full time employees** for customer interface. The franchisees and their DSAs will only do the money collection. This is also to ensure better customers – company interface.

10. The company has a 21-day training programme for freshers joining the firm on company products and soft skills (essentially communication skills)
11. Realizing the dearth of good telecom engineers and domain specialists, the company has started "Bharti Institute of Telecom" at IIT Delhi. This is a 2 year post-graduation course offering management degree in telecom and hopes to recruit the entire batch for in-house requirements (although not assured)



DLF UNIVERSAL LTD, MR. RAKESH SHARMA, CHIEF EXECUTIVE OFFICER – WESTERN REGION

Nature of Business:

Development of Residential Townships, Premium Office Buildings, Condominiums, Shopping Malls, Multiplex theatres with Food Courts. Builds them as developer and also maintains them (as opposed to typical Indian real estate developers who construct buildings and exit after selling the developed space).

Key Points:

1. There are several hotel management institutes that offer good professional staff for star hotels. But, there is a need for “ITIs” kind of institutes for training the lower staff of these hotels as well as restaurants (including coffee chains)
2. There is also need for trained drivers that can be employed by car hire/rental services
3. Typically, in star hotels and niche/specialty restaurants, **only about 30-40% of staff has relevant educational background** (courses where they are trained specifically for the job). Specially for lower positions, **attitude towards work** is an issue – high degree of attrition and absenteeism
4. For smaller restaurants including the famous chains of south Indian restaurants (like Kamath, Udipi, etc.), the promoters recruit people from their family and their native town/village. The living conditions at such places for the lower class staff are very poor
5. For the entertainment business of DLF (that includes shopping malls, DT multiplex theatres and food courts), DLF manages the maintenance of common areas mainly through specialized facility management agencies. The key people employed either directly by DLF or these specialized agencies are as follows:
 - Engineering–Engineers and Trade specialists
 - Housekeeping staff
 - Security staff
6. For development/construction division, DLF has a very strong in-house team (“known as Owner’s team in industry jargon) with specialists in various disciplines. These people have degree or diploma in the relevant discipline with considerable work experience. The diploma holders are typically paid lower than the degree holders (for similar years of experience). The owners team comprises of architects, civil engineers (with specialization in structural engineering or finishes or planning), mechanical engineers and site supervisors)
7. This in-house team in turn works with consultants and contractors, which are selected based on their staff strength and specialization. The contractor’s team comprises civil and mechanical engineers (mainly diploma holders) with skills/specialization similar to the owner’s team (mentioned above), large force of skilled workers (carpenters, concreting, masons, etc.) and unskilled workers (to operate tower cranes, ready mix and batching plants)

8. The various trade disciplines in the construction industry are dominated by the people of specific ethnic groups. These people acquire the skills from their family elders and migrate to other parts of the country in search of employment. For example,
 - Carpenters and Painters (from Gorakhpur in Uttar Pradesh)
 - Masons (from Rajasthan and Dharmapuri in Tamil Nadu)
 - Plumbers (from Orissa)
 - Stone Making / chiseling (from Rajasthan)
9. There is a huge shortage of people with skills in **Masonry and Concreting work**. This is perceived to be a very critical requirement for improving productivity and avoiding wastages.
10. The mode of recruitment is either through advertisement or 'word of mouth' publicity or 'employee referrals'.
11. The DLF group is very strong in National Capital Region (NCR), i.e. Delhi and Gurgaon. In this region, they employ about 1200 people including 60 architects, 100 engineers and about 200 customer support/sales staff.



Higher & Technical Education Department, Ms. Joyce Sankaran, IAS, Principal Secretary

1. Told us about a recent scheme by the Government of Maharashtra: the “**Artisan to Technocrat**” scheme announced vide a government resolution dated 12.4.2005 which envisages evolution of artisan to senior artisan, craftsman, master craftsman, technician and finally technocrat. Details of this scheme are as follows:
 - a) The premise for starting this scheme is an effort towards mainstreaming informal sector workers. It has been often observed that workers in the informal sector or those involved in some mode of self-earning are skilled people: however they do not possess any **certificate of having completed formal education**. This is an impediment for them in getting formal jobs, even though they have the required competency levels. Though the Government is running Industrial Training Institutes (ITIs), the required entry-level qualification for ITIs is finishing school level education. However, the drop out rate in the formal education system has been observed to be the highest at school level only. Generally, due to poverty and many other reasons, children leave school at around 10-12 years of age and contribute to whatever little livelihood means the family has. Being practitioners in such family trades, they do acquire high levels of skills. However, it is not formally recognized by way of any academic certification, which in turn, blocks their entry into the formal sector. To overcome this situation, Government of Maharashtra, vide its Resolution No. ITI – 1004/138 – A/TE – 2, dated 12th April 2005, launched a scheme called the “**Artisan to Technocrat Scheme**”
 - b) There are **six layers** designed in the scheme – artisan, senior artisan, craftsman, master craftsman, technician and technocrat. These are grouped into the first four and last two. There is absolutely no entry level minimum educational or age criteria for appearing in the first level tests, which would result in a certificate as **artisan**. The government has designated six ITIs in the state, which would conduct such tests, mainly in subjects such as, plumbing, carpentry, motor mechanic, painting, welding etc. These tests would be conducted three times in a year in all six ITIs. The government would examine the progress of the scheme and would expand it to all other ITIs
 - c) ITIs would also conduct **short duration training courses** for these tests. However, completing such training is not mandatory while appearing for the test. Anyone can appear for the test by paying a fee of Rs. 500/-, and if optionally some pre-training were required, there would be additional fees
 - d) Candidates passing through the first level can appear for the second level and so on. There would be grades awarded and not marks at each test. While the respective ITIs would issue certificates for the first two grades, candidates clearing third and four levels would get a certificate issued by

the **National Council for Vocational Training (NCVT)**. Further, those clearing fifth level would get a **Diploma** and finally after clearing the sixth level, a **Degree** would be awarded by **Dr. Babasaheb Ambedkar Technical University at Lonere in Maharashtra**

- e) There are separate mechanisms being evolved for deciding the syllabus in various subjects and levels, standardization of test procedures across all ITIs, etc.
- f) Government has also set up an **apex level Steering Committee** under the Chairmanship of Principal Secretary in Higher & Technical Education Department to monitor, evaluate and review the implementation of this scheme periodically



ICICI BANK, MR. RAJENDRA NIRANTAR

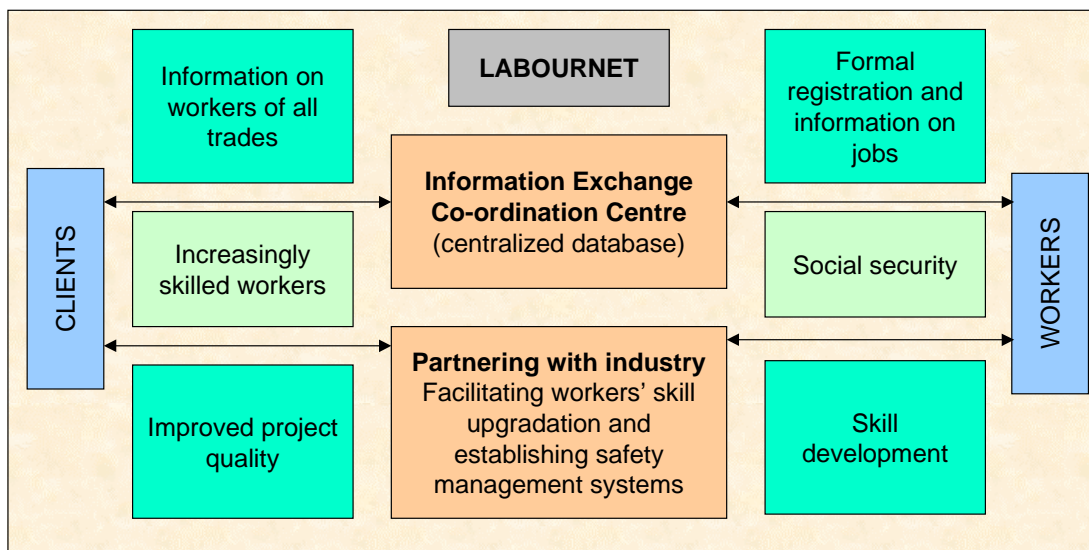
1. ICICI Bank typically recruits graduates and professionals (MBAs/CAs) with or without work experience. About 70% of the recruits are “fresher graduates” (at least 10+2+3, i.e. basic graduates)
2. It is possible to develop the relevant skills in freshers as well, although this sometimes takes longer than for MBAs/CAs who already have some relevant background. Freshers typically take longer to adjust to the work environment, which is one of the major factors leading to high rates of attrition. It takes about 2-3 months for these fresh graduates to become productive and start contributing to the organization
3. One of the ideas being considered for reducing attrition is to **introduce approximately 3-month training programmes in schools or colleges (including vocational institutes)** where theory as well as practical inputs are provided on banking skills. Examples of this kind of training include theory about e.g. functioning of banks, the Reserve Bank of India (RBI's) role, banking norms including Know-Your-Customer (KYC) norms, and practical sessions on IT systems used by banks, banking processes, and practice sessions using mock data. The training could be followed by a short internship at the bank
4. While it is always better to learn “on the job”, the advantage of mock exercises is that in the event of a mistake/failure, there are no adverse consequences to the bank and further such training helps to prepare the prospective employees for what they should expect. Also it does not take much time to teach them how to, say, help a customer complete a transaction. This is akin to simulator based training provided to pilots who first practice on simulators before they are actually put on the job. Also, it is **possible to teach “soft skills”** such as customer management in the classroom or in training sessions
5. Further, while ICICI Bank does not recruit from Industrial Training Institutes (ITIs) because they cover their software engineering and other technical requirements through technical service providers (annual maintenance contracts), Mr. Nirantar felt that in general the **skills taught at ITIs and vocational training institutes are very much relevant in today' context**, especially if training on relevant banking skills as mentioned earlier is incorporated
6. The training that is currently provided to employees of ICICI Bank is mainly **in-house training on various functional skills** relevant to banking, IT systems training, training on products and services offered by the bank, etc.
7. ICICI Bank has both regular employees and service providing agencies (SPAs) on its rolls. SPAs supply them with direct sales agents (DSAs) for their retail banking. SPAs are selected on the basis of various factors such as track record (proficiency of management, structure of agency, whether books maintained properly) and on whether they provide basic facilities (such as minimum wages, health insurance through the Employee State Insurance Scheme, group life insurance, PF contribution) to their employees

8. The DSAs are not trained directly by the bank but training kits are provided to the SPAs who further train the agents. These training kits mainly cover soft skills such as customer interaction, how to contact a customer, etc. which are more relevant to them
9. ICICI Bank also undertakes various social initiatives under its Social Initiatives Group (SIG) which include initiatives in health, education and **microfinance, mainly for the rural poor**. In the case of microfinance, there are two models involved, both of which are used by the bank: ICICI Bank funds the microfinance institution (MFI) which in turn funds the borrowers (self help group-SHG). The borrowers are typically a very small group of people (around 10), mainly women in villages. The loans (in the range of Rs. 1,000-5,000) are typically used to buy capital assets such as a sewing machine. The alternate model involves lending to the borrowers directly with management being carried out by the MFI. These MFI initiatives have been largely successful in funding small borrowers
10. ICICI Bank has recently also started supporting the **poor in urban areas**. The bank is currently running a **pilot scheme to lend to hawkers based in Mumbai** through an arrangement with their associations. About 100 such borrowers have so far been financed and the loan ticket size is between Rs. 5,000-10,000. The bank is also looking at tie-ups with builders to offer low cost housing schemes for slum dwellers in the range of Rs. 50,000-Rs. 2 lakh
11. In general for the economy as a whole, Mr. Nirantar felt that there is **no dearth of jobs** in Mumbai. **Quality of people is also not an issue** but there is a need for **employers to invest in potential employees**
12. The city has a performance driven culture and young employees are ready to work hard and work long hours. There is of course a change in mindset in the sense that the younger generation wants everything fast (such as by taking on housing and car loans) and for this, they also need a higher source of income
13. The **concept of loyalty** is different and employees do not stick to a single job for long (maybe 3-4 years) which is a change from earlier generations which spent long tenures at a single firm
14. Skills taught at **ITIs and vocational institutes** are still relevant to the changing needs of the economy: it is always better to have employees who have received some basic exposure or training and mold them further



MAYA ORGANIC, MR. SOLOMON JP, CHIEF FUNCTIONARY

1. LabourNet is an initiative by **MAYA Organic**, which is a programme initiative by MAYA (Movement for Alternatives and Youth Awareness), a Karnataka based development organization. MAYA Organic addresses livelihood issues of the working poor through organizing the informal sector workforce into worker-owned enterprises and supporting marketing and business ventures. MAYA Organic currently works with the garments, lacware, and metal work sectors
2. LabourNet is an initiative to address the issues of workforce development (income, living conditions, working conditions, health) in the construction sector by **networking all stakeholders in the sector**. LabourNet routes workers to jobs, encourages skill development, and facilitates access to social security schemes for construction workers
3. The construction industry mainly consists of migrants from other states and LabourNet is an initiative to organize these workers. About 10,000 workers have been already registered in the first initiative in Bangalore, which was started two years ago (MAYA Organic was formed three years back). In addition all major construction companies and project management companies (who fall in between the customer and the builder) are also registered with LabourNet



4. The initiative has two broad approaches to organizing the construction workforce in the industry. These are represented below:
5. The two approaches are: as an **information exchange**, and as an **audit organization and a training facilitator**. As an information exchange, worker groups of all construction trades are registered onto a database which is available on call to all the builders and contractors for projects in Bangalore. The database captures information of workers in terms of personal history, experience and skill sets
6. Two help lines have been put in place to enable this exchange of information on workers and jobs for the customers and workforce, respectively. The database is maintained according to trade and is

continually updated through feedback mechanisms instituted for the work executed through the network

7. The call centre runs for about 6-8 hours a day and about half the calls translate into actual work (requirements need to match)
8. Companies currently pay a small fee. Once the initiative catches on, this fee could be increased but first the benefits need to be clear and the service should be used
9. All workers are registered, and covered under health and accident insurance. LabourNet also aims to establish systems of better work practices including occupational, health, safety systems and other minimum standards
10. As a training facilitator, LabourNet provides **training on basic skills to labour contractors** ("mistris") who are typically responsible for 10-15 workers
11. LabourNet also operationalizes **training facilitation centres** for workers working on construction project sites to enhance their skills and productivity. Training is considered an important unmet need because construction companies do not invest in formally training the workers (training is provided to only supervisors and above). Construction workers are considered to be short-term employees and the training is therefore not felt to be worth the investment. However this leads to a vicious cycle of low productivity, poor quality and low wages. However since for LabourNet the workers are part of the same pool, it is more feasible to train workers and enhance their skills
12. Felt that this kind of model is actually the role of the labour departments of some organizations. However in reality this role is not performed and there is a need for such a facilitating mechanism which needs to be a body that is co-owned by the government, construction industries, trade unions, worker representatives, training organizations, NGOs, etc. and not by the government alone. However these structures need to be **heavily supported and co-ordinated by the government**. The initiative could be a structure outside the government with public representatives
13. The idea of the initiative is that both sides get a fair deal. The prices for particular skills and labour need to be standardized. The system of minimum wages does not work in practice. For skilled workers, the market determines the wages. However in the case of unskilled workers, negotiations matter and often the weakest end up suffering most
14. A **social security bill** for construction workers has been prepared but has not been implemented. There is a proposal for levy of cess that is implementable but several provisions of this as well as other social security bills are impractical. In the first place it is difficult to identify the employers for informal workers. For a construction worker for example, the employers may be many: the project management company, contractor, etc.): right across the value chain. Similarly the concept of welfare boards is also not very practical though a few welfare boards have been tried in places like Tamil Nadu and Kerala. Similarly, to expect a migrant worker to approach a state's labour department for registration upon entering the state is not practical. Further, trade unions prefer to work with the formal sector and the structure is insufficient to deal with the informal sector. He also felt that construction companies are not organized properly and do not allow the workers to get organized. The blame ultimately falls on the contractors or the workers



