



Bollywood – Maharashtra and India's Film Cluster

Final Paper for

Microeconomics of Competitiveness

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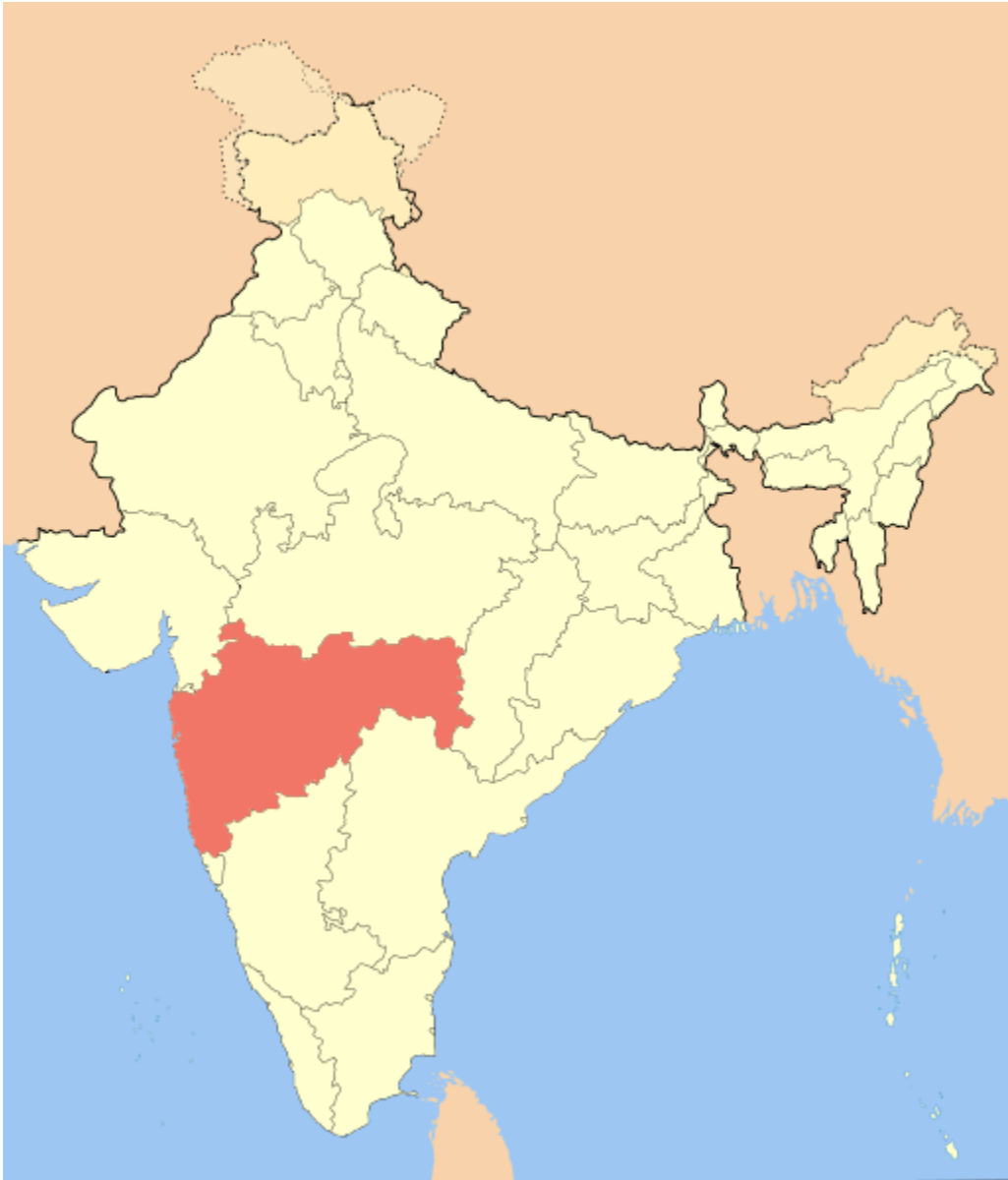
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India and Maharashtra state



1. Introduction

India is a rising star with many different faces: the biggest democracy in the world; a nuclear power; the second most populous country after China; one of the poorest countries of the world; and the new destination for venture capital and technology companies. As the world's 12th largest economy with a GDP of about \$1 trillion (US State Department, 2007) India has gained a strong voice in the international agenda and attracts investors and governments looking to establish alliances with her.

Maharashtra is the economic powerhouse of India and home to the Bollywood Cluster. It is India's largest state economy GSDP about \$ 110 billion (ESM 2007-2008) comparable to Kansas (USA) and is also India's second richest state in terms of GDP per capita. Home to India's largest city Mumbai (population 13 million and formerly know as Bombay), Maharashtra is divided into 35 administrative districts and 6 revenue divisions (Government of Maharashtra Official Website, 2008). It has a population density (814 per square mile) comparable to Massachusetts (USA) and an area (118 809 square miles) comparable to New Mexico (USA). It is surrounded by the states of Madhya Pradesh, Chhattisgarh, Andhra Pradesh, Karnataka and Goa. Like all Indian states there is a ceremonial Governor appointed by the central government and a Chief Minister who is the head of government and holds executive power.

2. Overall Economic Performance of India and Maharashtra

2.1. Economic Growth

India's economic growth after the 90s has been overshadowed only by China's spectacular growth rates during the same period (see Table 1). India's economic growth is expected to slow down from 9.4% in 2006/7 to 7.2% in 2009/10 (EIU 2008) driven mainly by ongoing slowdown

in the retail boom, large job losses in the labor-intensive industries and slower growth rates in the manufacturing industry. Nevertheless, this GDP growth rate is well beyond the 2009 predictions (EIU 2008) for the US (1.4%) and the European Union (2.1%). The negative outlook of the US economy will have a small impact on India and instead the economy is set to grow at more sustainable rates than the last decade (EIU 2008).

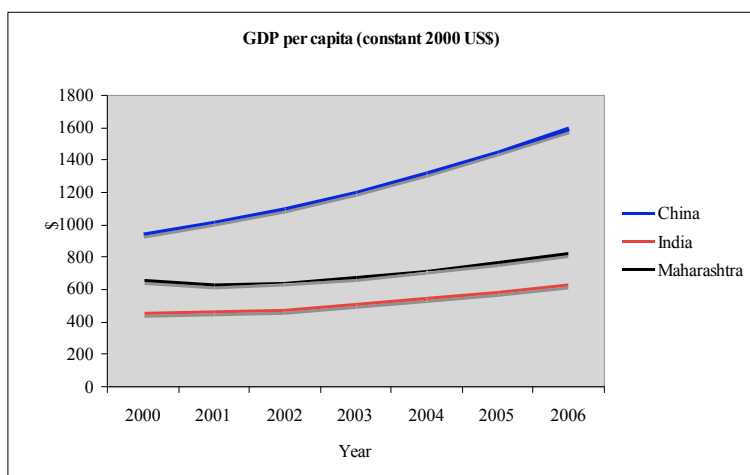
Table 1: GDP growth (at 2000 constant US\$)

	1965	1975	1985	1995	2006
India	-2	9	6	8	9
China	16	9	14	11	11
United States	6	0	4	3	3

Source: WDI

Growth however has not benefitted all states equally. For example per capita income of Ma-

Figure 1: China, India and Maharashtra state GDP per capita



Source: WDI; Economic Survey of Maharashtra 2007-2008 and Group Analysis

harashtra is triple that of Bihar state. Figure 1 shows India's GDP per capita compared to China and Maharashtra. In 2006, Maharashtra's GDP per capita was 30% higher than India's average (ESM 2007-2008).