15. Therefore there is a need for new structures to address the needs of such workers. The Government of Andhra Pradesh is considering a form of LabourNet for workers to the Middle East who are often exploited. They are planning to set up a central agency which would verify the credibility of the employer, help in negotiations and help provide a guarantee to both sides – in other words, act as an intermediary
16. In general, informal sector workers should be organized under **associations, which function like an umbrella organization of 20-25 people**. These associations would facilitate sharing of resources, working together, and marketing products and clusters of small enterprises can also network with each other across the supply chain system. These self help groups would work as a co-operative without the shortcomings of a co-operative
17. There is scope for **easy replicability** of such initiatives (e.g. LabourNet or even organizing into self help groups/associations) and within Maharashtra, cities like Mumbai, Nagpur and Pune are ideal places for starting this kind of an initiative. For example, karamcharis who do cleaning, gardening etc. could be organized and made responsible to local citizen groups. While there may be initial resistance from local and municipal councillors who make money from garbage disposal, such an initiative could be tried in a few areas initially and then expanded when its value is realized. People would be willing to pay extra fees for the services provided, especially when they result in a cleaner environment. Waste could also be recycled and converted to energy

MOVE-Best Practices Foundation, Dr. Sangeetha Purushothaman, Director

1. The Best Practices Foundation (BPF) documents and disseminates best practices in the fields of development, governance and gender. It aims to conduct innovative research in partnership with practitioners and implementing agencies of the state and civil society.
2. Market Oriented Value Enhancement (MOVE) is an initiative by the Best Practices Foundation which aims at promoting access to the market by the informal sector, particularly the landless and women (*see box: About MOVE*)

About Market Oriented Value Enhancement (MOVE)

Market Oriented Value Enhancement (MOVE) is a method to approach income-generating activities for the landless, asset-poor, and illiterate with marketing as the central focus. The development of the MOVE training programme was funded by the UK Department for International Development, as part of a research project to study natural resource management and poverty alleviation in villages near urban areas.

Market Orientation is when instead of being oriented to their perceived abilities or lack of it, participants will undertake a business venture according to market demand. The key to the process is when participants first ask, "What does the customer want?" and then, "How do I deliver it?"

Value Enhancement is the process of continuously evolving new products and services to cater to customer needs and demand. By adding value to products according to the customers' wants, entrepreneurs can serve specific market niches

This approach solves many problems:

 - By conducting thorough market research first, income-generating activities are more likely to succeed. Participants estimate market demand, gauge possible sales of a given product, identify market segments to target, and then begin business
 - With the emphasis being on marketing rather than on a specific product, adaptability to the marketplace is built in. Hence, participants are trained to be more than just skilled labourers – they become entrepreneurs
 - Though the poor and landless may not have the resources to compete with large-scale production, they have one key advantage over large corporations: the possibility of a direct connection to the customer. Participants can capitalise on this advantage by delivering products to their doorstep in remote villages and by tailoring products to customer specifications

The MOVE model consists of 11 modules, which begin with motivation, progress to general business concepts, market research and finally the formulation of a business. By the end, participants should be empowered to enter the market confidently as independent players
3. Said that income-generating activities are typically focused on skill enhancement with emphasis on a single product. Skills could get redundant as market forces make some products more attractive than others
4. Therefore MOVE instead focuses on understanding the market and developing skills that would help to design and deliver products and services accordingly, with **marketing as the central focus**. This is done using **participatory market appraisals** for various products which is essentially a version of market research specifically designed for the illiterate
5. The initiative has so far been implemented in about 5-6 villages in Karnataka in the Hubli-Dharwad area. It has focused on 'products' but there are efforts at replication for both products (a CARE sponsored initiative) and services (ILO sponsored initiative)
6. Another planned replication is an initiative for the Mahila Samiti Karnataka (MSK) wherein "dais" i.e. midwives are trained to make their occupation more market oriented and sustainable by introducing them to services such as escort services, pre- and post-natal care
7. The initiative has been largely very successful. However there are always lessons to be learned especially in order to make the initiative more sustainable. One of the issues that have been faced is the rising cost of inputs. Therefore there is a need to find cheaper sources of raw materials/inputs. There are also issues with respect to availability of capital (returns from the investment are used to



repay the loan and for other revenue expenditure but not ploughed back into the business through creation of say, a capital fund). High interest rates (say 2% a month) also make such units uncompetitive compared to others who are able to obtain funds at cheaper rates. These are issues that the women sometimes do not understand but efforts are being made to overcome them so that the initiative becomes financially self-sustaining

8. This initiative is based on the simple premise that skills should be developed according to the market and therefore can be replicated anywhere, wherever there is a market. Therefore the ease of replication is high and Best Practices Foundation is now undertaking a similar MOVE initiative for the services sector for ILO

Dr. Abhay Pethe, Prof. of Urban Economics & Regional Development

1. It is not true that the workforce is growing at a faster pace than employment – especially in the informal sector, employment has been growing faster and it is getting increasingly difficult to find enough people with suitable skills
2. There is a need to set up a **special cell** as part of the government to promote vocational training/ITIs. There is no need for a separate institutional set up, which only ends up increasing costs and bureaucracy. Only a separate cell could be established
3. ITIs and vocational training institutes should not be set up directly by the government; however, the government should **encourage the private sector** to set up these institutes, by offering incentives and subsidies (which are justified as this is a 'merit good')
4. Shared a working paper written by him on "Designing a Best Response with a Human Face in the context of Paradigm Shift in Macroeconomic Management: A Case for Civil Society Intervention". The paper focuses on the educational response to the changing labor market situation and the challenges posed by dropouts from formal education. Dr. Pethe explained that there is a niche that requires urgent attention from NGOs, which further need to be supported by the government, industry as well as academia. The paper provides further directions on the same
5. Suggested that we meet Prof. Ramesh Dutta who has done a study on employability in Maharashtra; Dr. C S Deshpande of MEDC, and chambers of commerce such as the Bombay Chamber of Commerce & Industry and Indian Merchants Chamber
6. Also told us about a research paper (dissertation) written by his student, Mukta, titled "Access to credit by hawkers: What is Missing? Theory and Evidence from India". The paper which is available online examines access to financial services by hawkers and barriers to accessing formal credit because of the informality of the sector. The author has conducted a survey of hawkers in Mumbai and suggested possible policy implications for the government. Dr. Pethe gave us the contact details for Mukta



Sanjay Maintenance Services Pvt. Ltd, Mr. Sanjay Khanvilkar, promoter

Nature of Business:

The company is in the business of providing Maintenance and Housekeeping services (cleaning, mopping, electrical and plumbing needs) to offices since 1968. Apart from workers, they also supply consumables, like, toilet papers, soaps, etc.

Key Points:

1. The company has operations in Mumbai (headquarters), Pune, Vadodara, Delhi, Ahmedabad and Bangalore.
2. Employs more than 5,000 people out of which more than 90% people are permanent employees. Generates annual turnover of about Rs 220 million (5 million USD).
3. Most people are school dropouts and studied less than tenth class. Hence, most of the staff has **very poor educational background**. The staff is a fair mix of local people and migrants.
4. The company prefers to recruit '**raw**' people as they can be molded more easily.
5. The company does reference check before recruiting people. One of the key requirements of the business is to take full responsibility of the staff posted at the client's site.
6. **Training is imparted on soft skills** – attitude, customer interactions and the technical skills required for the job. The new recruits are given training for 15-20 days on recruitment and then they are supposed to hone up skills on the job.
7. The company uses machinery and equipment (often imported) for scrubbing floors, vacuum cleaners, water jets, etc and hence staff is given training to handle the equipment.
8. Apart from the housekeeping skills, the clients (sometimes) also expect the staff to help customers or the security guards. Hence, the people are also expected to be good in **inter-personal skills**.
9. The staff is paid on the basis of **minimum wages** (basic salary of Rs 3130 for unskilled staff plus dearness allowance). The semi-skilled and skilled staff earns basic salary of Rs 3230/- and Rs 3330/- per annum.
10. Recommends that **Government should strictly enforce** the labour laws and payment of minimum wages to the staff. This would ensure 'level playing field' for all the companies in the business. Also, recommends that Government should carry out a periodic revision of these minimum wages.

SPARC (Society for the Promotion of Area Resource Centers), Mr. Sundar Burra, Adviser

1. The **Society for the Promotion of Area Resource Centers (SPARC)** is one of the largest Indian NGOs working on housing and infrastructure issues for the urban poor
2. SPARC was formed in 1984 and started working with the most vulnerable of Mumbai's urban poor: the **pavement dwellers**. Since 1986, SPARC has been working in partnership with two community based organizations: the National Slum Dwellers Foundation and Mahila Milan. Together, these are known as the Alliance
3. The immediate aim of the Alliance is to create the institutional arrangements that are necessary for large numbers of the poor to access housing and infrastructure. The long-term vision is to support a process where organized groups of the urban poor can participate in making decisions about how their cities are developed and managed
4. Mr. Burra felt that it is extremely important that people in the informal sector are **given adequate protection**. Currently most of the informal sector workers are considered illegal. They are harassed and have to pay a variety of **finances and bribes** to the police, local ward councilors, MLAs, MPs, Municipal Corporation. All this eats into the meager earnings of the poor. There is a perception that these workers "live off" the city; however, they do pay indirect taxes like people in the formal sector and they spend a lot on bribes. Therefore there is a need for regulation by the government and some form of "regularization". Even the work of those who are involved in home based work is considered illegal and there is a need to protect these employment and self-employment activities
5. There is also a need to provide **adequate housing for the poor**. This would also serve the purpose of generating employment, because the demand generated in the construction industry would have a multiplier effect on employment and create a variety of employment opportunities for masons, carpenters, bricklayers and similar workers
6. Other aspects of promoting access to affordable land in the cities include: promoting rental housing, ensuring that the Tenancy Act does not come in the way of rental housing, providing new areas for housing, affordable transport to ensure connectivity between these new areas and the place of work, providing links with the mainland, ensuring that standards for resettlement are met and there is no demolition without resettlement, etc.
7. The problem is that land is the source of money for most politicians. The Urban Land Ceiling Act also is a farce and is intended only to prevent land from coming into the market so that prices remain high and builders profit
8. In terms of workable models for ensuring the inclusion of informal sector workers, SPARC aims to **enhance the capabilities of individuals to negotiate with the government**. SPARC as an institution is in touch with about 200,000 families of slum dwellers which provides a critical mass base to carry the initiative forward
9. There has to be a re-negotiation of roles between the government, NGOs and Community Based Organizations (CBOs). The government cannot do everything itself and has learnt to partner with other



stakeholders such as NGOs and CBOs. The government should lay down the policy, finances, guidelines but cannot reach the poor directly. The mode of public services delivery should be changed to involve civil society, so that these services reach the poor. At the same time, the state needs to play a strong and positive role. This is similar to the model followed in education, where multiple stakeholders are involved in running the school

10. Another important aspect is providing credit for the poor: sometimes the rates of interest that are charged to hawkers etc. for credit (for consumption, earning opportunities or housing) are in the range of 50-70% a day. There is a need to provide more affordable credit through microcredit and other sources

Sukhi Security Agency, MR. AMAR SUKHI, PROMOTER

Nature of Business:

Security Agency – providing guards for providing round the clock security at commercial and residential buildings/colonies.

Key Points:

1. The company is headquartered in Mumbai and employs more than 1200 guards.
2. Almost all the guards are full-time employees and are paid as per the minimum wage fixed for unskilled staff.
3. The guards are expected to work for an eight hour shift and get a day off every week. However, there are strict instructions for not leaving the security post till a reliever reports for the duty. Often, the guards end up working for more than 16 hours at a stretch in case the reliever does not turn up.
4. This is a very cost-sensitive industry and the clients do not agree for paying more than 15-20% over the minimum wages for unskilled staff. Equating a security guard with an unskilled worker, according to him, is the bane of this industry.
5. Most of the people employed are migrant workers and come with reference of existing employees. The company does due diligence of the person's background prior to recruitment.
6. Most of the guards are educated only till Xth class²⁷ and the key requirement is ability to **read and write English** (so that they can read the vehicle registration numbers or write the visitor's contact details in the register).
7. The recruits are given **in-house training** on the following for about two weeks before posting them at a client's site:
 - Communication with visitors and residents (politeness and standing posture)
 - Taking down details in the visitors register
 - Physical exercise for staying fit
 - Light martial arts (more for self-protection) for tackling unruly elements
8. The **attrition rate** is quite high as many people find it difficult to adjust to the difficult working conditions.
9. The guards are given strict instructions for not leaving the security post unguarded or for carrying out any other errand jobs for the client or any of its representatives.

²⁷ In India, the formal school education is of 12 years with Xth class (Secondary school) and XII class (Senior Secondary School) as important milestones



Tata Institute of Social Sciences (TISS), Prof. R. C. Datta, Professor and Chairperson, Centre for Human Resources Management, School of Management and Labour Studies

1. Prof. Datta has worked on a detailed study on employability of labor in Maharashtra. The study, titled “**Livelihoods, Employment & Sustainable Development: An initiative towards improving skills and employability of people**” has been prepared by a team of TISS researchers headed by Prof. Datta and has been supported by the Confederation of Indian Industry (CII), Western Region

2. The report presents results from a detailed sample frame for six different districts of Maharashtra covering 55 enterprises, 22 institutes, 16 independent members and 5 placement agencies. The broad recommendations for the government include **setting up a labour market information cell to provide a linkage between employers, education and training providers and**

Recommendations of TISS Report

The report on “Livelihoods, Employment & Sustainable Development: An initiative towards improving skills and employability of people” envisions that two specific structures need to be set up in order to help bridge the employability gaps. These include **Labour Market Information Cell and Service Training Institute**. Additionally, the operation of **vocational training institutes** needs to be significantly restructured in order to enhance their quality, utility and effectiveness in the context of changing technology.