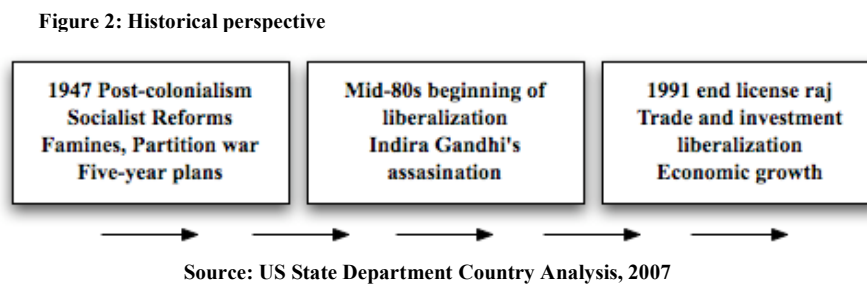
Maharashtra had a compound annual growth rate of 8.3% during the 10th 5-year plan (2002-2003 to 2006-2007) compared to a target of 8% (ESM 2007-2008). This is a strong performance compared to a CAGR of 3.8% during the 9th 5-year plan (1997-1998 to 2001-2002) (ESM 2007-2008). Growth rates in the primary, secondary and tertiary sector were 4.3, 9.6 and 8.7% during

the 10th 5-year plan showing that industry and services accounted were the main drivers of economic growth in the state (ESM 2007-2008).¹

2.2. Historical Perspective of India and Maharashtra

India's political leadership and economic evolution

The evolution of the Indian economy can be divided in three different political periods as shown in figure 2 below.



The *period after independence* saw an array of socialist reforms. The partition of British India into India and Pakistan resulted into 2 to 4 million refugees, a considerable financial strain (EIU 2008). The post-independence government adopted five-year communist-style plans and promoted heavy industries. Famine affected part of northern India and economic stagnation characterized the period. India's politics were dominated by the Congress Party and were characterized by instability and political assassinations for the three first decades following independence.

The *second period* started with the assassination of Prime Minister Indira Gandhi, an event that further damaged investor confidence. In the early 80s, the Indian economy broke from a history of disappointing economic performance. Between 1965 and 1975 GDP per capita grew by 14%

¹ The respective sectors are *primary* (Agriculture; Forestry and Logging; Fishing; and Mining and Quarrying); *secondary* (Manufacturing; Construction; and Electricity gas and water supply) and *tertiary* (Transport, storage and communications; Trade; Hotels and Restaurants; Banking and Insurance; Real Estate and Ownership of Dwellings; Business Services; Public Administration; and Other services)

and then increased by 45% between 1980 and 1990 (EIU 2008). Economic growth and a substantial fall in poverty took place over the course of the 90s.

1991 was the beginning of the *third period* marked by liberalization of the Indian economy. Manmohan Singh, a member of the Congress party, was the Finance Minister at the time and the brains behind the liberalization of investment and trade. He swept away the *license raj*, which required the permission of the Capital Issues Committee to raise new money, and got rid of quantitative trade restrictions. Singh was elected Prime Minister in 2004. An economist by profession who worked at the IMF, he is a highly respected politician around the world and has brought some stability to the complex coalition politics of India.

Maharashtra's political leadership and economic impact

Consistent and stable political leadership explains Maharashtra's historically strong economic performance especially during the tenth 5-year plan and 12th financial commission² (ESM 2007-2008). From the state's inception in 1960, the Congress party has dominated the politics. In 1995, this monopoly was lost to the combined parties of Shiv Sena and BJP who have a nationalist leaning. The Congress party resumed power in 2004 in coalition with the National Congress Party (Wikipedia). The former selects the Chief Minister while the latter selects the Deputy Chief Minister.

Chief Minister (Government of Maharashtra Official Website) - The current Chief Minister is Vilasrao Dadoji Deshmukh. His socio-political career spans 30 years and he has led Maharashtra for most of the last decade. Deshmukh attended Pune University where he received degrees in

² The primary recommendation of the 12th finance commission was that central government no longer provided loans and advances to state governments except for externally aided projects with the outcome that state governments had to depend on debt to finance their budgets.

science, arts and law. He has significant private sector experience having served as a Director of two cooperative banks and established the Manjra Cooperative Sugar Mill which won various national and international awards for excellence in production and management. He also founded Manjra Charitable Trust that runs colleges in Latur and Navi Mumbai. In May 2000 he led an official delegation to USA (New York, Los Angeles, San Jose, Washington) and UK (London) in search of FDI for Maharashtra. In 1980 and 1981 as a member of Maharashtra Legislative Assembly, he travelled to Japan, Thailand, Philippines, Taiwan, Hong Kong West Germany, France, England, United States and Japan in 1980, to study Cooperative Movement and Agricultural Development. One of his sons, Ritesh Deshmukh, is a famous Bollywood actor who studied in the USA (Indianetzone.com, 2008).

Deputy Chief Minister - The current Deputy Chief Minister is R.R. Patil, popularly known as ‘Mr. Clean’ and ‘efficient minister’ (Rediff.com, 2004). He is a lawyer by training and has built a reputation for ‘impressive achievements, astute organizational skills and result-oriented leadership’.

Governor (Government of Maharashtra Official Website) - The acting Governor is Sanayangba Chubatoshi Jamir. He is the current Governor of Goa and a member of the Congress party. He is serving in a temporary capacity after the previous Governor, Somanahalli Malliah Krishna (2004 – 2008), resigned to return to active politics in Karnataka state.

2.3. Structure of the economy

India National Economy

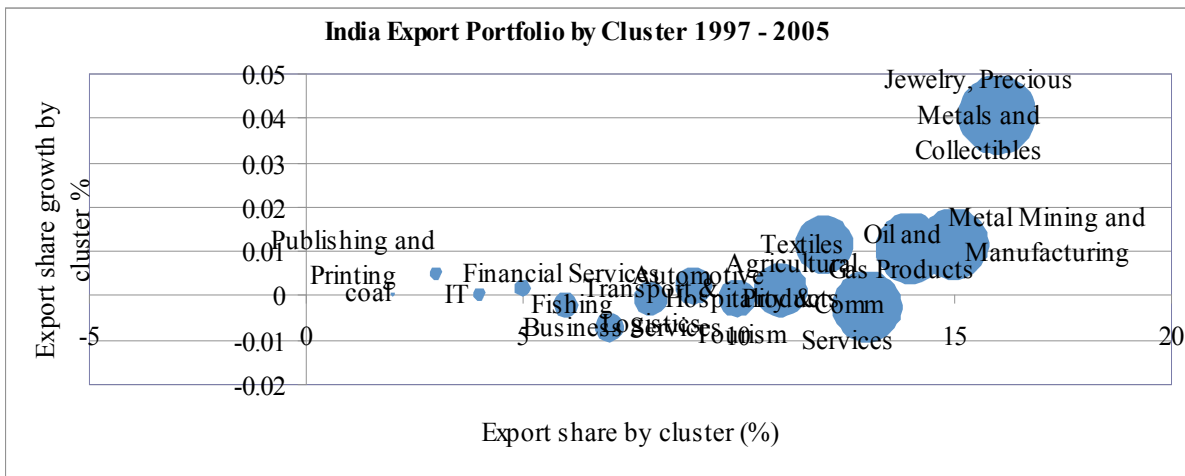
India’s structure of production, similarly to the United States and China, has increased the share of GDP produced by services, however, agriculture still represented 18% of GDP in 2005, a percentage much higher than in the US and China.

Table 2: Structure of the economy

Indicator	India		United States		China	
Structure of production (% of GDP)						
	1990	2005	1990	2005	1990	2005
Agriculture	29	18	2	1	27	13
Industry	27	28	28	23	42	48
Manufacture	17	16	19	14	33	33
Service	44	54	70	76	31	40

Source: WDI

Growth in the Indian economy is mainly due to growth in the following sectors: “trade, hotels, transport and communication (12%), “financing, insurance, real stated and business services (11.7%), “construction” (9.6%) and “manufacturing” (9.4%). Growth in agriculture is set to decelerate this year to 2.6% from 3.8% in 2007.