- **Labour Market Information Cell:** Would enable individuals to update their skills and overcome barriers with respect to this by providing knowledge about the type of skill sets required and about methods of deployment and presentation of skills to their employer. The LMIC is envisaged to provide the pivotal linkage between the employers, education and training providers and prospective employees
- **Service Training Institute:** Would offer training on issues relating to customer handling, communication, interpersonal skills and sales management. This is considered important given the rate at which the service sector has been growing. The STI could impart training to various parts of the service sector such as retail, insurance and BPO which would combine both soft skills training and theoretical knowledge about sales, marketing and customer care
- **Restructuring of vocational training institutes:** Vocational training institutes such as ITIs should become autonomous societies or be granted adequate autonomy to operate and update their curriculum according to industry demands. ITIs should provide ongoing skill development based on the development needs of the area. For the restructuring of vocational training institutes, educational administrators and the industry need to play a strategic role. Industry should establish benchmark standards of employee quality and high performance, in order to ensure that they get the right kind of workers

- prospective employees. Other recommendations include **setting up a Service Training Institute (STI) and restructuring of vocational training institutes** (*see box: Recommendations of TISS Report*)
3. TISS is considering setting up a labour market information cell within the institute itself which can later be extended to the wider economy
4. Regarding the performance of Industrial Training Institutes (ITIs), Prof. Datta felt that while there are differences between the ITIs in Maharashtra with some (e.g. the ones at Pune, Nashik) being good and even having set up Centres of Excellence to equip students with multiple skills, **in general ITIs lack adequate infrastructure and other facilities**. However according to him it is not true that students are not interested in joining these institutes – he said that this is an argument of the 1960s and recently there are many good students joining these institutes (cut off marks themselves are high)
5. The Apprenticeship Act of 1961 made it mandatory that students from ITIs undertake apprenticeship or training, with a stipend being paid to them. However, employers did not provide proper working

conditions or even minimum wages. In fact **potential employers have a major role to play** in ensuring that students from ITIs obtain good jobs. There is a perception that these institutes are not good, which may not be fair without visiting them in the first place as at least some of them have been found to be quite good

6. There is also a need to market ITIs properly, and this tends to vary depending on the type of management running the institute
7. BPOs have been providing their own in-house training through an outsourced model wherein external agencies are hired to provide training. This is mainly because these jobs require some skills/training specific to the business and not so much due to a lack of training provided by institutes
8. According to Prof. Datta, the Government can also run ITIs and there is **no apparent difference between public and private sector ITIs**
9. Regarding the “soft skills” which are increasingly in demand now especially for the service sectors, Prof. Datta feels that **it is possible to provide these skills through training and courses**. The employer needs to take an interest and sponsor these programmes. There is scope for involving the private sector and taking up the public-private participation (PPP) route for such initiatives
10. On the issue of why people do not consider “low end” jobs such as flipping burgers at Mc Donald’s as a longer term career option and how such jobs could be made more respectable, Prof. Datta felt that these jobs are not seen as a long term option perhaps only because youngsters these days are anyway **not so much interested in job security as in earning the money**. However he feels that there is a good enough supply people for such jobs especially in Mumbai, Pune etc. region and there is no stigma attached. He felt that rather, a lot of people derive self esteem from just speaking English. Further, some industries such as construction are growing fast and employ workers who are not trained in ITIs – such industries are considered low end and branded low
11. Regarding the informal sector and ways of mainstreaming it, Prof. Datta has been quite active in this area and strongly believes that it is important and possible to provide **basic social security and rights to informal sector workers**. This has been shown to be possible even if a person is working for three different employers in a single day. There may be some resistance from the employers’ side due to concerns about forming unions, but this too according to him is a fundamental right of the workers
12. There are over 20,000 maids in Mumbai and Pune alone. A maid servants committee has been formed, and a gazette notification is pending – however, the bill is still pending and there are various issues with respect to formalizing maids, amongst them being privacy of households



TATA STRATEGIC MANAGEMENT GROUP, MR. SUNIL BHANDARE, FORMER ADVISOR ON ECONOMIC AND GOVERNMENT POLICY

Mr. Bhandare was working at a senior position with a reputed group until recently and has retired now. After retirement, he has been actively involved with Bombay First, which is a platform for dignitaries to come together on various issues related to Mumbai and make the city a better place to live, work and invest in. For Bombay First, he has recently been involved in studies on workforce assessment for Mumbai.

1. There has been a radical change in the type of jobs available in the open market. As a response, the patterns of education and outlook of youngsters and parents is also changing.
2. Traditionally, the job market in Mumbai was known for mostly “white collar” followed by “blue collar” jobs. The typical entry-level profession was to join as a clerk in Government, Semi Government, banks and even in the private sector. Similarly, for youngsters with technical skills, typical job openings were in production oriented traditional industries.
3. Therefore, the education level of the youth was typically up to graduation/post graduation, or engineering in Colleges and Universities.
4. This pattern has been changing drastically in recent years. The entry-level job market is now essentially in the following areas/sectors:
 - Retail markets (malls, shopping complexes, etc.)
 - Multiplex theatres
 - Media & entertainment (TV channels, production of TV serials, 24 hours news and music channels)
 - Support level mechanisms for media industry
 - Automobiles, repair of automobiles
 - Financial sector (insurance agents, credit cards, banking products, home loans and other products of retail loans etc.)
 - Security agencies
 - Real estate, interior decoration
 - Event management
 - Hospitality
 - Call centers/BPOs and so on
5. As against this, the demand for typical white collar and blue-collar jobs is fast diminishing.
6. With this, the attitude of the youth towards education is also changing. On the one hand, traditional education is becoming expensive, on the other, there is no job assurance after typical university education. Hence, people prefer to go in for **vocational education**. However, there is **insufficient supply** of vocational training institutes.

7. With this background, there is a need to **restructure the Industrial Training Institutes (ITIs)** being run by the State Government. Incorporating courses on **new skills** (such as skills required in the services sector, e.g. call centres) is necessary.
8. The private sector would be willing to assist the Government in this regard or take over this function entirely. However, there should be proper policy formulation by the Government to attract private sector participation in this field.



Ultratech Cement (An Aditya Birla Group Company), MR. ARUN KHURANA, DEPUTY GENERAL MANAGER

Nature of Business:

Cement Manufacturer

Key Points:

1. The company is India's one of the largest cement manufacturers headquartered in Mumbai.
2. Although Mumbai or MMR does not have a manufacturing facility, the local office handles the distribution of cement from the Mumbai office to its dealers, distributors and institutional customers
3. The people requirements of the company (or any cement company) are for two major categories:
 - **Manufacturing staff** – mainly chemical engineers (for managing production), mechanical and electrical engineers (for maintenance), chemistry post graduates (for process and quality) and technicians (electricians, machine operators, etc.)
 - **Sales, Marketing and Distribution staff** – mainly graduates/post graduates with experience in sales and marketing, For cement distribution, people with experience in supply chain management and logistics management
4. The industry is extremely competitive and over the years the customers too have become very demanding about the quality (technical specifications) of cement. This has necessitated the need for technical experts who understand the chemistry of cement and can help in improving the quality of cement. Such experts, he pointed out, are not easily available.
5. Apart from these technical experts, the industry also has a shortage of good people with expertise in 'supply chain management'.
6. While there is not dearth of institutes offering formal graduation and doctoral courses in chemistry, the recruits still need to be given **industry (cement) specific training** upon joining (unless they have past experience of working in cement industry).
7. The company representative felt there is urgent requirement of good institutes offering degree/diploma courses in supply chain management. Although, there are a few institutes (like Narsee Munjee Institute of Management Studies (NMIMS) offering a one-year diploma through the online and distance learning mode) in Mumbai that have started offering specialized courses in supply chain management, the company is still dependant on **lateral entries from FMCG** (fast moving consumer goods) companies.
8. The company's representative expressed satisfaction regarding quality of technical staff – both engineers and technicians.
9. He also had no issue with quality of personnel graduating from 'ITIs'. His opinion was more philosophical on this issue, i.e., "the technicians are essentially people from lower income groups and relatively poor academic background. These people could not get into engineering courses and hence it is improper to compare the competence levels of engineers with these technicians. Hence, the role of "ITIs" becomes that much tougher to produce 'quality' technicians.

10. When pushed further on this issue, he expressed satisfaction with the technicians he worked in his firm (since last 14 years) and for this he gave credit to the firm's excellent **brand equity** (this firm was part of L&T till year 2002-03), **HR policy** and hence the propensity of best of the people to seek job in the firm as employees.



YUVA (YOUTH FOR UNITY AND VOLUNTARY ACTION), Ms. Lysa John

1. YUVA (Youth for Unity and Voluntary Action), a voluntary development organization since 1984, has questioned social structures along the side of the poor, with the aim of empowering them to participate in a process of meaningful change
2. YUVA has done a lot of work aimed at mainstreaming the informal sector in Mumbai and has wide-ranging activities with communities living in slums and pavements
3. The National Association of Street Vendors of India (NASVI) nominated YUVA to its core group and since then YUVA has provided strategic inputs to them on governance and city development plan
4. YUVA's initiatives include organizing construction workers into co-operatives (such as the "Nimriti" co-operative) where training is provided to workers in order to prevent exploitation by contractors
5. YUVA has also organized women rag pickers into a co-operative. In 2003, YUVA began intervention with a group of women in Ghatkopar, Vikhroli and Mulund. YUVA initiated, formed and registered the service co-operative of ragpickers in N-ward (Ghatkopar). About 25 women are members of this co-operative and the advantage is that the co-operative is able to cut out the middle man (scrap dealers) and enable direct access to the big dealers
6. YUVA aims to upgrade the skills of the co-operative so that they can survive in the existing informal economy as well as build capacity in the areas of business management and marketing. YUVA also organized a **6-month Co-operative Animator Training Program (CATP)** to inculcate co-operative values and culture in the core members of the co-operative
7. The problem faced by co-operatives is that adequate capital and credit is often not available and also it is difficult to share profits amongst the members. Therefore it may be a better option to organize workers into associations which could be formed ward-wise. Associations provide an identity to workers and reduce their dependence on middlemen/contractors
8. YUVA also intervened in **Nallasopara city** which is situated in the Vasai-Virar region of Mumbai, with the objective of **resettlement and rehabilitation of street vendors**.
9. YUVA has also been working on influencing the **National Hawking Policy** and preparing an alternate development plan showing the integration of street vendors in the plans (*see box: National Hawking*

National Hawking Policy

In 2004, the Ministry of Urban Employment and Poverty Alleviation formulated a National Policy on Urban Street Vendors. The Policy document was sent to all states for adoption. However, most of the states did not implement the policy.

The overall goal of the policy is to provide and promote a supportive environment for earning livelihoods to street vendors, as well as ensure absence of congestion and maintenance of hygiene in public places and streets.

The policy also includes planning norms, stating the regulation of street vendors and the provision to take the natural market concept into account. The policy states:

"Provisions made so far by some cities do not recognize the fact that demand for their (the street vendors') wares/services is highly specific and varies as to location and time, manifesting as a natural propensity of street vendors to locate in various places at particular times. On the contrary, the present urban planning norms completely disregard the formation of such markets. They also do not have implementation systems in place. Planning norms should be supportive of such markets."

- Policy*). The objective is to regularize street vendors into the city management and planning of Nallasopara, so that they get a legal position and legitimate space by proper rehabilitation/relocation
10. Other aims of the integrated development project are to develop and distribute the alternate plan as a model for implementation in other cities and raise awareness of the issues of hawkers in urban planning to planning authorities and the public
 11. The **process adopted** for preparation of the alternative model was **people-centred**, involving: pre-consultation meetings with hawkers and the collector, site surveys and studies, preliminary zoning plan, street vendors survey, draft plan, final consultation process, and final plan
 12. Ms. John mentioned a model prepared by Best Practices Foundation (Ms. Sangeetha Purushothaman) – MOVE (Market Oriented Value Enhancement) for mainstreaming the informal sector



ANNEX C: CASE STUDIES

Prepared by Sharit Bhowmik, Varsha Ayyar, Vaijayanta Anand,
and Indira Gartenberg

On behalf of the **Tata Institute of Social Sciences**

May 2007

WORKFORCE DEVELOPMENT AND MAINSTREAMING THE INFORMAL SECTOR IN THE MUMBAI METROPOLITAN REGION

“Slums are an integral part of urban areas and contribute significantly to their economy both through their labour market contributions and informal production activities. This Policy, therefore, endorses an upgrading and improvement approach in all slums. It does not advocate the concept of slum clearance except under strict guidelines set down for resettlement and rehabilitation in respect of certain slums located on untenable sites.”

“The poor represent an extremely important element of the urban labour force and contribute substantially to total productivity and labour market competitiveness. It is vital that all ULBs recognise the contribution of the urban poor in helping to build urban prosperity and make sufficient provision for them to have access to affordable land, house sites and services. The present planning and development framework is exclusive of slums and informal settlements. It views slums as ‘problem areas’ requiring corrective action. The legal framework with its origin in the pre-independence socio-economic context requires modifications and progressive change. There is a need for a greater commitment to institutional re-orientation by adopting a more ‘enabling’ approach to the delivery of basic services accessible to the poor through the more effective mobilisation of community resources and skills to complement public resource allocations. Major areas of attention include: town planning, land management, poverty alleviation, basic service delivery and capacity building.”

(Extracts from the *Draft National Policy on Slums*, Government of India, Ministry of Urban Development)

I INTRODUCTION

EMPLOYMENT AND HOUSING IN MUMBAI: A BRIEF INTRODUCTION

During the past few decades, especially since the 1970s, the employment situation in Mumbai has undergone drastic changes. This can be seen from the decline in the share of the organised sector in employment and the equally rapid increase in employment in the unorganised sector. In a study based on the 1961 Census data, Heather and Vijay Joshi (1974) found that 65% of the city's workforce was engaged in the organised sector while only 35% were in the unorganised sector. Subsequent figures from the later censuses indicate that the situation changed rapidly after the 1970s. The draft plan of the Mumbai Metropolitan Region Development Authority (1996) indicates that the shares of the two sectors reversed by 1991. The plan, quoting the 1991 Census shows that 65% of the workforce was engaged in activities in the unorganised sector while the organised sector employed only 35% of the work force.



Formal employment in the metropolis has hardly grown during the above-mentioned three decades. In the decade 1971-1981 it grew by only 1.4% and during 1981-1993 it declined by 0.7% (CRD 1995: 36). Thus during the period 1971-1993 formal employment grew by only 0.2% (Ibid). Another important trend during this period is that employment share in the manufacturing sector, which includes the large and small manufacturing units, fell from 47.3% in 1983 to 34.7% in 1993. This fall is computed at 8.9% per annum (Ibid: 37). At the same time growth of unorganised sector employment has been high as seen by the changes in proportion of employment in the two sectors between 1961 and 1991. Another trend observed is that while the share of employment in the manufacturing sector declined, there was increase in the employment share of the services and finance sectors. The services sector share in 1983 was 19.6%, which increased to 25% in 1993, while the finance sector's share was 7.6% in the 1983 and it rose to 11.5% in 1993 (Ibid).

The rapid increase in the growth of the unorganised sector indicates that employment opportunities in the city have increased. At the same time we have to consider the types of employment available. There are mainly two types of employment available in the city's unorganised sector. These are, casual or contract labour and, self-employment. For the overwhelming majority of those engaged in this sector, both types of employment denote low and irregular income, lack of social security, little regulation in work and, absence of legal protection. All casual and contract labour find employment under these circumstances, as do workers in small-scale industries. For the self-employed, the main source of income include hawking and street vending, providing services and, home-based work. Most of the laws relating to regulation of employment and provision of social security do not apply to this sector. These laws are usually enforced in places where the Factories Act or the Shops and Establishments Act are in operation. According to the Factories Act, only those units employing 10 or more workers and using power in manufacture or those units employing 20 or more workers without using power are regarded as factories. Similarly, the Shops and establishments Act can be enforced in units where five or more people are employed. The Minimum Wages Act is applicable to selected industries. The minimum daily wage is notified, usually once in three years, by the state government and the employers are expected to comply by these. Further, the wages stipulated are meant for an eight-hour working day. However it can often be found that workers are engaged for longer periods at wages lower than the stipulated minimum wage. Hence, workers in the unorganised sector usually work for long hours at low wages. They do not have security in employment nor

any guarantee of regular work. Other forms of social security such as health, housing, retirement benefits are also denied to them. This sector is therefore also known as the unprotected sector.