Source: Group Analysis and ISC - HBS (2008)

As regards India’s export portfolio by cluster, the main sectors are portrayed in the illustration above³: 1st jewelry and precious metals, 2nd metal, mining and manufacturing, 3rd oil and gas products and 4th communication services (ISC - HBS, 2008).

³ Source: Prof. Michael E. Porter, International Cluster Competitiveness Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.

Maharashtra State economy

Maharashtra has a population of almost 100 million people, almost 9% of India's population (ESM 2007-2008). It is the most industrialized of the Indian states and has achieved accelerated economic development through infra-structural development, via private initiative in all possible sector and creating large scale employment⁴.

Maharashtra contributes 18% to India's industrial output (ESM 2007 – 2008). Industrial activity is concentrated in Mumbai City, Mumbai Suburban District, Thane and Pune. The service sector dominates the economy of Maharashtra. In general, India has a strong competitive advantage in

Figure 4: Structure of the Economy



Source: India's Planning Commission

knowledge-based industries and Maharashtra is above that national average (ESM, 2007-2008). Almost 1/4 of the top 500 companies in the IT sector are in

Maharashtra. The state of Maharashtra has a lower share of primary sector activities contributing to the national income than the Indian average. As shown in Figure 4, Maharashtra has increasingly become a service and industry-based state.

⁴ Maharashtra State Analysis 2007-2008

3. Assessment of National Business Environment

3.1. Human Development Indicators

Despite impressive economic growth, India fares very badly in terms of population living under the \$1 poverty line (see Table 3). The proportion of population living below the poverty line has fluctuated widely but the trend has been downward. India's Planning Commission estimates that around 27% of the population lived below the poverty line in 2004-2005, down from more than 50% in 1977-78.

Table 3: Poverty Indicator

	% Pop. living under \$1 a day 2005	Prevalence of undernourishment 2002
China	4.6	11
India	30.2	21
Malawi	66.5	33

Source: WDR 2005

Maharashtra has been able to almost halve the percentage of population living under poverty; in 2005 about 30% of the population lived in poverty (according to India's Planning Commission poverty line measure).

However, other states such as Kerala have managed to reduce this share from 40% to

Table 4: Human Development Indicators

	Life expectancy, years at birth	Adult literacy rate	HDI indicator
Maharashtra	69.6	72.9	0.67
India	63.3	58	0.59

Source: India's Planning Commission

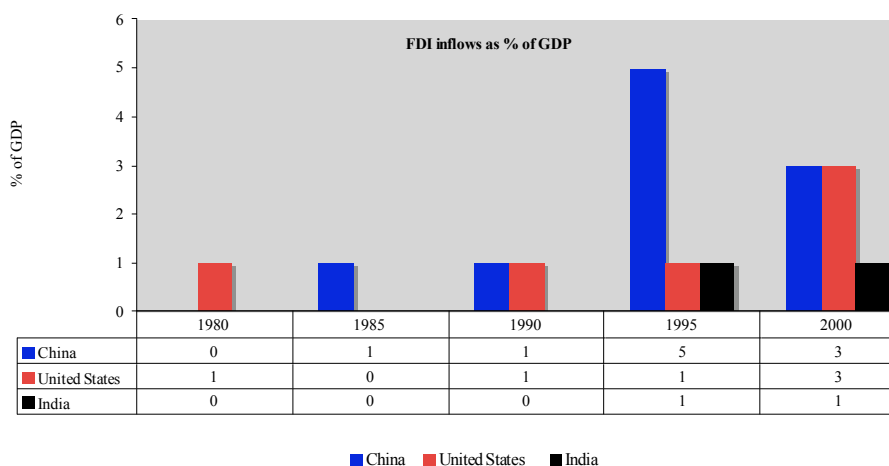
12.72% for the same period. Table 4 shows that Maharashtra has better human development indicators when compared to India, remarkably, adult literacy in Maharashtra in 2001 was 15 percentage points higher than in the rest of India.

3.2. FDI in India and Maharashtra

In the early 1990s the government of India started amending the norms capping FDI in certain sectors (Financial Express/Reuters, 2008). The liberalization act (1991) cleared the path for foreign investment. In January 2008 the government announced increases in the FDI limits in seven more sectors. Hence, the new maximum limit for investment in oil refinery joint ventures with public sector for instance increased from 26% to 49%. FDI inflows in India as % of GDP, however, are still smaller than in China or in the United States (see Figure 5 below). In 2006, the Special Economic Zone Act came into effect, a measure that has simplified procedures and provided single window clearance at the central and state level (ESM 2007-2008).

Maharashtra has consistently ranked been ranked as the number one investment destination in India by the Gallup Survey and the Federation of Indian Chambers of Commerce and Industry,

Figure 5: FDI in India

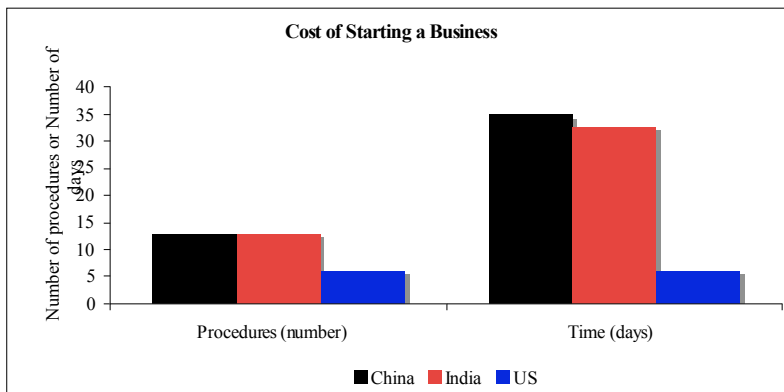


Source: WDR 2005

(21%), infrastructure (12%) and automobiles (10%). However, poor governance indicators in India and Maharashtra curtail the FDI potential. Figure 6 shows that India's government effectiveness and regulatory quality are clear barriers to investment.

ahead of the states of Andhra Pradesh, Karnataka, Tamil Nadu and Gujarat. FDI projects approved in 2007 were mainly in the field of services (24%), IT

Figure 6: Starting a Business in India, China and the United States



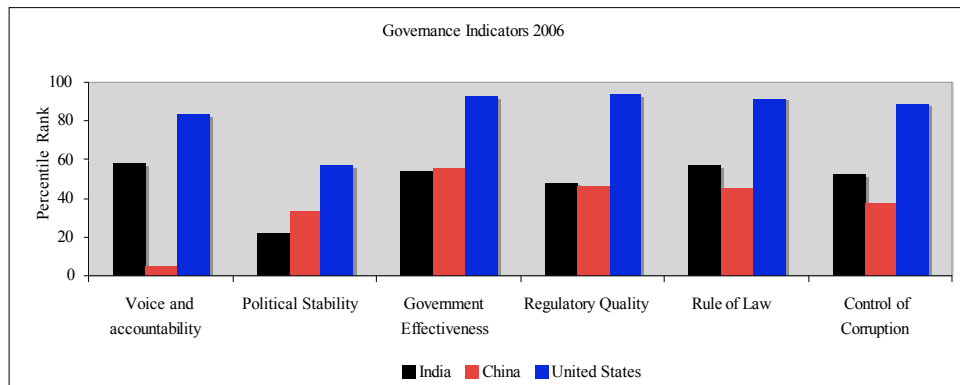
Source: Doing Business Report, World Bank

Why hasn't FDI increased even more rapidly? India's investment climate has improved substantially during the last decades but there is wide room for further improvement.

According to the World

Bank, the top five business constraints to investment in India identified by managers in 2007 are: Corruption (37%), Electricity (29%), Tax Rates (28%), Tax administration (27%) and Policy Uncertainty (21%) (Beath, Andres, 2006). Starting a business in India as show in Figure 6 is much more costly in terms of procedures and time than in the United States. Another key factor

Figure 7: Governance Indicators



Source: Doing Business Report, World Bank

to improve India's investment climate relates to labor productivity and labor regulations. According to the International

Labor Office⁵, the United States still leads the world by far in labor productivity per person employed (2006). There is a rapid increase of productivity in East Asian countries where workers now produce twice what they produced 10 years ago and China and India have experienced very

⁵ "Key Indicators of the Labor Market (KILM), fifth Edition"

strong productivity growth in the last years (6% for China and 3.5% in India in 2004), however, their productivity levels are only 14% and 9% of the US levels. India's labor regulations are unusually complex; firms must pay 79 weeks of salary in notice, severance and penalties to dismiss a worker, compared to the 35 week-average in OECD countries (Beath, Andres, 2006)). Table 5 portrays the differences in productivity between India and Maharashtra. The latter has more productive, better-paid workers than the Indian average.

Table 5: Productivity indicators

	Labor productivity (net value added per rupee in wages)		Total output per worker (Rs. In lakh)		Annual Wages per worker (in Rs)	
	2003-2004	2004-2005	2003-04	2004-2005	2003-04	2004-2005
India	6.66	7.73	21.15	25.34	50071	50968
Maharashtra	7.54	8.35	30.79	44.06	71778	75404

Source: India's Planning Commission

Compared to China and the United States, India's patenting output is relatively low. In the year 2000 Indian residents filed 4339 while the American counterparts filed 161786.

**Table 6
India Global Competitiveness 2003 and 2006 Trend**

	2006 Global Competitiveness Ranking	Quality of the business environment	
		2003 (out of 101)	2006 (out of 121)
India	43	36	27
China	54	42	65
United States	6	2	1
Italy	42	24	42
South Africa	45	28	34

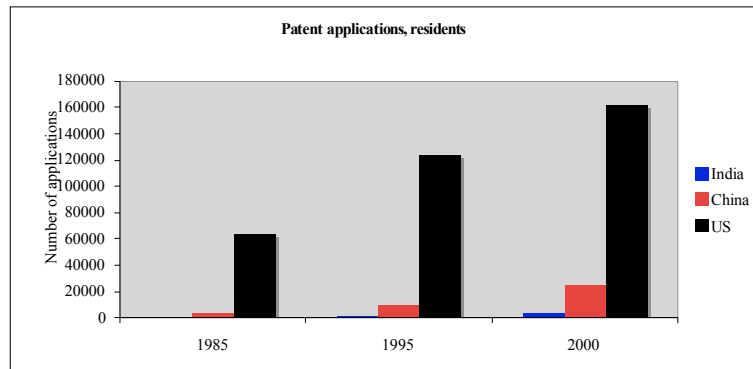
Source: Global Competitiveness Report, World Economic Forum

3.3. India's Competitiveness

India's global competitive position according to the World Economic Forum data continues improving. The quality of the

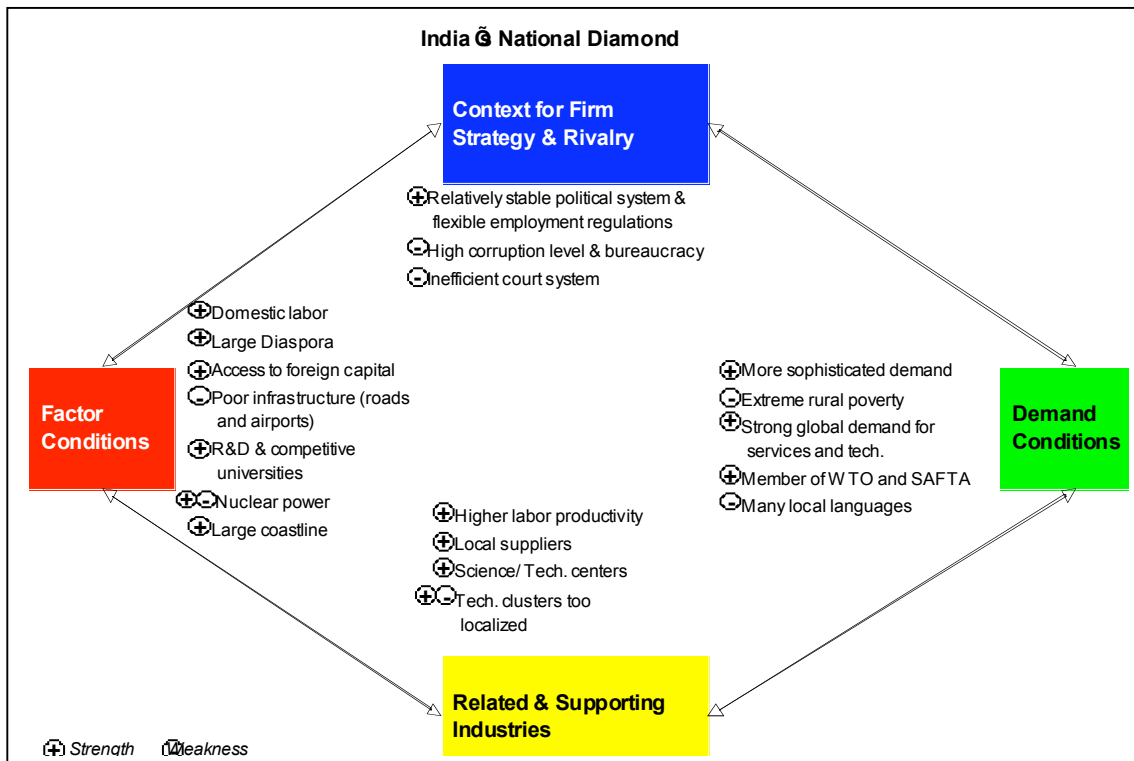
business environment in 2006 ranks better than other more developed economies such as Italy or South Africa or China (see Table 6).

Figure 6: Innovation indicator



Source: World Bank

3.4. India's National Diamond



Using Porter's country diamond framework (Porter, 1998) we analyzed the business environment of India. Factor (input) conditions indicate that India has a strong supply of domestic labor together with a powerful and large Diaspora. India's long coastline and availability of investment capital are strong inputs.

However, India's inadequate physical infrastructure heavily curtails its economic growth poten-

tial. Just over half of India's roads are paved and it takes around 45 days to get connected to a public grid (6 days in China). On demand conditions, the strong global demand on technology and services favors India's economy. Moreover, as regards internal demand, Indians are becoming more sophisticated clients; each year about 40 million Indians become part of the growing middle class. The context for firm strategy is favored by a stable political reality (especially after Prime Minister's Singh arrival) and changes in labor regulations, which have simplified firing and hiring procedures. As regards, related and supporting industries, India benefits from competitive technological and scientific research institutes and many local suppliers, but these inputs are still too localized and benefiting a small minority of Indians. In general, there is a favorable outlook of India's business environment, being infrastructure and the uncertainty of a corrupt environment the main barriers to firm competitiveness.

4. Recommendations: Economy and Business Environment

4.1. Technology centre and Agriculture potential

Maharashtra, like India, faces the challenges of sustaining fast economic growth while having to undertake large structural reforms. To maintain growth at a rate 8-10 % per annum the State Government should continue using its relative advantages as a technological and scientific research centre. However, given the large percentage of the national income originating from agricultural industries, the State Government should invest large resources in improving agricultural productivity, water management and irrigation.