For the vast majority of the population, slums or other forms of cramped spaces provide the only form of housing. A study, sponsored by the Bureau of Economics and Statistics, Government of Maharashtra, notes that, "in almost 73 percent of the metropolis, households live in 1 room tenements another 18 percent in 2 room tenements. In 1981 things were a little better with 69 percent of the households living in 1 room tenements..." (CRD 1997: 7-9). Another survey conducted on behalf of the municipal corporation shows that a majority of the city's population lives in slums that don't have basic sanitation facilities (YUVA 2001). The survey covered 1969 slum settlements whose total population constituted 54% of the city's population. A majority of these slums (60%) had public toilet facilities, but these were over used or unusable as they were in dilapidated condition. Other amenities such as regular water supply, electricity, garbage disposal and drainage facilities were also woefully lacking. If we add another segment of the population, namely, the pavement dwellers, the proportion will increase further.

This report attempts to evaluate the contributions of slums and the informal economy in Mumbai to the development of the city's economy. In doing so we have selected a few slums and examined the activities of the informal economy in them. We have examined the linkages, forward and backward, in the type of work done. Based on our study, we have tried to make suggestions on how to increase the efficiency of the informal economy so that the workers could have better returns for their labour. These include training facilities, changes in existing legal framework and interventions from formal institutions such as banking and credit. We will start with a brief description of the slums that have been covered.

DHARAVI

Routinely known as Asia's largest slum, Dharavi has generated interests for academics, policy makers, urban planners and builders. This melting pot has interested researchers for its vibrant and diverse toilers that converted a swamp to a housing and commercial hub. For urban planners, policy makers and builders interest lies in to make Mumbai a slum free city and acquire this piece of gold mine that has become India's hottest real estate.

Dharavi, a sprawling slum of about 435 acres, sustains a human population of one million, with a density of 18,000 people per acre. This slum settlement boasts of scores of businesses ranging from leather, textiles, plastic recycling, and surgical sutures to gold jewelry, illicit liquor, detergents, and groceries.



The local residents of this area comprise mainly lower caste population. Kumbhars (potters), Chambhars (cobblers), Adi-Dravida, Kunchi Korwe, (Denotified Tribe), Gondhali (Nomadic Tribe), backward class Muslims, Mahars and Valmiki are some of the lower caste and tribal population of Dharavi.

Dharavi alone has an estimate of business turnover of about Rs 50 million daily and up to Rs 20 billion per annum. The small manufacturing units include:

- 500 small scale garments units, and about 100 doing embroidery and zardozi work.
- 25-30 big and 5000 small job work leather goods manufacturing units
- 150 leather shops
- Units making suitcases
- Only 50 Lijjat members are in Dharavi (out of 8000 in Mumbai and 40,000 in India). The rest are involved in papad making for other private labels.
- Printing presses – about 100
- Foundries (brass buckles)
- Gold refinery and retail outlets
- Indian sweets making units (biggest in India)
- 111 restaurants
- 85 Export Oriented Units (including WHO approved surgical sutures)
- 3 to 4 Soap and detergent factories
- 152 Food units – chikki (27), papads, chana dal, khari biscuit, etc.
- Some tanneries
- 25 bakeries
- 250 families of potters in Kumbharwada
- Kite making

BUDDHA COLONY (KURLA)

Buddha colony falls under the jurisdiction Municipal Corporation of Greater Mumbai and is one of the well known slums in the area identified as 'L' ward. According to the L ward office, the land area covers approximately 15.88 sq. kilometres stretching from Tansa pipe in the east up to Mithi river in the west. The north boundary of L ward extends from Powai to the Sion creek marking it as southern border of the ward.

This ward is also known as ward of slums and small and big enterprises. There are about 68 recognized slums that have access to municipal amenities. There are 38 private industrial estates and over seventeen thousand private shops and establishments.

Buddha colony is one of the recognised slums of L ward. The slum is mainly known for its Dalit population. The slum is also known for its close connection to the famous 'Dalit panthers Movement', a social movement of lower caste to fight against caste and oppression. However, Buddha colony is also home to other communities like Kunchi Korwe (denotified tribe), Muslims, Charmakars (lower caste), Marathas and Wadar (a community identified as Other Backward Class). Thus, though Buddha colony might appear a Dalit slum, it has pockets that belong to non-Dalit population mainly Muslim, and other backward classes.

MILIND NAGAR (VAKOLA)

Milind Nagar is located in H ward of Santa Cruz (East) in the western suburbs of Mumbai. Its boundary extends up to Mithi River CST Road, Western Railway line, Mahim Causeway, Dharavi Link Road and Vile Parle Subway. The Ward covers an area of 13.53 square kilometers. The ward is predominantly residential-cum-commercial nature with industrial estates at Vakola and Kalina.. The approximate population of the ward is 475,994 with an additional day-time floating population of 150,000

Milind Nagar is situated in Vakola and spreads from Datta Mandir to the Airport building, comprising of several chawls and shanties. This slum has a mixed neighbourhood of Mahars, Marathas, Thakurs, Leva Patil, Agri, Matang and Adi Dravida. Most of these castes are Dalits and other backward classes. We have focused on two informal enterprises in this slum; both are related to waste picking. The two communities that are involved in waste picking from this slum are Anjani, a lower caste from Salem district of Tamil Nadu and the other community is Matang from Osmanabad, Maharashtra.

Besides covering slums, we also covered the activities of those who reside in slums but their place of work is outside. These include street vendors and waste recyclers/ rag pickers.

METHODOLOGY

This study deals with the issue of employment generation in slums of Mumbai. It has been executed and completed within a short time frame of three months, namely, from February to April 2007. SPARC, a well known NGO involved in development of slum dwellers had conducted a survey of industries



in Dharavi in 1998. The present study was to use the findings of that study as baseline data and follow up on these industries. Unfortunately we were unable to get that report so we had to start afresh with our data. Hence though this study began with the idea of a diachronic approach it has become a synchronic study.

The other problem with this study was that given the time frame and limited resources it was not possible to conduct large surveys in the slums. Instead we concentrated on qualitative methods of research using anthropological methods such as observation, unstructured interviews with key informants and focus group discussions. Questionnaires were used for collecting quantitative data relating to members of the household, economically active people, individual and household income, type of dwelling. These were administered to limited number of people in the slums that were covered. Since the entire team comprises sociologists who have experience in social anthropological methods of data collection we felt that the data collected would provide an in-depth knowledge of the living and working conditions of slum dwellers.

The team also conducted Focus Group Discussions (FGD). Four such discussions were conducted in three slums, two Buddha Colony one each in Milind Nagar and Sathe Nagar. Of the two FGD in Buddha Colony, one was of Dalits, mainly Mahars, and the other of non-Dalits. The latter included Muslims (3), OBCs such as Vadar (3) and Kunbi (2). There were eight respondents in each group.

The focused group discussion at Milind Nagar had twelve women who were from Dalit communities such as Matang, Mahar and Tamil Dalits (each having equal representation in this group). The fourth focused group discussion at Sathe Nagar had 10 respondents that comprised Matangs.

Data for food, leather and garment industries were drawn from a questionnaire that was administered to the owners of the factories. Besides this, FGD were held among the workers of each industry. Each group comprised 8-10 workers. Discussions covered their work, wages and living conditions.

Data for the embroidery unit was collected through unstructured interviews with the key informants. These included the manager of the unit, the middle person who was the link between the work place and the export house and finally the manager of the export house. In addition, an FGD was held among the workers on their living and working conditions, wages, migration, etc. Ten workers participated.

Data on street vendors is a part of a research project on this issue. It also includes the findings of Jon Shapiro, a Ph.D. scholar from the University of California, Santa Cruz. He used anthropological methods to collect his data.

II: DHARAVI: FOOD PROCESSING, GARMENTS and EMBROIDERY

We have earlier stated that as a slum, Dharavi has some unique features. The complexity of the myriad economic activities existing in the slum settlement need to be understood in their entirety. The residential life and the economic hub are entwined and share a symbiotic relationship with each other. Characterizing Dharavi only as a economic hub or only as residential slum is a futile exercise. Instead Dharavi needs to be studied as a unique case where the economic activities have evolved and have absorbed several migrant communities providing them livelihood sources as well as benefiting from their services. The economic enterprises existing in Dharavi are numerous and also the feed in to each other in such a way that removal of any one component can disturb the whole setup. It is also true that the present economic hub has roots in the whole evolution process of Mumbai as a commercial city. We need to examine the forward and backward linkages along with the labour force involved in the process. In the following sections we will examine four such industries located in Dharavi. The advantage that we have in Dharavi is that most of the manufacturing units are located in specific areas of the slum and most of them have their own formal or informal associations. These associations helped us in understanding the type of work done, number of people employed and the total number of units. Factories in Mumbai are commonly known as 'galas' and this report too refers to them as such.

GARMENTS

According to the informal garment units' association there are around 500 big galas with fifty sewing machines each. There are around 3000 small galas also with fewer machines. The garment industry survives here mainly on the job work. All kinds of readymade clothes are made here. They get raw materials and, to use their terminology, the work is done as 'cut to pack'. It means the cloth is cut and stitched as per specifications and packed with the labels attached as per the instructions. The work is given in bulk by a middleman or an agent representing the buyer. The labels for which the job work is done are both for Indian market as well as for export market. The agent gives the materials, namely, fabrics, tags and labels along with design specifications. The garment unit invests on the machinery, the other material like thread, buttons and other required accessories.

The machineries used by the unit owners are fairly modern in the sense that the technology used is not totally labour intensive. It is not the latest 'state of the art' variety. These machines are bought through agents who liaise with other countries such as Germany and Japan or with larger industries in Delhi and Madras. The machines are purchased as scrap or second hand. One of the agents who procure such



machinery said that they get them from the large scale garment factories that sell their old machines or sometimes when these factories close. These agents purchase the machines at low, throw away prices. The machines are both hand operated and electrically operated. They include cutting machines capable of cutting 50 cloth pieces at a time or have 50 needles thus stitching at multiple levels.

The labour force comprises skilled and semiskilled workers. Around 50 -70 persons are employed in the larger galas and around 20 to 30 workers are employed in the smaller ones. The cutting master is the key person as he cuts the cloth according to the designs given by the suppliers. He is paid a monthly wage. The other tailors get paid on piece rates. Their job is to stitch the material according to the directions of the cutter. The labour force many times stay at the gala itself and are provided with meals and boarding facility or they may stay in the vicinity in Pongal houses (dormitories catering to mainly Tamil workers) or rental places. Male migrants from Tamil Nadu, Bihar and UP are basically involved in this work. The industry has existed here since 1960's. The major labels are Cambridge, Zero, Apollo, Apple Plus, etc. The galas are rented and they make optimum use of space. A tiny area of 400 to 500 sq. feet is split in two levels—ground floor and loft—thus maximizing the use of space.

LEATHER AND LEATHER GOODS

Dharavi has a flourishing trade in leather which was the earliest trade in this settlement. The first leather based industry here was started in 1925 by East India Tanning. The limits of Bombay at that time ended in Mahim in the west and Sion in the east. Dharavi, which lay just outside the city limits (between Mahim and Sion) was regarded as the backwaters. It was situated near the Mahim creek and was the place where the refuse of the city was pumped to the sea. This place was ideal for the leather industry, especially for tanning.

The labour was from particular caste groups in Tamil Nadu. They were low-caste people who were traditionally engaged in leather work. The company used indigenous tanning methods where vegetable dyes were used. The settlements of the labour force grew as many were absorbed in the industry. As the settlement grew there were protests against tanning process as it emitted lot of pollutants. In 1977 the tanning licenses were stopped and tanning units were closed down. However the smaller households that were earlier working in tanneries converted their households into leather goods units. There are around 5000 such small units of which around 300 are members of the registered body called Leather Goods Manufacturers Association.

The hides or the raw, semi finished leather are bought from places like Chennai, Kolkata and Kanpur. The leather work done here is of two types. The major one is job work taken up for the middlemen or exporters of leather goods supplying the goods to buyers in U.K., USA, Germany, etc. Some of them have licenses and sell their goods directly to retail shops. The leather is also supplied to the railways and various buyers in the country itself. The leather units use lot of traditional skills which are region, caste or family based. There is a mix of Muslims (Shia/Ismaillis) who are owners of the units and Tamil Adi Dravida/Dalits as workers. The units though connected to each other do have their own exclusive clientele and are secretive about the market linkages as well as the skills used. The labour force is employed either from the same villages belonging to castes that are traditionally engaged in leather work, or they have kinship relations with those from neighbouring villages. The workers are paid either on monthly or piece rates.

FOOD PROCESSING INDUSTRY

There are around 80 farsan galas in Dharavi. These units produce South Indian snacks that are known as farsan, chivda, chakli, chikki, chips that are deep fried and other snack items like roasted gram, roasted groundnuts, potato crisps, banana fritters among others. The production is done in large galas where the mixing of raw ingredient like flour is done by machines under the supervision of a kneader. The kneader is a skilled person who was trained by a master for several years. Kneaders start as assistants to mixers and after gaining enough knowledge and expertise they can branch out as independent kneaders.

The person who fries the food items is called the master and is revered for his skills. Every unit has huge ovens or fireplaces with huge cauldrons. The galas try to maintain a clean environment. In most cases one cannot enter the workplace with footwear.

There are machines like potato slicers, farsan mixers so that human touch is minimized. The process includes production and packing and delivering. The food is prepared as part of the job work or as per the order and is even sold through retail outlets all over the city and even in the local market itself. The raw material like oil, flour, other ingredients are purchased as required for the job work. Care is taken that excess material is not purchased as storage is a problem. The units are part of an organized association and employ fairly stringent sanctions to maintain proper pricing as well as quality of materials used. There is uniformity in the oil brands and all the materials used in their quality. The labour force by and large stay in the unit itself. Some senior workers stay in pongal houses or other places. Each unit has around 10-15 labourers. The employers pay them monthly wages. They are provided with food. Most of the labour force



is from Tamil Nadu and some are from UP and Bihar. We found that the average earning is Rs. 3,000 per month.

Forward and Backward Linkages

There are several players in the three industries discussed above. These are:

1. In the case of garment industry there are the buyers or agents, representing the brand or the retail chain. Besides placing orders they also provide the fabrics with specific instructions on the cut and design of the garments to be made. The buyers are both local and at national level. The garment factories get buyers from local markets and from export houses dealing with international brands.
2. The gala or the factory owner who takes up the job and employs a set of work force to complete the job work. He also gets the required raw material like threads, needles, etc. If need arises he may further subcontract or give work of finishing or cutting of threads or embroidery to the women working from home.
3. The labour force is traditionally trained. The workers learnt their skills on the job. The worker either is a new migrant staying in the factory itself or he stays at a nearby Pongal house. They are paid on either monthly basis or piece rate basis. This is decided on their work or their skill. The wages on an average range from Rs 70 -100 per day but the working hours are linked to the orders received. Usually their working day is between 10-12 hours. Payment is made every month in most of the industries. Workers in farsan factories and in some of garment factories stay in the factory itself. They are given free food and lodging. In some places they are given some allowance like Rs 20 per day or some amount per week to buy essentials. If the gala does not have space the other workers stay in the vicinity in the Pongal houses or sheds where men stay. There are around 150 such Pongal houses with 5 to 15 persons staying in each. The workers staying here also work outside Dharavi. They pay Rs 350 per head for staying. They eat food in the common mess by paying Rs 1000 per month for breakfast, lunch and dinner. There are around 200 such eating places catering to these workers. They also supply lunch packs for workers working outside Dharavi.
4. The agents who supply the machines and raw material as per the requirements. These agents are able to acquire machines both from within the country and from other countries machines which are downloaded as scrap from the industry closed down due to several reason.