4.2. Infrastructure

Maharashtra's power, ports, railway and roads networks need to improve for the state to continue being a foreign investor's destination. Infrastructure development requires central, state and local governments and given the low governance standards, the State Government should make sure

that a proper division of roles is achieved and that the private sector participates in the development through Public-Private partnerships (for example using models similar to CIDCO in developing Navi Mumbai).

4.3. Regional balance

Most of the development in Maharashtra has been concentrated in the urban centers particularly Mumbai and Pune. The state government in conjunction with Mumbai based firms should champion an effort to improve firm environment across the state by developing clusters like agribusiness, eco-tourism and Information Technology.

5. In-depth-Analysis of Bollywood-Cluster

5.1. Bollywood Today

India has a large presence in the world film industry today. India produces the largest number of films in the world: 1041 films were produced in India whereas US produced 815 in 2005 (European Audiovisual Observatory, 2007). Theater admission in India is more than twice bigger than US (3,770 per year in India, 1,403 in US) (EAO, 2007). In terms of revenue, however, Indian films do far worse than the rest of the world. Indian film industry has one percent share of the world film industry revenue while US earns 60% of the world revenue (PWC & FICCI, 2007). Total box office sales in India are 94% less than US, average ticket price is 95% cheaper than US, and India has 70% fewer screens than US (EAO, 2007). Despite small revenue, film is still a big chunk of India/Maharashtra's economy. Film industry shares 27% of India's total entertainment industry revenue (PWC & FICCI, 2007). In addition, the industry's impact extends to music, TV, video and live entertainment. Recently, Film industry is growing very rapidly. Overseas market has grown 40% in 2004-2006 period from increasing international demand (example of

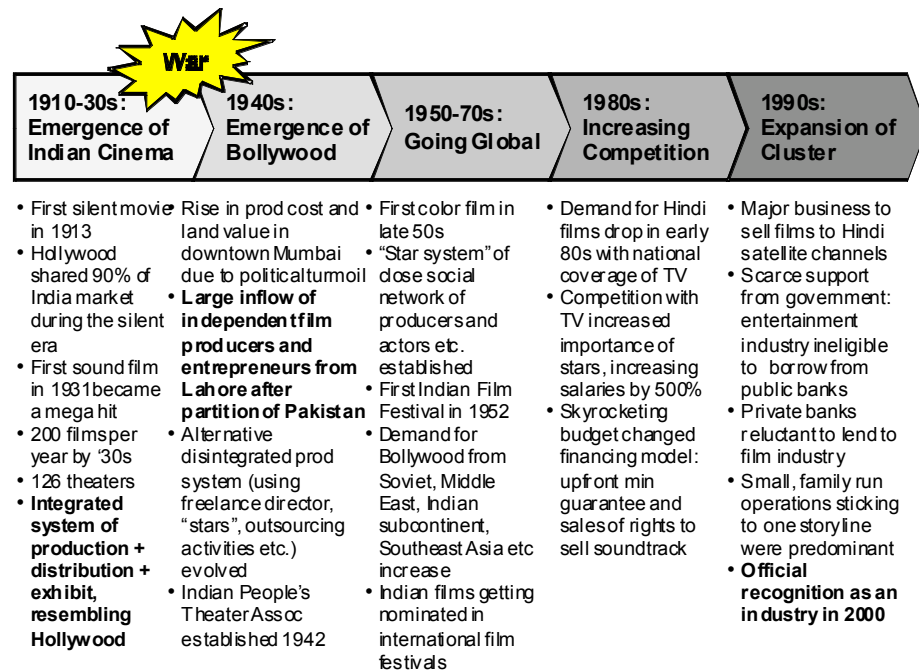
successful movies include “Monsoon wedding” “Bend it like Beckham” “Bride and Prejudice”), box office sales increased 41% in the same period mainly from increasing number of multiplex and booming affluent class. The growth is expected to continue at a rate of about 30% (PWC & FICCI, 2007).

5.2. Cluster History

Indian film industry consists of multiple regional clusters, and Bollywood is just one of them. Bollywood is the cluster located in Mumbai, producing the largest share of films (40%) mostly in Hindi (PWC & FICCI, 2007). Bollywood is the oldest film cluster in India, dating back to early

Figure 7: History of Indian Film Industry

20th century. The cluster became competitive after receiving a large inflow of Hindi speaking migrants with advanced film technology from Lahore after partition of Pakistan. A large



Source: Shedde, MoB

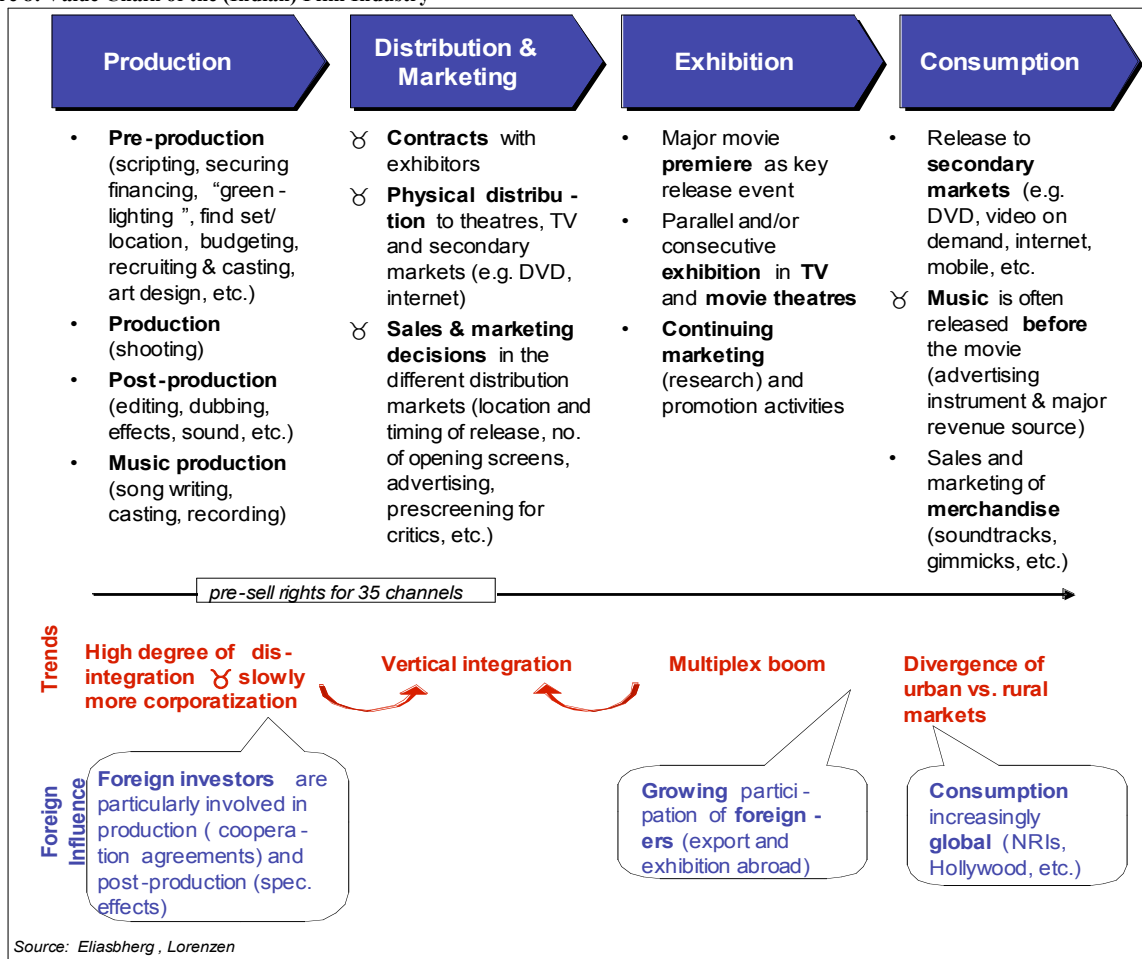
group of entrepreneurs emerged and disintegrated the production system into multiple layers. After Mumbai market became quickly saturated in late 40s, Bollywood came up with an original style called “masala”, which systematically combined story genres like comedy and romance along with symbol-driven song and dance in order to attract viewers across regions beyond lan-

guage difference. Because of wide popularity of “masala” style, Bollywood today still dominates segments like music and TV across regions in India. Other film clusters in India such as one in Hyderabad, called “Tollywood” produces second largest number of films mostly in Telugu. Other clusters produce films mainly in their regional language.

5.3. Cluster Value Chain

The value chain of Bollywood as shown in figure 8 contains four broad steps.

Figure 8: Value Chain of the (Indian) Film Industry



The production phase includes every activity that contributes towards creating the film. As the typical “masala movie” has a simple storyline that connects many professionally performed songs and dances, music is of major importance - in many cases even more important than the plot. Hence, in parallel, music scenes are written, choreographed, and recorded and amount to a

substantial portion of the budget (Garwood, 2006). In distribution and marketing companies market the movies and sell film rights to exhibitors, TV stations, and secondary market providers (DVD etc.). Different distributors typically cover different regions, particularly in terms of the physical distribution of film copies (Naachgaana, 2008a). Exhibition of Bollywood movies is related primarily to theatres and TV stations (70% of revenues). Exhibitors are often stand-alone local theatre operators or TV stations. The consumption phase includes any business but primary exhibition, thus the sale of DVDs, videos, soundtracks and merchandise. The secondary markets are becoming increasingly important and offer still a lot of untapped revenue potential esp. with regard to commercials and IT-related consumption channels such as internet (estimated at 46 million users with an active user base of 32 million) (Ernest & Young, 2007a).

→ Challenge 1: Capture revenue potential of secondary markets

Bollywood is still highly disintegrated with hundreds of individual players in each part of the value chain.⁶ However, since having received official industry status in 2000, corporatization is taking place, the industry structure is shifting towards bigger players and there is an integration of the different parts of the value chain and also among industries (music, telecommunication, TV) (see chapter 6). As producers nowadays can pre-sell their film rights to up to 35 different revenue sources (e.g. satellite TV, DVD, home video, radio stations, etc.), film production is the most lucrative part of the value chain. While still many individual producers finance and produce a movie based on their own industry-network (e.g. of financiers) increasingly also large integrated Hollywood-style production studios emerge embracing also the distribution and marketing

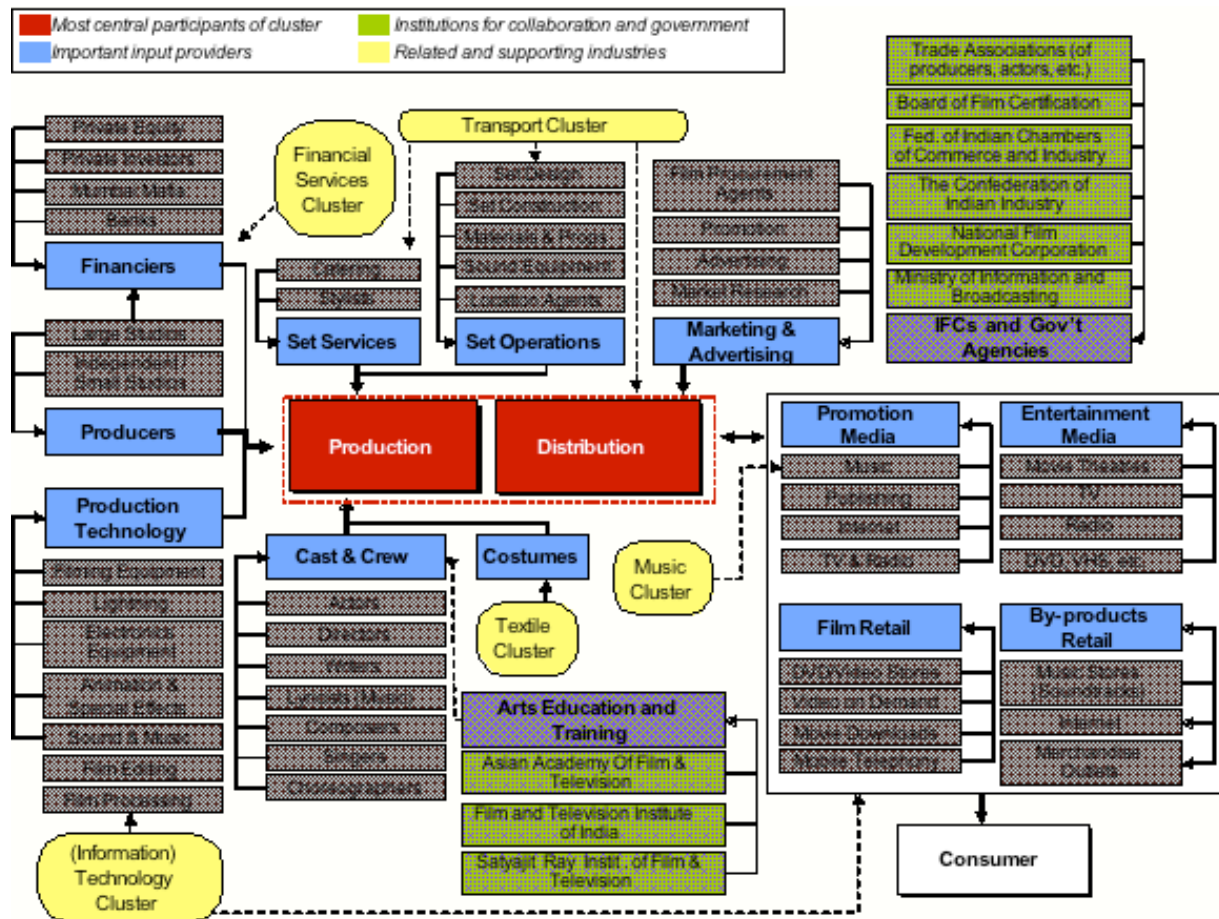
⁶ “Bollywood films have been produced, financed, distributed, and exhibited in complex collaboration among hundreds of independent producers each owning a small-scale production company (with one or fewer annual releases), independent distributors (covering different regional territories), private financiers, and stand-alone cinema operators.” (Lorenzen, 2006)

function. Very profitable is also exhibition: With an emerging affluent middle-class, urban centers are experiencing a growth of western-style multiplex cinema (300 in the last three years) creating 60% of all box office revenues (Ernest & Young, 2007a). Ticket prices have been 300% of conventional theatres, thus creating large revenue potential (De Ramos, 2007).

5.4. Bollywood's Cluster Map

Given the disintegrated nature and tradition of Bollywood, its cluster map is densely populated with individuals and companies that supply every possible input to the value chain.