5. The transport system which includes tempo and trucks. These are very well linked to each factory. Some transporters are contracted on regular basis. Whereas some make vehicle available by parking themselves in the vicinity. There are around 200-250 mini tempos and around 250 trucks meeting the needs of all the industries in Dharavi. Besides these transport system taking care of local transport need in and around Mumbai. Dharavi also has linkages through trucks all over India. The trucks regularly ply to other states either bringing the raw material or transporting the finished product.
6. The money lender who supplies cash at high rates of interest. The money lender is from the same community or a known community and is very much part of the informal network essential for such economic activity. The money is made available any time and without much collateral. Recommendations by known people are enough to get credit. The interest rate is as high as 10 per cent per month. In most of the industries it was said that the raw material is given on credit for 7 days so within those days they fulfil the order and get paid by buyers and then pay back the supplier of raw material.

EMBROIDERY WORK

Dharavi has a thriving industry of workers engaged in embroidery work. Almost all these women are poor Muslims who have some skills in this type of activity. Their skills are learnt at home, from the older generations. The master cutters are all men.

Khan embroidery is one of the many enterprises in Dharavi, buzzing with activity. Rajabhai, 35, the embroidery factory manager, is busy attending to his workers' queries and many phone calls. For a preliminary understanding of the operations, he takes us around the small factory.

Right there in Rajabhai's small office, sits Bunty²⁸ in a corner. He is barely 15 years old. He is engrossed in his work— giving finishing touches to a complicated and detailed embroidery pattern on a computer. Bunty is a primary school drop out, who ran away from his village at a young age and came to Bombay in search of employment. He acquired his computer skills while at work.

Materials for men's, women's and children's tops/ shirts, pairs of jeans, salwar kameez and men's trousers are all embroidered here. The cloth and the designs are generally sent by the ordering party. Two 'masters' as they are called, do the cutting work of this cloth with the help of a cutting machine. Bunty improvises on some of the designs-- if needed-- and gives them the right proportion to be cast on cloth.

²⁸ Boy's name changed.



They are then printed on sheets of thin butter/ trace papers. A machine is used to make equidistant holes on the design in the printouts.

In the adjacent room, are the women workers of the company, all sitting on the floor and performing different tasks. One of them sits in one corner of the room with these printouts. She mixes water with some Colgate toothpaste or kerosene-mixed-jean²⁹ powder to make a solution. She then wipes down the solution evenly with a kerchief on the holed trace paper, which creates a pattern on the cloth sheets under it.

Once the print on the cloth pieces is dry and ready, it goes to the ground floor for its main work—embroidery. Alternatively, some software based patterns provided by the contracting company are loaded into the embroidery machines directly, for automated embroidery work.

The ground floor of the factory, which is more like a basement, is a noisy place. Twelve highly sophisticated embroidery machines imported from China engrave complicated patterns on thousands of meters of cloth; at more than twice the speed of the earlier hand embroiders. These machines do any kind of design, lettering and patterns of embroidery on almost any type of cloth material. Some of the machines are set to embroidering labels and designs on pairs of jeans, while others repeat floral and decorative patterns on long stretches of plain cloth and so on.

The cloth that uses the manually applied pattern is washed after the embroidery, and the white marks of the solution, used as reference, go off easily.

Once ready, the embroidered cloth from the ground floor goes back to the women's room above. A group of women sitting on the floor in the same room, do sequin work on the embroidered cloth. This work includes the use of colourful beads, sequins, and sometimes shells. One of them is Dilshaad, 26, who plays a crucial role as a middle-person between the factory and outsourced women workers of the Dharavi slums.

Forward and Backward linkages

1. Forward Linkages

Hindustan Apparel, an export company in Mumbai, has been exporting garments to the U.K., U.S.A. and Canada since 1962. The export rate ranges from USD 3.75 to 6.75 per piece. When the orders

²⁹ A slightly better quality of powder than the one used on carrom boards.

are large (for example, the last order was one lakh pieces of children's clothes), the company contracts its embroidery-cum-sequins work to Khan Embroidery.³⁰

The embroidery factory under consideration, purely does job/ piece work. As and when there is an order from Hindustan Apparel and other garment export companies (for example, Texpo Syndicate), the factory workers send all finished products back to the contracting export company.

2. Backward Linkages

For the purpose of our study, backward linkages could be divided into 2 sub-categories:

- a. Labour— Factory full time and outsourced labour
- b. Materials— Raw Materials and Production Machinery.

a. Labour

There are around 50 workers in Khan Embroidery factory. Most of them are men, while 15 are women. There are 2 people especially employed to cut the long stretches of cloth, who are called 'masters'. There are around 10-15 men dealing with the machine embroidery. There is administrative and accounting staff, whereas all women take care of the hand-work in the factory. Only Naazma baji, the owner's sister does supervision work in the women's room.

During festivals and other occasions of celebration, the orders are bigger than usual. At such times, the factory outsources part of its sequins work. Dilshaad, who is a factory employee brings home the surplus sequins work and distributes the embroidered cloth pieces among the Dharavi slum women. The payment for this work varies, depending on the size of the cloth and the work. For example, for a kaftan/nightgown (also referred to as a ladies' maxi), the company gives Rs. 50.00 per piece, of which Rs. 40.00 reaches the slum woman doing the work. Being a middle-woman, Dilshaad keeps Rs. 10 as her commission. Similarly, kerchief size cloth for sequins work costs the factory Rs. 2.00, of which Dilshaad keeps Re. 1.00. For sequins on a jacket or *dupatta* (veil), the factory gives Rs. 10.00, of which she gets Rs.6 per piece.

b. Materials

The export company sends the cloth to the embroidery factory in advance, along with the patterns and designs to be embroidered on it. The export company which is actually a forward linkage for the embroidery factory (the final ready product goes to the company), for this particular reason also acts as part of the backward linkage (since it provides the cloth).³¹

³⁰ When the orders are smaller, the export company contracts with a women's Ashram in Vashi (New Bombay).

³¹ The export company gets this cloth from Indore mills or South India or it is imported from China.



The threads, sequins, beads and needles are all bought by the embroidery factory from another informal enterprise in Lower Parel area of Mumbai called *Dhagaghar* (literally, Thread house). Some of it is also bought from within the Dharavi slum itself.

Production tools and machinery include scissors, the computer and the embroidery machines. Scissors are also bought from Dhagaghar and the embroidery machines, as mentioned above, have been imported from China.

III: BANKING FOR THE POOR: A CASE-STUDY IN DHARAVI

Though Dharavi is the largest slum in Asia having a population of 12 million, it has a network of industries that sustain a large section of the working population. It is estimated that the turnover of the industries located in Dharavi have an annual turnover of Rs 2000 crores. There are certain economic activities falling under legal categories and others are unregistered without any formal documentation. The nature of economic activities are so dynamic, it will be very difficult to provide latest update on the economic front. Around 40% of the residents have regular salaried jobs, 35% are self-employed and 15% are employed on temporary basis. The remaining 10% are unemployed. Regular cash flow is the backbone for sustenance of these economic activities. It would be essential to look at the role of the financial institutions both formal and informal. It has been observed in the inner part of Dharavi there are only two scheduled banks operating namely Abhyuday Cooperative Bank and Hindustan Commercial Bank and only one nationalized bank operates from a nearby centre.

The large section of the population are slum dwellers, majority of them are second generation migrants. These people have their day to day credit requirements and they meet their credit requirements from informal channels such as chit funds, credit cooperatives and private money lenders. The need of micro-finance has been felt by the local slum dwellers, CBOs and NGOs while working on various issues. Due to international recognition as the largest slum of Asia, the focus of international donor agencies has always given on improving the physical infrastructure (Housing). However the livelihood issues has not been seen in integrated manner. The role of financial institutes has tremendous importance in shaping up present mechanism of entrepreneur activities and sustaining them as a strategy to improve their livelihood. While doing this it is also essential that they remain part and parcel of economy of the city and backward and forward linkages in the areas of demand and supply are considered appropriately.

The plight of the migrant workers and self employed people in Dharavi

Due to availability of cheap labour and subsidized services such as water, electricity and land the economic activities are flourishing. The Dharavi slum is a residential and commercial habitat. The large number of migrants reside in their factories, workshops and common places such as Pongal houses. These places are congested without basic amenities. Often these migrants do not have proper lockers or any secure place to keep their valuables and the money saved by them. Majority of them keep their money with their employers or in chit funds or they send it to their homes through informal means. These methods often lead to exploitation and the saved money is not available during their crises, such as health emergencies, and family needs. While working with this population the need of formal financial was felt very strongly. Lack of any financial safety net forced these migrants to take up low paid jobs and also work on day to day basis with no job security. Surprisingly the factory owners and the self employed also depended totally on the informal financial bodies and took credit with exorbitant interest rates for their economic activities. Many small manufacturers were all the time caught up in the web of money lenders.

OPENING OF INDIAN BANK BRANCH IN DHARAVI

These observation made by the NGO Nirman working with Tamil migrants for five years lead to some interesting turn of events. The NGO through their network were able to bring two of the reserve bank officials for a visit to Dharavi. The appalling conditions of the people and also the day to day problems expressed by the factory owners made an impact. The officials wrote to the governor of Reserve bank requesting intervention so that inclusive banking as a concept can be applied here. This initiative led to immediate action from Indian bank. They took up to the challenge along with Nirman .This led to a process where by the bank officials and the Nirman staff went from door to door and also met several factory owners exploring the possibilities of inclusive banking. It was amazing that within 4 months around 8000 accounts were opened with deposits as small as Rs 50 and very little documentary requirements. Within few months the bank took the decision to start a branch in the centre of the slum. The bank has been existing here since 14th December 2006 and has every kind of facilities like ATM, smart card and credit facilities with reasonable collateral. The bank also facilitates the remittance of money to the families of the migrants in their native place. The bank also offers the concept of mobile banking whereby the bank personnel carries a laptop and other accessories and provides the facilities of both saving and withdrawing of money at the door step. The bank now is interested in introducing credit facilities to the people of Dharavi. The major response to the bank has come from the factory owners and small entrepreneurs besides the migrants.



This is an excellent example of micro finance referring to small scale financial services provided to the poor people or people with moderate financial means without access to the formal banking sector. The needs in such informal economy and the poor people are for credit, provision for small loans, advice and training in basic business and financial skills, savings and insurance services, safely store excess liquidity and provide liquid forms of interest yielding savings.

The response to this venture has been overwhelming. The exorbitant interest rates and exploitative methods of the private money lenders provided very little space for stability in the economic activity, expansion in the activity or diversification of the economic activity. The accessibility to banking also has given an identity to the population here which is so essential for stabilizing livelihood options in a city like Mumbai.

The other major banks like ICICI, State Bank are now exploring the possibilities of entering Dharavi. The entrance of a bank has been mutually profitable and also it has helped in acknowledging the bankable abilities of slum having a commercial hub within.

The day to day earnings, liquid cash earned through retail business and also all the financial transaction now gets a veneer of transparency. The money so far being circulated within the slum in the informal economy now is fed into formal system through banking helping in mainstreaming of the informal economic system.

IV ECONOMIC ACTIVITIES IN KURLA AND VAKOLA

BUDDHA COLONY (KURLA)

Buddha colony is a large slum situated in Kurla. Its origins could be traced till the 1930's. The current population belongs to the third generation living in Mumbai since their migration. The slum has developed out of small huts and shacks to chawls (buildings comprising one-room tenements) and again degenerating into a slum that comprises irregular tin roof houses and one-storied houses. Today, most of the part of the slum is undergoing slum redevelopment project and is affected by the controversial World Bank funded link road (Santa Cruz-Kurla-Chembur Link Road).

Migration

The caste factor was one of the most important reasons for the migration towards the island city for Dalits. Muslims, Charmakars, Vadar and Kunchi Korwe moved towards Mumbai after the independence in

search of better employment. The settlement pattern of the slum has clear segregation. Dalit population being the first to migrate is located at the centre and towards the northern part of the slum leading towards the nearby suburban station of Kurla. The new migrants reside along the periphery that also forms the outer part of the slum along the famous Halav pool. This part has been heavily affected by the link road project displacing the Wadar and Dalit population.

Caste and Regional Zones

Buddha colony is divided and segregated on the basis of caste and region. The settlement pattern of Buddha colony signifies the neighbourhood are ghettoized and dominated by the kith and kinship. Caste, region are significant to the slum dwellers as they believe in the settlement process caste protects the new migrant in the city and gives much needed sense of belongingness and identity. But, this factor of preferential has formed segregated neighborhoods creating strong caste and communal feeling. Though, there are few pockets of slums that has small entrepreneurial activities that brings communities across the caste and community lines. Most of these entrepreneurial activities that are a part of informal sector are owned by Muslim community. Muslim community that has a history of self employment and small and large entrepreneurial activities were the saviours as they were the employers for households that lost their jobs during the 1991 liberalization phase.

Livelihood

Most of the people in Buddha colony are working. The women are working along with managing their household responsibilities. The need of surplus income is high hence most of the families have at least two or more earning members. Buddha colony has high number of people working in informal sector. Economic activities of men and women can be segregated on the basis of their work place that is:

- i) Inside the slums (where their homes become production houses) and
- ii) Outside the slum to work (government, private, daily wage earners, etc.).

Dalit (Mahar) men living here mainly work as contract workers for Airport Authorities, railways or as security guards. The Kunchi Korwes are largely working as sewer workers. They largely work on daily wages or on six month contracts. The Vadar community is working as security men and auto- drivers. Most of the Vadar community members have bought their own auto. The Muslim men trade in plastic, perfume and toiletries and garment. Muslims here are also small merchants dealing in scrap of metals and iron ores.

Dalit women in Buddha colony are mainly engaged as Domestic workers in the nearby areas of Kurla and Santa Cruz. Women that are not working as domestic servants do piece works of leather and



garment export houses and this is one of the largest source of income in this slum. There are other women vendors selling vegetables and food on the streets. The Vadar women sell kerosene and this comprises as their livelihood. Due to restrictions imposed by Vadar men, women are not allowed to go outside the slum hence these Vadar women sell kerosene inside the slum.

Kunchi Korwe women make brooms and weave baskets. The Muslim women do fine embroidery work i.e. largely garment related work. Some of the Muslim women get piece work and job work for the nearby small garment factory to the slum. These women then hire girls and women from the neighbourhood to assist their work by paying them.

Leather Work

Leather work or piece work as it is called by women from the slum is one of major labour activity in this slum. Women work in small groups comprising of seven to eight women that reside in the same neighbourhood. Interviews with these women traced their entry into the work, their wages or mode of payments, amount of work and the linkages to the export house.

Women that are engaged in piece work informed that their entry into leather work was accidental. They had been working for garment factories that were located in the L ward. L ward is also known for its garment and industrial hub along with its entrepreneurial and labour activity hence there have been ample opportunities available for them in these sectors.

Women of this slum and nearby areas were involved in doing the finishing work for a garment house. For every shirt, they would get piece rate of Rs. 5. The work involved cutting the extra threads, stitching buttons, stitching the collar, ironing and then finally packing the shirts into the boxes. Each piece took about one hour. This work was painstaking and low paid. These women could earn about twenty to thirty rupees per day. This work was widely done as it was easily available and near to their slum.

This garment house sold their finished goods in India and abroad. Their base in abroad was mainly the United States. But, this garment work could not go for long as the garment house shifted its base from Bombay to Gujarat around 1995. This loss of livelihood made them search for new kind of work.

A Muslim woman who resided in a neighbouring slum was aware of Buddha colony's workforce and through her contact at the 'Shaz Export House' a Kanpur based footwear company she outsourced work to women from slums. She got the stripped leather pieces and raw material from the Mumbai office of Shaz Export house for these women. Women knit, cut and paste the leather into the shape of the *mojri*, an

ethnic Indian footwear. The piece is given at the export house for further processing. This was the initial phase of women doing the piece work.

Today, there are hundreds of women doing this work. They are mainly Mahars and Muslims. The leather work mainly deals with casual footwear and leather accessories like belts, hats, etc. Sandals and *mojris* are mainly outsourced by the export house. This part of work involves manual labour and cannot be done by machines. Hence, the export house is always on a look out for semi-skilled workers. This work is known as piece work or *mojdi* work. It is a seasonal work. It mainly is carried out from October to January and from mid May to mid August.

Women from Buddha colony were introduced to the Export house roughly in the year 2000, through a Muslim woman that resided near Buddha colony. In the initial phases there were about fifteen women that were interested in this work. These women underwent a short training of eight days where they were taught on cutting and knitting the leather to make sandals. They were also imparted training for making knitted leather belts that are always in demand for leather market. These women completed their training and were given work by the Export house. For one pair of sandal two rupees was paid and for a complicated design five rupees are paid for a single pair. These women were also given additional work like that of belt making. Five rupees is paid one leather belt. The prices for their work have almost remained the same since their days of joining except for *mojris*, which is increased by two rupees. Hence, now these women get seven rupees for a *mojri*. Today, there are more than hundred women from Buddha colony that are involved in this work.

Nature of work

Women that are involved in this work have to get the raw material from the export house. The house has its store and office in Dadar. One of the women from the group travels to Dadar and gets work for everyone. The export house gives her the raw material and also a time of two days to return the finished work. They usually get two days to finish work. This work is then distributed in their group. Depending on their capacities to finish the work within two days the work is distributed or taken up by women.

Usually they can do about four to five pairs of work, that is mostly thirty to forty rupees worth of work is done by a single women. There are some families where mothers, daughters work and they try to earn more in order to increase their production. These groups have great understanding and coordinating skills. One of the women goes and gets the work. They collectively pay the travel charges. Then, work is distributed according to their capacity to finish the work. The export house is very strict about their deadlines hence they have to maintain their deadlines. Women sit together on streets or outside their



houses and work in groups. The work being monotonous is generally carried out in groups. It has been observed when they work in group it not only kills monotony but also increases the production abilities as they help each other and a general mood of working is created through interactions. The afternoon time is generally their working time. Even in the evenings, women sit by the roadside, chatting and try to complete their work. These interactions through work, caste and neighborhood relations also bonds women into social relationships to have social networks that acts as their safety nets. These groups also become a part of their monthly saving groups that are called as 'Bhishi'. These groups often become great stress busters for working women that are living distressed lives in urban slums.

Number of women in this sector

This work is a typical informal job work. In Buddha colony that has about 5000 household estimated by a ward officer has at least 100 household women that are doing leather piece work. This number might appear infinite considering the slum population but there are several women estimated about thousands that are doing the same work under several export houses. The interview with one of the dealers mentioned he alone with a small turnover of Rupees fifty lakh per annum has about 1000 women across central Mumbai that are doing this work.

The nature of the work appears simple and without any investment. However, a closer look at the work explains it's a complicated and a painstaking work. The wage is too low for the skills that are required for the work. Most of the young women picked up the trade without any training. Through observation and practice some of these young girls and women have become a skilled workers. The inputs required by these women are for travel to the export house to get the work and good reputation of delivering the work within the due dates. Women have been very committed to follow the deadlines set by the dealer. This has helped them to continue with this work that is now widely carried out as a major economic activity.

It would be difficult to give the accurate figures of working hands employed in this sector. One unit that we have examined is the export house which has more than 500 people looking into the office work mainly handling the imports and exports. This export house has divided itself into two branches, out of which one is based in Mumbai and the other one in Kanpur. In the Kanpur house, there are more than 5000 workers as estimated by the main dealer. However, these figures cannot be taken as final. Apart from their regular and salaried employees working in the house, they outsource their job-work to the women from slums. There is a large presence of women working this work, as this work is similar to that of knitting sweaters, which is considered to be as women's work in India. There are about 500 women that take away

this piece work of leather for belts and sandals from the house across Mumbai. Most of the women are slum dwellers and travel from Kurla, Thane, Mira Road and Bhayender to get this work. Hence, it can be estimated as 1000 to 1500 people are directly and indirectly involved in this work on a daily basis under a single unit. There are more than 25-30 big and 5000 small job work leather goods manufacturing units in Dharavi alone. Hence, hundreds and thousands of women that are slum dwellers are working daily as invisible hands that are shaping India's global economy.

The work described above is mainly carried out by women inside their homes, that is basically from their slums. However, there are large number of households that have member that are working outside the slums. We will mainly look at the Dalit population residing in Buddha colony and their livelihood that is mainly outside the slum.

Contractual Labour

There are about three thousand people belonging to Dalit families that are working for Airport Authorities. They are mainly sweepers, loaders and security assistants. Women have generally got this job as compensatory offer (due to death of their husbands/sons) and they are working largely as sweepers. The domestic airport and the international airport are close to Kurla and Buddha colony is well connected to the airport through buses. The frequency is good and the fare is affordable. Thus, living in Buddha colony that is so well connected to the places of their livelihood is the most vital factor of living here. Some of the pockets of Buddha colony have been demolished, making way for the Santa Cruz –Chembur link road. These project affected families have been moved to Mankhurd. This relocation has cost great difficulties for the families largely due to great inconvenience of reaching their workplaces. One of the main reasons of people abandoning their rehabilitated sites is due to increased difficulties in travelling to workplaces, loss of livelihood and additional expenditure on travel and maintenance. One of the respondents described their plight thus:

'Slums are feasible housing option of poor. We have been living like this for more than forty years. Of course we too are human beings and ashamed of telling people that we live in *jhoparpattis* (slums). But, you know why are we living here? We are Dalits, because of our low caste we never got education, family property and good employment. My father was a mill worker, a great union leader, he died out of depression after being kicked out for his union activities. I am a sweeper at Airport. So, you see we have given so much of our sweat and blood to get dignity for our work but all in vain. Coming back to why we live in slums, you see the prices in Mumbai, are these prices affordable for poor people? They are high for even



middle class families, forget people like us. We created homes for ourselves that people call slums. From swamp we made this place habitable. Gradually, our homes were cemented and paved with good tiles. Now, we have bought second-hand fridge and television set through our hard work. We pay electricity and water charges. We even pay for sanitation like every other citizen, so why do they call us squatters? We live in slums out of compulsion. And slums are more sustainable and affordable housing of the urban poor. You see these building that have been made to rehabilitate the slum dwellers are lying vacant because you can't afford to live like a middle class when you are poor"

The importance of low cost housing and its benefits are well articulated by the slum dwellers themselves. Location of the slum, utility of their spaces, distance from the workplaces, caste and social networks, cost of living are the most important aspects of slums becoming ideal for poor and working class population of Mumbai. Therefore, redevelopment if necessary should be done in situ to avoid displacement and loss of livelihood.

VAKOLA, MILINDNAGAR

Milindnagar is a large slum situated Santa Cruz (East). There are some smaller settlements situated in this slum. These are caste-based and the residents are engaged in specific types of activities. We have taken two such settlements in this slum, namely, Madraswadi and Lasanwadi.

Madraswadi

Madraswadi as its name suggests comprises exclusively Tamils. The residents are from Salem district of Tamil Nadu. Madraswadi has a population of more than five thousand. This Tamil speaking population migrated to Mumbai to try their fortune in the island city. There have been some success stories but most of them are doing the low end jobs and working hard to bring change in their life. This community largely belongs to the low caste known as Arjani.

Men of this community are largely working as construction labourers. They often refer to this kind of job as 'mitti ka kaam' which means soil related work. This work is not as simple as it sounds, the work composes of getting to a naka (corner) and then picked up by the middle man to get his day's work. They

do not get regular work and when they do, the wages are low. They are not paid minimum wages; even the agreed wages are not paid on time. Even after the construction work is over, substantial dues remain with the builders or the contractors. Moreover, their working time and hours are not regulated. They do not get overtime rates for excess work. The work too is hazardous and there is no medical or accidental insurance covering them.

Women of this community are engaged in two kinds of work and both of these are outside slums. They are mostly engaged as domestic workers and as rag pickers. Rag picking or waste pickers of this community has been doing this work for more than fifty years. Kainakam, a waste picker from Madras wadi says this is the second generation in this business. She informed that most of the community women are illiterate and do not know the other jobs that they can do hence what their parents did was taken up as their livelihood. These waste pickers have their spots usually in slums. They travel up to distant suburbs such as Virar and Bhayender in search of waste. First they collect all the refuse. Later, they segregate plastics, wood, paper, vegetables and clothes and sell it to the middle man who buys the segregated waste from them. There are about six to seven *kabbadiwala*, the one who buys their waste. Depending on the waste, he pays these women. These women make about 60 to 70 rupees per day.

These women work at the lowest level. The work involves them to go to the dumping pit or the '*kachra kundi*', where the waste is thrown as early as possible. This is so because Municipal clears the waste in the morning round bringing losses to the waste pickers. Therefore, these women get to their dumps as soon as possible. They have been collecting waste from these points for more than twenty years. Women like Kainkam inform that as a child she collected waste from the same dump and even today at the age of 35 with three children she is collecting waste from the same pit. For most of the community the present generation is the second generation that is engaged in this work.

Women collect the waste and pack them up in sacks. They often leave their sacks at the pit for the entire day before selling it to the *kabbadiwala*. Sometimes they even collect the waste of two days. Some women who travel to outskirts and collect more garbage sell on the same day, where as women who do not travel much collect waste of two days and sell them.

These women informed that the local waste dealers are mainly Muslims and Hindu North Indians. Kainkam pointed out that they are illiterate and do not have any organization that is why the dealers exploit them. Sometimes they pay less and at other times they delay payments. These women have less bargaining power, she informed. "Men can at least fight," she said, "we being women don't say anything".



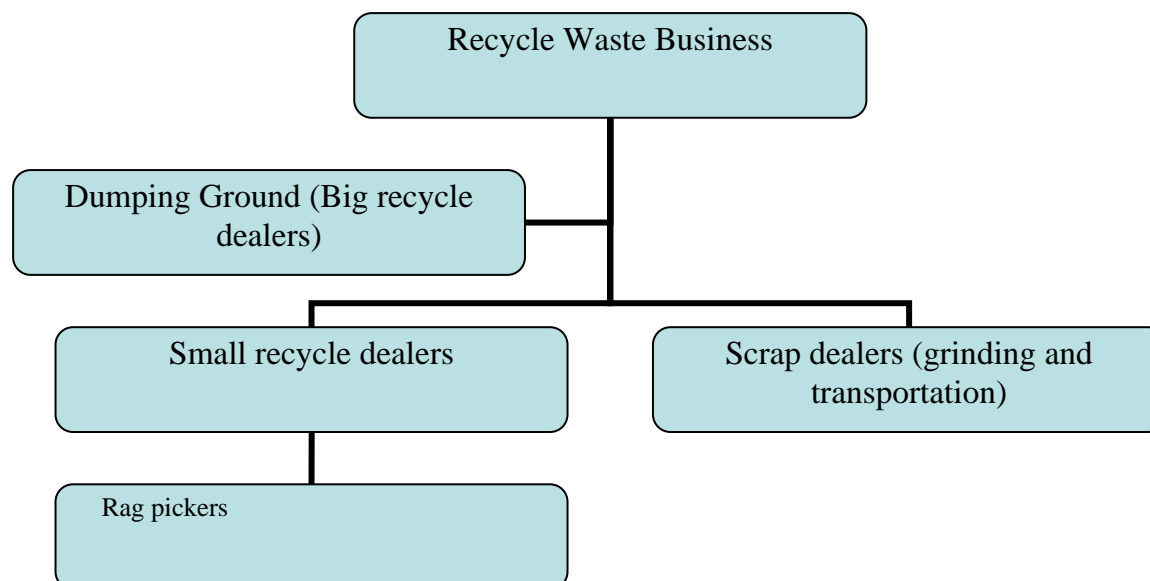
These women waste pickers do not know what is done with the waste except for the fact that they just know it is a big business and big shop owners buy their waste. Most of these women informed they have been infected by several diseases and mainly Tuberculosis, Asthma and Jaundice. Due to their consistent exposure with the waste and lack of safety measures such as face mask, gloves they suffer from skin infection. They frequently suffer from severe headache and cough too.

Women informed they have been in this work for more than forty years. The Tamil women operate in the areas of Kalina, Vakola, Santa Cruz (East) and distant suburbs like Mira Road, and Bhayender. Before the Municipality does its rounds to clean up the spots, these women rush to pick up the waste. Some of these women keep the spots clean, stream the waste and spray chemicals and insecticide powders keeping the environment clean.

Those working at the basic level also earn less. The middle man informed that he collects the waste and sells it to contractors that are located at the dumping grounds of Thane and Chembur. The contractors send their trucks, where the kabbadiwalas give away their waste. They earn nearly 5 per cent per kg more than the waste pickers. Though, these are the rough estimates. The contractors grind the waste in Mumbai or it is sent off to Vapi in Gujarat. The contractors informed that waste has become a wealth in Mumbai. They need more and more waste to send it for recycling.

Overall, a hierarchy exists in the recycling waste. Lower castes are engaged at the basic level, making the least of income. Due to inadequate information and capital they cannot seek mobility.

A diagram below shows the hierarchy that exists in this informal sector:



Lasunwadi

Lasunwadi is a densely populated slum pocket in Milindnagar. Matangs, a Scheduled Caste were the settlers of this slum pocket. This community has migrated from Osmanabad district. Lasunwadi is known for the community's trade in plastics. Most of the community members buy plastic from the nearby areas by exchanging garlic (known as lasun) instead of money. Owing to this work, this area is widely recognized as 'Lasunwadi'. The community has been in this activity for more than fifty years now. The community does not know how they have got into this trade. But, they look at this trade as family and ancestral occupation. Illiteracy, ignorance of education and undermining its importance, lack of knowledge have forced them to seek these jobs , a woman concluded.

Men and women of the Matang caste in this area of Lasun wadi are trading in plastic. They go to nearby areas such as Yashwant Nagar, Dhobi Ghaat, and Kalina. Their investment is about seven hundred to eight hundred rupees which is needed for buying garlic from the wholesale market. Mostly women of go out to collect plastic and shoes early in the morning. They exchange garlic for polymer waste such as plastic bags, plastic toys, pet jars and shoes. Once, it is collected they sell it to trader who buys their waste. He then segregates these as there are 100 items of plastic and each is rated differently. The best plastic is used for name plates. This is sold at 40 rupees per kg. The cheapest is of Nylon at four rupees per kg. The plastic such as milk bags and other polythene bags are sold for 50 paise to two rupees. Plastic bottles, jars and small items are bought for ten rupees per kg. This waste is then picked up by the small and big



companies. Two companies have regular visits here at these traders. One is a Dharavi based plastic grinder company and the other is in Saki Naka on Andheri- Kurla road.