Figure 9: Cluster Map of Bollywood



The most important players in the cluster are active in production and distribution; especially since larger companies are now emerging that integrate those businesses vertically. Most production inputs are by local suppliers, including production, technology, crews, and set services and

operations. These inputs are supported by the financial services and textile clusters near Mumbai as well as the national IT cluster. Since the film business was conferred 'industry status' in 2000, about 15% of film funds in 2006 came from institutionalized sources like banks and equity issues (Shedde, 2006) and since then, the private equity boom in India has increased the easy availability of finance (Singh, 2008). Distribution inputs are also largely local, including marketing and advertising agencies, promotion and entertainment media, as well as film and merchandise retail. Distribution is aided by the local music⁷ and transportation clusters. Music is often released before the film and is an important marketing tool and at the same time financing source for the movies (Bhushan, 2007). However, of particular importance both in production and distribution is the national IT cluster. It contributes to almost every step in the value chain, particularly production (digitalization, special effects, editing) and exhibition (conventional media as well as new channels such as internet and cell phones). Bollywood has a wealth of Institutions for Collaboration, some geared towards talent creation but the majority representing Bollywood as an industry for policy and trade discussions. The map also indicates that government presence in the industry is little – however, it exists (see chapter 5.5)

5.5. Cluster-Diamond

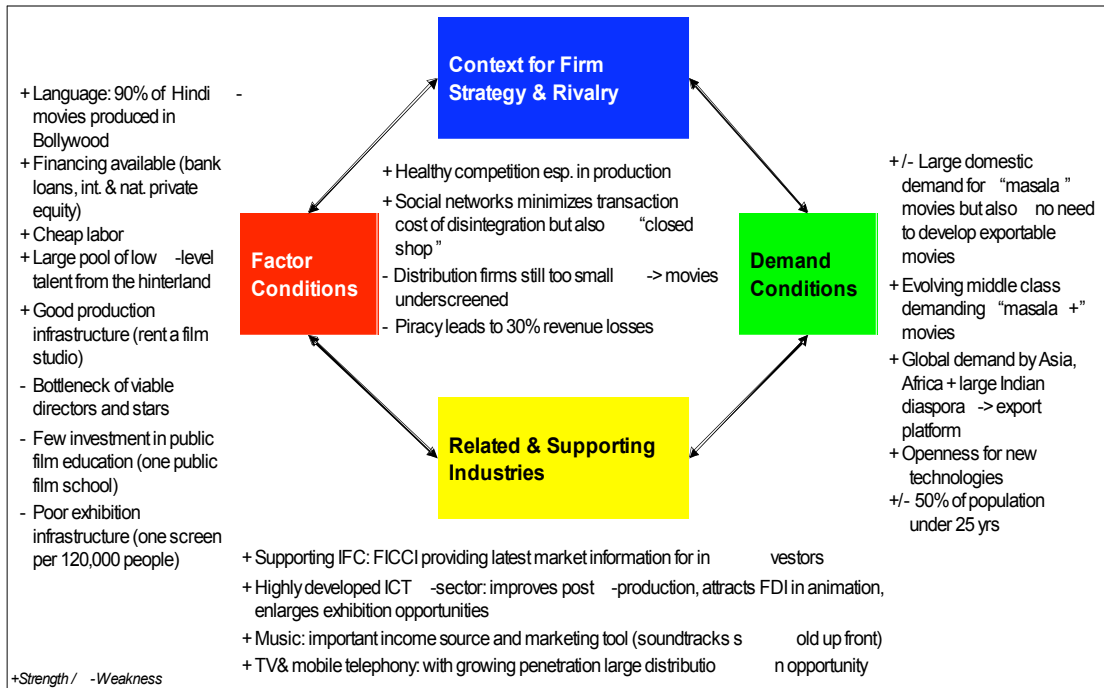
Context for Firm Strategy and Rivalry

The still highly disintegrated landscape of movie production leads to a healthy domestic competition. In addition, increased foreign presence adds to the competitive environment particularly for the emerging larger production studios. A tight social network of families and old ties reduces transaction cost (e.g. by lowering risk) but also acts as a “closed shop” for new stars and

⁷ In India up until the 1980s the only commercial music releases were film songs, and even today they make up 80 percent of music sales. (<http://www.bonza.rmit.edu.au/essays/2006/Mithila%20Gupta/BollywoodCinema.html>)

talent (Lorenzen, 2007) making it difficult to enter the industry. Nevertheless, movies often remain underscreened and forego revenue: while Hollywood firms make 3-4000 film copies, Indian firms provide on average only 250 copies (Ernest & Young 2007a).

Figure 10: Bollywood Cluster Diamond



The most important weaknesses of the cluster, however, is piracy leading to losses of up to 30% of revenues. Although a Copyright Act exists since 1957, enforcement is weak. Piracy is profitable because movies take up to one year to be screened outside of urban centers while rural demand exists much earlier. Thus, pirates can sell illegal copies for several months at high margins (Ernest & Young, 2007a, PWC, 2007).

→ Challenge 2: Fight piracy

Related and supporting industries

As discussed, Bollywood is inseparable from the music industry benefiting from its large pool of composer, poets and musicians. Through the highly developed ICT-sector, latest software, IT-

skills and favorable conditions such as reduced telephony rates, coverage of high-speed bandwidth connectivity are available. As for mobile telephony, penetration is still low (14%) but India is potentially the 4th largest wireless market in the world and already today non-sms data are the second highest revenue base for mobile phones. Consequently, Bollywood started producing short movies for mobile phones (Fitchard, 2007, Jayaram, 2007).

Factor conditions

Bollywood can draw on a large pool of low cost performers; however, given the closed social network the availability of viable stars and directors is small. This not only limits the quality but also the number of movies, because investors need stars to minimize the risk of failure (75% of movies flop) (Lorenzen, 2007 & Singh, 2008). Only one public film school exists and private schools emerge only recently (KPMG 2007). High demand for few stars starkly increased their salaries driving up the production budget by 100%. Legal contracts still not being common, stars usually commit to several projects at the same time, thereby contributing to inefficiencies and insecurity about movie success (de Ramos, 2007). A further weakness is at the level of the exhibition infrastructure. The total capacity is 13,000 screens, out of which only 9,500 remain fully operational per year and of these only 700 are multiplex screens (Ernest & Young, 2007a). A strength is the existence of easy to rent out film studios⁸ which together with cheap labor attract foreign film crews producing their movies in India (Atlas, 2007).

⁸ Film studios emerged because in the traditional disintegrated production sector, individual producers could not afford constructing own studios. Hence there are so-called film cities throughout India renting out space and all necessary infrastructure (Alter, 2007).

→ Challenge 3: Lack of viable stars and directors

Demand conditions

The demand for Bollywood movies is diversifying, and Bollywood needs to adapt quality and content its movies. The cluster's success historically has been based on its ability to cater to a large and fairly homogenous demand: coming out of poverty, people demanded escapist movies with emotion, dance and singing: the typical "masala movie". However, an attractive scale of domestic demand prevented the industry from developing other formats, such as movies for Western export markets, with larger revenue potential. The overseas market is currently estimated at Rs. 7 billion (approx. USD 180 million), and expected to grow at 18% annually.⁹ But Bollywood only captures less than 10% of its box office revenues abroad (PWC & FICCI 2007).¹⁰ In addition, with a growing middle class (300 million) there is also an increasing gap between urban and rural demand. The former now demands "masala +" movies¹¹ - a demand that cannot be met due to limited availability of talent (Shedde, 2006, Dwyer, 2006). Hence, international movies begin to penetrate the market to fill this demand gap. Although currently only 2% of annual revenues and 5 % of about \$1 billion tickets sold are being captured by foreign firms (Naachgaana, 2008b), foreign movies present a challenge. Hollywood movies with better marketing (larger budgets) are gaining market share.¹² Especially the large young population (more than 50%) is disillusioned with domestic music and cinema and are more susceptible to the arrival of Hollywood.

⁹ A report by Ernst & Young is even more optimistic, valuing the Diaspora at USD 200 million and estimating a CAGR of 20%.

¹⁰ The taste of foreign, western audiences are said to significantly differ from Bollywood movies with regard to 1) song & dance, 2) lengths of 2 ½ hours, 3) too high melodrama quotient (Ernest & Young, 2007b)

¹¹ Still emotional but telling a more sophisticated story that does more than just connecting song sequences, that uses less music overall, and that portrays a higher quality of sound and special effects.