There are about one thousand household that belong to Matang caste in this part of the slum. Roughly around thousand men and women are working on waste as their livelihood. The community is well aware of the other Matangs residing in other parts of Mumbai that are engaged in the same work. There is Sathé Nagar, a densely populated slum of Matangs, is located near the waste dumping grounds in Deonar (Chembur). Almost the entire population is involved in trading plastic in exchange of garlic. In Malad, a northern suburb of Mumbai too has Matang population that lives near 'Santraam Talaav'. They too carry out the same work. There are about ten thousand or more than that working in this informal sector.

A source estimates that there are about 722 scrap and recycling factories (plastic and chemicals) in Dharavi. This makes Dharavi's plastic recycling industry the largest in India. These factories directly employ 5000 people. There are about 121 sheds of recycle industries.

The plastic that is collected by the Matang community is sold at small shops which are generally owned by North Indians, Hindus and Muslims. This waste is then collected by the small and big companies directly for grinding. The grinding companies are well organized and have regular and employees working in their industrial units. This plastic that is granulated in multi-colours is then sold to big plastic manufacturers. These manufacturers are both based in India and abroad. They buy these granules to make buckets, bottles, toys, etc.

V. STREET VENDORS IN MUMBAI

Street Vendors in Mumbai: A Profile

For the urban poor, hawking/street vending is one of the means of earning a livelihood, as it requires minor financial input and the skills involved are low. There is also another section of the urban population that has taken to street vending, as studies from Mumbai show. These people, or their spouses, were once engaged in better paid jobs in the formal sector. Most of them were employed in the textile mills or in other large factories. Formal sector workers in the city have had to face large-scale unemployment due to the closure of large industries. The textile workers strike of 1981-2 resulted in job losses of over one hundred thousand initially, after the mills restarted. At present the work force is around 30,000 as compared

to 250,000 before the strike. Many of these retrenched workers or their wives, have become street vendors in order to eke out a living. A study conducted by the author on street vending in seven cities show that around 30% of the street vendors in Mumbai were former workers in the formal sector. Street vending thus provides employment to a large section of the population.

Street Vendors and the Urban Economy

The census conducted by TISS-YAVA of hawkers occupying municipal lands showed that there were 102,401 hawkers in these areas in 1998. The census did not include hawkers operating from privately owned lands, land owned by Bombay Port Trust, Railways and other central and state government owned land. If we include all these areas then the total number should be 250,000 or more. The National Policy for Urban Street Vendors states that around 2% of the total population of a city is engaged in street vending. By this measure the total number of street vendors should be around 250,000. Street vendors thus constitute a large section of the urban work force, and perhaps the most victimised.

The total employment provided through street vending becomes larger if we consider the fact that it sustains certain industries by marketing their products. A lot of the goods sold by street vendors, such as clothes and hosiery, leather and moulded plastic goods, household goods and some items of food, are manufactured in small scale or home-based industries. These industries engage a large number of workers but they could have hardly marketed their products on their own. In this way street vendors provide a valuable service by helping sustain employment in these industries. Our study of micro-industries in Dharavi showed that a lot of the goods manufactured there are sold by hawkers in the city.

John Anjaria Shapiro, a research scholar in Anthropology from University of California at Santa Cruz, USA, has been studying street vendors in Mumbai for over a year. The wholesale market at Vashi in Navi Mumbai is the main supplier of vegetables to the city. He finds that two-thirds of the vegetables from this market are sold street vendors in the city. A total of 150,000 tons of vegetables are sold daily at the market. Of these over 1000 tons are for household consumption and this is marketed exclusively by street vendors. The remaining 500 tons are bought by hotels and restaurants. Besides this, vegetable vendors in the western suburb of Kandivili (who number over two hundred) get their supply of vegetables directly from the farmers in the outskirts of the city. Removal of street vendors, according to Shapiro, would have a devastating effect on the vegetable growers in the state.

Street vendors are mainly those who are unsuccessful or unable to get regular jobs. This section of the urban poor tries to solve their problems through their own meagre resources. Unlike other sections of



the urban population they do not demand that government create jobs for them, or engage in begging, stealing or extortion. They try to live their life with dignity and self-respect through hard work.

The poorer sections too are able to procure their basic necessities mainly through street vendors, as the goods sold are cheap. The study on street vendors conducted by the author showed that the lower income groups spend a higher proportion of their income in making purchases from street vendors mainly because their goods are cheap and thus affordable. Had there been no street vendors in the cities the plight of the urban poor would be worse than what it is at present. In this way one section of the urban poor, namely, street vendors, helps another section to survive. Hence though street vendors are viewed as a problem for urban governance, they are in fact the solution to some of the problems of the urban poor. By providing cheaper commodities street vendors are in effect providing subsidy to the urban poor, something that the government should have done.

Profile of Street Vendors

In the following sections we shall provide a profile of the street vendors in Mumbai. The data presented, unless mentioned otherwise, is presented from a study conducted by the author in 2000. This study has been updated recently. The other sources of data are the study conducted by TISS-YUVA in 1998 and a study conducted by SNTD University in collaboration with ILO in 2000. TISS-YUVA had conducted a survey of street vendors on BMC lands while the other two studies were based on samples.

Location

Street Vendors are found at almost all places in the city and its suburbs. They sell a variety of goods that are used for different purposes. These range from perishables such as cooked food and raw food such as vegetables, fruits, meat, chicken and fish. Non-perishable goods such as clothes, accessories such as belts, articles for personal use, etc.

Vendors selling fresh vegetables and other products relating to cooking food such as green chillies, coriander, ginger, garlic, etc. usually concentrate in areas adjacent to the municipal markets as people go for marketing for their daily or weekly requirements to the market. They also concentrate in other locations such as suburban railway stations, major bus stops, etc., so that people on their way home after work can shop for these essentials before they return. If such places were cleared off street vendors, the consumer would face inconvenience as they would have to make a detour to the local market to buy their requirements before going home after an exhausting day at work.

Vendors selling other perishables such as fish, meat and chicken are few in number. This is mainly because people who consume such foods prefer to buy them at proper shops. There are other advantages of this. The stalls / shops are at recognised municipal markets and there is a possibility of the foods not being contaminated. Moreover, those manning these stalls are professionals in that particular product. Fish is invariably sold by Koli women who are good at cleaning and cutting fish. The buyer also feels that the fish is fresh or is not decayed. Similarly in the case of meat or chicken, the buyer feels that the product is cleaned and cut properly and the product is genuine. However one may find fish sellers outside some municipal markets. They are there because the demand may be high and there are not sufficient stalls inside the market to cater to all buyers and sellers.

In the case of vegetable vendors outside municipal markets, they gather there because there is a much larger demand for vegetables and the stalls demarcated for this inside the market are woefully limited.

Vendors selling non-perishable items, especially garments or accessories are found in large numbers in certain locations. These are at Churchgate, Colaba Causeway and Dadar in the city and in Bandra, Santa Cruz (West), Goregaon and other railway stations in the suburbs. Vendors selling accessories too gather in these places as their markets are similar.

One fact has to be borne in mind in these markets. There are no single item vendor markets in the city. In other words, one will not find a market that has only garment sellers. There will be food vendors and other vendors selling allied items. In this sense a hawkers' market gives one the impression of being a common person's open air shopping mall where a variety of things can be purchased from the same area.

Food vendors form a sizable section of the street vendor population in the city. This is because the people here have a tradition of eating out or consuming snacks during office breaks or while returning home from work. It is also estimated that at least one third of the city's population eats something during the day from a food vendor. Food vendors provide low priced meals too. These can range from rice / chapattis and vegetables to Chinese cuisine. Food vendors are found all over the city but they too, like other vendors, cluster around railway stations and other markets. One can find food and fruit vendors outside public hospitals.

The working conditions of the vendors are as tough as in the other cities. Most of them (90%) leave their homes by 6 a.m. or 7 a.m. and return late at night. Around two-thirds of hawkers (65%) reside 10 km or more from their places of work. They use the suburban trains for commuting. Thus we find that the working day of a street vendor, irrespective of her / his income is more than 10 hours.



Hawkers operating in the more affluent region of South Mumbai stay in the distant suburbs. They leave their homes at 7 a.m. and return at times at 11 p.m. Those selling non-perishable goods store their unsold stock in local shops for which they pay rent. Those selling food have to carry back the unsold stock in the luggage compartments of the suburban trains.

Hawkers in the working class areas of Central Mumbai reside in one-room tenements (chawls) or in hutments in the vicinity. Even there they start work from early morning when they have to go to the wholesale vegetable and fruit market at Dadar to buy their goods. They start selling their wares from 8 a.m. and return home in the late afternoon for lunch. They return to work at 4 or 5 p.m. and continue till 10 p.m.

Though the income of street vendors, in the case of women it is lower. The women squatting on the pavements in the working class area of Central Mumbai have started hawking after the closure of the textile mills in that area. Their husbands had worked as permanent workers in the textile mills and are now unemployed for the past several years. These women provide for most of the expenses for the household through their meagre incomes, as they are the main earners. In comparison to male vendors their incomes are 20% lower. We have not come across a single case where a female hawker's total household income is more than Rs. 2,000 per month. In most cases (more than 90%) their household income ranges between Rs. 1,000 and Rs. 1,500 per month. Undoubtedly these women belong to families that are below the urban poverty line.

Harassment and Bribes

Street vendors in Mumbai, especially those in the central business district and the affluent residential areas in the city and the suburbs, work under constant threat of eviction. In fact, from June to November 2000, the municipality carried out rigorous raids in the central business district and in the affluent residential areas such as Colaba, Cuffe Parade in south Mumbai, Bandra (West), Santa Cruz (West) and Ville Parle (West) in the suburbs. These raids were carried out mainly under the supervision of a re-instated Deputy Municipal Commissioner (Khairnar) who had become known for his demolition drives in the city.

The fall-outs of the mass evictions were:

1. A large number of street vendors were reduced to penury. For example, the street vendors in the Fort area, who were envied for being the most prosperous in the city, become paupers overnight. Many of them were back on the streets but heavily in debt.

2. The amount paid as bribes to the police and municipal authorities by hawkers in these areas went up steeply, sometimes as much as ten times the earlier rates. The street vendors were in panic and they were willing to pay any amount to enable them to carry out their business or to be forewarned about an impending raid. We had made a brief survey of these areas after these raids and we found that the vendors pay Rs. 100 to Rs. 125 at a time to the authorities for these 'services'.
3. The mental and physical health of the street vendors was been affected. The SNTD-ILO study shows that 85% of the street vendors covered suffered from ailments associated with stress. These include hyperacidity, migraine, digestive problems, lack of sleep, etc.

An almost identical situation occurred after the massive raids in 2003 conducted by another Deputy Municipal Commissioner, Chandrakant Rokde. As in the case of Khairnar, this person too had the full encouragement of NGOs representing the elites in the city. The English news papers sang praises of the courage and honesty of these two stalwarts.

Even before these raids took place, our study showed that a majority (76%) of the street vendors covered paid bribes daily to the police and the municipality. This ranged from Rs. 5 to Rs 100 per day.

In the suburbs we found that street vendors pay daily or weekly bribes to the police and the municipality. Even in areas where they are unionised, vendors have to pay bribes. In general we found that male hawkers usually had to pay bribes and the amount was more as compared to the bribes paid by the female hawkers. One possibility for this is that the income of female hawkers is lower than that of the males. Food vendors tend to pay more bribes to the municipality as they are frequently threatened that their goods will be destroyed, as these are unhygienic.

Laws and Regulations

The laws for street vending are regulated by the Bombay Municipal Corporation Act 1950 which was in force before the state of Maharashtra was formed on 1 May 1960. The municipal laws do not provide for the erection of any structure or stall on the streets which will obstruct the passage of the public, or impede the working of a drain or open channel. Such a structure is liable to be removed by the municipal commissioner and the person responsible for the creation of the structure is to incur the expenses of its removal. It is imperative for a person to procure a license from the municipal commissioner to be able to hawk his / her wares in any public place. Failure of compliance will lead to the removal of any product being hawked on the streets, without prior notice.



The municipal laws regulate the use of pavements while the police regulates the use of roads. Hawkers are evicted mainly under sections 102 and 107 of the act. These sections stipulate that anyone preventing smooth flow of traffic can be arrested and removed.

The police however have sweeping powers regarding what is termed as encroachment. This stems from Section 34 of the Police Act of 1954 that has been adapted by all states with regard to the local police. "No person shall cause obstruction in any street or public place by...exposing anything for sale or setting out anything for sale in or upon any stall, booth, cask, and basket or in any other way whatsoever." Hence even if the municipal authorities grant space for vending in public places, the police have a right to evict them under the above section. Perhaps the studies on street vendors show that more rent is collected by the police than the municipality!

A word regarding the system of issuing licenses is necessary. In Mumbai, where there are around 250,000 hawkers, the municipal corporation has granted only 14,000 licenses. Moreover, the municipal corporation has stopped granting new licenses for the past two decades, hence most of these license holders do not ply the trade at the present as they are too old or they have died. The TISS-YUVA survey found that only 5,653 hawkers, out of a total of 102,401 hawkers, had licenses. Hence this system has more or less failed.

As far as urban planning is concerned all such documents show that street vendors occupy no place in them. The *Draft Plan of the MMRDA for 1995-2015* has demarcated spaces for everything, except markets for street vendors. One way of ensuring some support to street vendors is of forming open air markets in open spaces in different localities.

Hawking Zones and Court Cases

The Municipal Corporation had a system of demarcating hawking and non-hawking zones. However, this system is now being challenged. There is a pending case in the Supreme that has some serious repercussions. However before we go into details let us look at the background.

There have been a number of PILs in Mumbai in the past (1980s onwards) on issues affecting the poor. However the most important case that affected the status of street vendors in the city was one in 1989 in the Supreme Court. More than a few decades ago, the New Delhi Municipal Corporation evicted a common street vendor, Sodhan Singh, who sold garments at Janpath in New Delhi. He appealed to the Supreme Court through a Public Interest Litigation claiming that the act violated his fundamental rights,

more specifically his right to carry on business or trade (article 19(1)g). In a very significant judgement, the Court ruled that:

"If properly regulated according to the exigency of the circumstances, the small traders on the side walks can considerably add to the comfort and convenience of the general public, by making available ordinary articles of everyday use for a comparatively lesser price. An ordinary person, not very affluent, while hurrying towards his home after a day's work can pick up these articles without going out of his way to find a regular market. The right to carry on trade or business mentioned in Article 19(1)g of the Constitution, on street pavements, if properly regulated cannot be denied on the ground that the streets are meant exclusively for passing or re-passing and no other use" (Sodhan Singh versus NDMC, 1989).

The above extract from the Supreme Court judgement is significant because it emphasises several important aspects of street vending and use of public space. The judgement notes the positive role of street vendors in providing essential commodities to common people at affordable prices and at convenient places. Moreover, the judgement notes that street vending, if regulated, cannot be denied merely on the ground that pavements are meant exclusively for pedestrians. The most important aspect is that street vendors are exercising their constitutional right to carry out trade or business hence it should be regulated properly and not abolished.

The judgement directed the state governments to direct their municipalities to evolve hawking zones where street vendors could practice their trade. In Mumbai, this happened in 1998. The Municipal Corporation of Greater Mumbai (MCGM), after a great deal of consultation and discussion had demarcated the hawker zones for the city and suburbs. The TISS-YUVA survey too was a part of this exercise. The proposed hawker zones were notified to all through newspaper advertisements. MCGM also announced that any individual or party that had any objection should notify this to them within a month. There hardly any objections or clarifications. It appeared that the plan would be implemented. However, no sooner than MCGM decided to implement the plan, there were a spate of protests from various residents associations (led by Citispace). They even got a stay from the High Court. After a few years the High Court passed an order which would in effect recognise only 20,000 or more vendors. The street vendors union went on appeal to the Supreme Court in 2002 where the matter is still pending. We have noted below the main points of the case so far.



National Policy as Solution

In the mean while, the Government of India approved the National Policy for Urban Street Vendors on 20 January 2004. The present government too has endorsed the policy. The Ministry of Urban Employment and Poverty Alleviation has called a National Workshop on Urban Street Vendors on 19 October 2005 where all the senior level officers of the state governments were called. The purpose was to take stock of the situation. The ministry found that none of the states had made any move to implement the policy, though each representative spoke highly of the policy. The Ministry (which has now become Ministry for Housing and Poverty Alleviation) called another meeting on 12 July 2006 for the same purpose. It was found that some states (UP, Rajasthan and Delhi) had started to implement the policy with certain minor adaptations to suit their needs. This was a promising start. However Maharashtra has yet to implement the policy. The recent Supreme Court judgement on street vendors in Mumbai too can be superseded if the Policy is enforced by the legislature. The judgement itself notes that the policy should be implemented.

The policy attempts to “provide and promote a supportive environment for earning livelihoods to the street vendors, as well as ensure absence of congestion and maintenance of hygiene in public spaces and streets”. The policy takes into account the contributions of street vendors as it notes that “Urban vending is not only a source of employment but provide 'affordable' services to the majority of urban population. The role played by the hawkers in the economy as also in the society needs to be given due credit but they are considered as unlawful entities and are subjected to continuous harassment by civic authorities.” It therefore aims to “to ensure that this important section of the urban population finds recognition for its contribution to society, and is conceived of as a major initiative for urban poverty alleviation”.

The Policy makes concrete suggestions of how to regulate street vending, it suggests that ward level committees that have all stake-holders as members should collectively decide the number of street vendors in each ward and the fees that they should pay. It gives greater prominence to self-regulation among the vendors.

The policy notes that besides Article 19(1)g of the Constitution, its Directive Principles of State Policy notes in Article 39 (a) and (b) clearly that the State shall in particular direct its policy so that: “(a) The citizens, men and women equally, have the right to an adequate means of livelihood. (b) The ownership and control of the material resources of the community are so distributed as best to sub-serve the common good.” Hence we find that the Constitution does have provisions that favour the street vendors and similar marginalized groups.

The Policy suggests that certain changes in the legal framework needs to be done. It directs the centre and the states to make changes in Section 283 of IPC and 34 of the Police Act and the corresponding section in the state police acts. Section 283 of the IPC: "Whoever, by doing any act or by omitting to take order with any property in his possession or under his charge, causes danger, obstruction or injury to any person in any public way or public line of navigation, shall be punished with fine which may extend to two hundred rupees." The offence punishable under this section is the nuisance of causing obstruction.

Section 34 of the Police Act: " No person shall cause obstruction in any street or public place by exposing anything for sale or setting out anything for sale in or upon any stall, booth, board, cask, and basket or in any other way whatsoever."

These two provisions create the contradiction between a legal 'licensed' vendor and 'illegal' obstruction or causing nuisance resulting in physical eviction of even licensed vendors. The policy therefore recommends that Central Government and all States should amend the Police Act and Rules/Regulations by adding a rider as follows: "Except in case of street vendors /hawkers and service providers with certain reasonable regulations"

One of the strong points of the Policy is that it tries to promote the concept of 'natural markets'. These markets arise whenever there are requirements in society. This means that the natural market for street vendors revolve around certain places not merely because the vendors find their consumers there but more so because the consumer would prefer them to be there. Thus one will find flower sellers and fruit sellers outside temples, vegetable vendors tend to congregate near railway stations and municipal markets as they serve the needs of the public there. Similarly, one will find food vendors and fruit sellers outside hospitals because they fulfil a vital need of the patients and their attendants (especially in the public hospitals where largely the poor visit).

In the case of the interim judgement of the Supreme Court we can see that this very principle is being overlooked. This is not an exception because the Policy notes that, "Following the Supreme Court orders, some cities drafted guidelines for regulating urban vending activities. However, the provisions made so far do not generally recognize the fact that demand for their wares/ services is highly specific and varies as to location and time, manifesting as a **natural propensity of street vendors to locate in various places at particular times**. On the contrary, the present urban planning norms completely disregard the



formation of such natural markets. They also do not have implementation systems in place. Planning norms should be supportive of such natural markets" (emphasis in original).

It is hence necessary that urban plans make provisions for street vending. This could be done as in Bangkok, where pavements are made broad so that one-third could be demarcated for street vendors. There is also need for spaces that could be demarcated for weekly markets. Delhi has been holding such weekly markets in different localities. The particular area is cordoned off once a week so that a local market can function. This serves the needs of the local residents, especially the poorer ones. Another idea from Bangkok could holding of night markets. These become tourist attractions and places for recreation.

An important aspect of street vending is the question of encroaching on public space and obstruction to the flow of pedestrians and traffic. Street vendors are frequently held responsible for these acts. In reality, this is far from truth. The Supreme Court judgement, quoted above, shows that if hawkers are regulated properly they could be a boon for the public. This regulation will be possible only if street vending is legalised. It should also be borne in mind that normally street vendors would not like to block pedestrian traffic because this would affect their sales. There is some form of self-regulation among them in this regard.

The other question on blocking or preventing smooth flow of road traffic is again an allegation that needs to be proved. A year ago, Kamla Raheja College of Architecture, Mumbai was asked by MCGM to conduct a study on street vending and traffic flow at Dadar station, one of the busiest railway stations in the city. The findings clearly showed that it was not the street vendors, but cars that are parked haphazardly that causes traffic problems. The study drew up an alternative plan for regulating traffic around the station which would ease the congestion. The study also found that the presence of hawkers actually increased the business of the shops in the lanes.

The above changes are not very difficult to achieve. If they are made the poorer sections in the city will definitely benefit and the municipal authorities too will increase revenue. What is needed is the political will to serve the interests of the poor and thereby of the city as a whole.

Note: All quotations are from the National Policy for Urban Street Vendors, Ministry of Urban Housing and Poverty Alleviation, Government of India. The surveys referred to are: "Hawkers and the Urban Informal Sector: A Study of Street Vending in Seven Cities", conducted by Sharit K. Bhowmik for National Alliance of

Street Vendors of India, 2001; "Census of Hawkers on BMC Lands" conducted by TISS and YUVA for Municipal Corporation of Greater Mumbai, 1997; "Study of Hawkers in Mumbai" conducted by SNDT Women's University and ILO, 2001.

VI. WHAT NEEDS TO BE DONE

The discussions in the above report try to highlight the need for mainstreaming informal employment. We can see that slums and the informal economy are linked and that they together provide important contributions to the city's economy. What needs to be stressed is that slums and those who reside in them are not parasites; they contribute significantly to the city's economy. The industries in Dharavi help sustain employment to a large section of the city's poor. They also contribute towards improving the facilities for people in the city. However, the most significant part of their contribution is in increasing the wealth of the city. Dharavi has an annual turnover of over Rs. 2,000 crores. This turnover returns only in trickles for the residents, who live in penury. Even the lowly waste pickers, who are ranked lowest socially, are major contributors to a multi-crore rupee recycling business. Their contributions are never recognised because they are marginalised and poor.

Before discussing the training needs of this sector, we will summarise the main points of the contribution of slums to developing the urban economy. Two of the major contributions of slums are firstly generation of employment and low cost housing.

The studies on Dharavi and Kurla show that a large section of the urban poor who reside in slums also find employment within them. This includes the huge section of home-based workers, garment workers and other factory workers. In fact we find that Dharavi has tremendous employment potential that can be destroyed if the scheme for rebuilding it does not accommodate its production units. If this is not done, it will not only destroy employment opportunities for the residents but will also destroy a part of the city's economy.

Another important aspect is that slums provide cheap housing to the working class. Along with this, street vendors too contribute by providing goods at cheap prices. Both these factors make it possible for lower wages. Hence costs are cut in this way and the benefits go to the better off sections who employ these people.

An often repeated accusation against slum dwellers is that they take away resources which are meant for tax payers. These include water, electricity and other services. This is totally untrue on two counts. First, most slum dwellers pay for the water and electricity. Second, there is a notion that tax payers



are those who pay taxes directly to the concerned authorities and these people have the right to usurp the facilities provided by the state (municipal corporation in this case). This also means that those who do not pay direct taxes are not tax payers.

A cursory look at the sources of MCGM's income will show the lack of truth in this proposition. More than 60% of the corporation's income comes from one source, namely, octroi (tax on goods entering the city). Other major sources of income too are through indirect taxes. These taxes are paid by the business people and industrialists but are ultimately passed on to the consumer—a majority of whom are slum dwellers. Hence slum dwellers pay indirect taxes like octroi, sales tax, excise duty, etc. whenever they buy anything from the market. In fact we can ask the question: Do the municipal corporation and the state government provide them the facilities they should get as tax payers? The answer will surely be in the negative.

Improving Informal Employment

The aim of this report is not to glorify slums or the urban poor. This would be wrong because no one, especially from the urban poor, would like to live and work in the conditions that they do. What we have tried to show is that despite the problems these people are able to make major contributions to the city's economy. What is therefore needed is not merely allowing this economy to continue, but to examine how improvements could be made on the living and working conditions. Our suggestions, based on the study, are:

Informal Enterprises

1. One major recommendation would be of creating a better environment for the functioning of the informal economy. This would include simplifying procedures for registration of industries in slums, enabling them to get institutional credit at normal rates of interest. Registration would mean a legal recognition and also prevention of harassment by authorities. A large section of the profits of these enterprises are reduced because of high interest loans that are supplied by money lenders. The employer covers up by saving on labour costs by paying low wages. If institutional credit is available many of the entrepreneurs would be willing to increase wages.
2. Another important issue before slum dwellers, and enterprises in slums, is lack of tenure. All the Five Year Plans of the country, starting from the Seventh Five Year Plan right up to the recent eleventh plan

(which is currently in draft stage) recognise the importance of poor people and their contribution to the city's economy. All those policy reports have made it amply clear that the conferment of ownership, occupancy and tenurial rights should be given to the people living in the slums, to ensure slum upgradation and improvement. If not ownership, at least tenurial rights must be conferred upon slum dwellers, which will go a long way in mainstreaming the informal sector.

The Tenth Five Year Plan emphatically states that, "slum dwellers need not perennially be at the receiving end of selected doles but must be made part of the urban economic and social processes with adequate opportunities for improving their lives, while contributing what is acknowledged to be a major share in economic activities of the cities. Upgradation of living conditions of the poor has to be recognized as part of the national development process." It is therefore necessary to ensure that slum dwellers and enterprises in slums are provided rights of occupancy if not ownership.

3. Street vendors form a major part of informal employment in the city. As discussed above, they provide vital services to the city, especially to the poor but they are constantly harassed by the authorities. Therefore it is suggested that the National Policy for Urban Street Vendors should be accepted and implemented. In this case too legal recognition would mean that there is regulation of street vending at the ward level taking into account the ground situation, the vendors would be paying taxes to the municipal authorities instead of paying bribes to unscrupulous officials and policemen, they could also get institutional credit. These steps would help in increasing and stabilising their income and would prevent harassment.

Skill Upgrading through Training

The major disadvantage that those in informal employment have is lack of skills. This is one of the main reasons why wages are low and this in turn forces other members of the family to seek low paid work in order to make up. As a result the family continues to live in poverty. The members are unable to improve their skills either because of lack of opportunity or because they do not have the resources to avail of skill building facilities. Hence the family reproduces this poverty in the future generations.

The only way to break out of this poverty cycle is by improving the existing skills of the workforce. This could be done through various ways. Technical training programmes are needed but these should suit the requirements of the existing work force. Programmes for technical training as done through the Industrial Training Institutes or other similar formal training institutes would be expensive and may not suit the needs to the existing workforce. These could be useful for the next generation who will be new entrants to the workforce and they could be skilled workers through this type of full time training.



What is needed is in-service training so that they can improve their skills at the work place. The costs of such training would be lower than the full time regular training and more workers could get the benefits of such skill upgrading. Moreover the workers would not have to stop work during the training period. If the income of the present generation of workers is increased in this manner they would be in a position to support training for the next generation through their own resources. Hence the skills of the present workforce need to be upgraded.

Home-based workers could improve their skills by being trained in the use technologically advanced means of cutting sewing cloth. Training in computers could be a major means of upgrading skills. Most of the designs in the garment industry are computer aided. Such types of skill formation would not only improve their existing employment but would also prepare them for alternative employment.

One could take the lead from organisations like Nirman and SEWA Housing Trust in capacity building. Both are working among construction workers. This is one of the fastest growing industries that employ mainly low skilled workers. Nirman is engaged in upgrading the skills of construction workers at their workplace (with the cooperation of the builders) so that they are able to cope up with new technology.

SEWA Housing Trust is a part of Self-Employed Women's Association, the largest trade union of women in the country. SEWA Housing has been carrying out intensive training for skill upgradation. It has trained so far over 5,000 women construction workers in Ahmedabad to learn carpentry, welding, plumbing, etc. The organisation anticipated that with increased use of technology in this sector the women would be the worst affected as most of them were engaged in low skill physical labour. They then decided to introduce training programmes for them that would make them competent to take on skilled jobs.

A similar type of training for skill upgradation could be introduced for other sections of the informal economy. The traditional means of providing alternative employment by teaching women to make papads, candles and incense sticks are of very little use. New programmes have to be formulated after taking into account the needs to industry and the willingness of the people concerned to learn. Many training programmes have failed because they were imposed from the top. The planners decided what was suitable for the people without taking their opinion into account. Hence our study shows that there can be no cut and dried approach to skill formation. Plans need to be made from below so that they are relevant for the people.

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Appendix

Table No. 1: Garment Industry in Dharavi

Name of the garment factory	No of labour force
Israil garment factory	20
Prince garment factory	10
Total	30

Table No. 2: Residential arrangements of the workers

Place of residence	No of workers	Percentage
The garment factory/gala itself	6	20
Pongal house	18	60
With family in the neighbourhood	6	20
Total	30	100

Table No. 3: Type of work done by the workers

Type of work	No of workers	percentage
Master (does the cutting of clothes as per order)	4	13.3
Tailor(stitching parts of clothes)	20	66.3
Helper(cutting extra threads,ironing clothes)	6	20
Total	30	100

Table No. 4: Wages earned by the workers

Per day wages	No of workers	Percentage
Rs 50-Rs 100	6	20
Rs 100-Rs 150	20	66.3

Rs 150-Rs 200	4	13.3
Total	30	100

Food Processing Industry in Dharavi

Table No. 5: Residential arrangements of the workers

Place of residence	No of workers	percentage
The factory itself	18	90
Pongal house	2	10
Total	20	100

Table No. 6: Type of work done by the workers

Type of work	No of workers	percentage
Master (does the frying)	4	13.3
Kneading of dough and preparing for frying	20	66.3
Helper(packing, mixing)	6	20
Total	30	100

Table No. 7: Wages earned by the workers

Per day wages	No of workers	Percentage
Rs 50-Rs 100	16	80
Rs 100-Rs 150	4	20
Total	20	100