¹² Hollywood profits in India are growing at 35 percent a year (Sappenfield, 2007)

→ **Challenge 4: Respond to diversifying demand patterns (rural, urban, international)**

→ **Challenge 5: Increasing international competition**

5.6. Role of Government

Although neither the government of India or Maharashtra has actively responded to the cluster's need in terms of policy, they certainly played a role in setting up institutions fostering competitiveness. The Ministry of Information and Broadcasting (MIB) provides guidelines for the import and export of films, and includes in its mandate the development of the film industry and the organization of national film festivals. MIB has a film division which is allocated about 10% of the Ministry budget (67 crore rupee in 2008-2009) according to their annual report (MIB, 2008). MIB oversees many IFCs such as the Directorate of Film Festivals which promotes national film festivals, the Central Board of Film Certification which regulates film content, the National Film Development Corporation of India which promote high quality films, and the Films and Television Institute of India which was set up in 1960 to train film and television production.

6. Bollywood's Strategic Issues

A new Indian film industry is emerging in Bollywood, one that looks at filmmaking as a formal business (rather than a social network of entrepreneurs) – even as it is still searching for the right model to apply. This change is manifested through several important trends including corporatization, integration, foreign investment and digitization impacting also the challenges so far identified.

6.1. Cluster Trends

6.1.1. Corporatization

After receiving industry status which facilitated borrowing from the state bank Bollywood started corporatizing. Corporatization refers to the streamlining of the value chain, creating not

only formalized networks and joint ventures but also large-scale studios in production, distribution, and exhibition. In 2006, already an estimated 15% of Bollywood movies were "corporatized" (Aanand, 2006). The trend impacts the cluster in several ways: (1) It increases the average size of film businesses enabling larger-budget projects; (2) corporations have better access to finance which helped reducing interest rates for financing films (and thus even small producers can access loans now more easily); (3) it enables producers, by having more funds at their hands, to invest in more efficient production, technologies, and marketing.¹³ Additionally, producers are more willing to sign on directors at higher sums and thus investing in the quality of content (Naachgaana, 2008b). Corporatization hence positively impacts the challenges of diversifying demand patterns and increased international competition.

6.1.2. Integration

Corporatization has given rise to another important trend: integration along the value chain. Esp. distributors but also players from outside the industry are integrating into production and exhibition as these are the most profitable parts of the value chain (Raghavan, 2008); or distributors are integrating in other industries to better reap benefits from new communication channels. For example, distribution firm Adlab moved into telecom, TV producers (UTV) moved into finance and release of films (KPMG, 2007) and, India's largest conglomerate Tata Group formed Cutting Edge Entertainment in 2002 (de Ramos, 2007). This has the following impacts: (1) Larger integrated production companies can operate more efficiently (economies of scale enhance profits)¹⁴;

¹³ Consequences include a >60% decrease in average production time (de Ramos, 2007) and more sophisticated market research in pre-production (PWC & FICCI, 2006)

¹⁴ "Being a pure play doesn't give you the scalability beyond a certain point," agrees Ronald D'Mello, chief operating officer and corporate-finance strategist at UTV." (quoted by de Ramos, 2007).

(2) these companies can benefit from control over distribution surpluses¹⁵; and (3) integrating up to exhibition allows producers to capture a portion of box-office receipts.¹⁶ These impacts together with generally higher professionalism in larger firms positively influence the challenges of lack of talent, and again the challenges of diversifying demand and increased international competition.

6.1.3. Foreign Investment

Foreign presence plays an ever more important role in Bollywood in all parts of the value chain. All the major Hollywood studios that have production offices in India – MGM, Warner, Sony, Paramount and Disney – have developed different models of co-production, from film finance and distribution arrangements to co-productions with equal equity participation by all overseas parties and their Indian producers and a share of copyright that's thereby created.¹⁷ The Indian government is promoting this trend by arranging co-production agreements with individual countries (so far UK, Germany and Italy) facilitating tax and import issues and is also discussing to open a single window for investors offering centralized clearance service to prospective foreign film producers (MIB, 2007). Foreign investments are valuable for Bollywood with regard to exchange of experiences, training between technicians and a possible positive impact on storylines and general quality of movies, and are hence responding to the challenges of divergent demand and foreign competition.

¹⁵ The surplus after distributors have recovered their costs and earned their commission is usually split between distributors and producers, but underreporting by distributors is common (Naachgaana, 2008)

¹⁶ Theatre ticket receipts still make up 70% of a typical Bollywood film's revenues (de Ramos, 2007)

¹⁷ For example Walt Disney is planning to make animated films using the voices of actors in Bollywood and Paramount is planning to setting up an own film studio.

6.1.4. Digitization

Advances in digital technology are in the process of changing the face of the film business - the impact is expected to be as radical as internet and cell-phone technology changed the communications business (PWC & FICCI, 2007). Digitization impacts the entire value chain of the industry: (1) Digital technology can significantly improve film production by leading to efficiency improvements and higher control over the production process.¹⁸ (2) Distributors can benefit from more flexibility and substantial cost savings, which hinges on the idea of ‘digital cinemas’ (the projection of movies in a digital format without the need for actual film prints).¹⁹ (3) ‘Digital cinemas’ provide similar flexibility benefits (e.g. adjustments to timing of screening) and cost-saving effects to exhibitors as to distributors, and it could also allow exhibitors to raise ticket prices given the better quality of the images shown. However, exhibitors also bear the highest investment costs in terms of purchasing digital projectors²⁰, facilitating the technology, and support services. Due to these high costs, only large (multiplex) chains have begun investing significantly. (4) Digitization helps to curb the problem of piracy. Digitization of both movies and cinemas would allow an almost instant distribution to rural cinemas and thus close the time-window in which piracy is profitable. Moreover, digital films often include visual features that can deter the quality of an illegal recording of a movie (e.g. a large mark on the screen that is not visible in the cinema but on recorded copies). (5) Digitization allows charging higher prices thus increasing revenues²¹, which translates into higher entertainment and income tax collections.

¹⁸In terms of efficiency, about 85% of the film shot at production is not used – a waste that is not existent with digital technology. Producers have more control given the increased speed and flexibility of digital technology (e.g. shots can be transported and combined with sound effects by means of pushing a button). (Eliashberg et al, 2005)

¹⁹ Savings in distribution in the US film industry, for example, are estimated at more than USD 1bn through digitization of films and cinemas. (Eliashberg et al, 2005)

²⁰Estimated at USD 100,000-150,000 per screen (Eliashberg et al, 2005)

²¹ “Early migrants to the digital cinema system have reported more than 100% increase in revenue collections. “ (PWC & FICCI, 2007)

Smaller cinemas can thus become more commercially viable (by facing less piracy and higher revenues), which translates to more employment opportunities and a strengthening of the rural exhibition industry. 6) General film quality improves also, especially because digital films (on contrast to prints) do not lose visual quality when shown many times.

Thus, digitization is a promising trend in many ways, but certain challenges need to be overcome. Digitization has only happened to a small extent in Bollywood – regional Tamil cinemas are, for example, ahead in the game.²² Also, lacking technological standards impede the growth of one unifying and affordable technology (Naachgaana, 2008b).

6.2. Cluster Challenges

Challenge 1: Capture revenue potential of secondary markets to benefit from large opportunities with the emergence of digital platforms, increased mobile telephony and internet downloads, and tap into still underused advertising potential in the entertainment industry in general.

Challenge 2: Fight piracy to prevent revenue losses of up to 30% for the industry and hence threatens the industry's attractiveness for investors.

Challenge 3: Counterbalance the lack of viable stars and directors which limits quantity and quality of Bollywood movies thus influencing also challenge 4 and 5.

Challenge 4: Respond to diversifying demand patterns (rural, urban, international) and provide sufficiently adapted movie content and quality to the different audiences.

Challenge 5: React to increasing international competition in order not to lose large parts of the domestic demand especially as Hollywood will form the taste of the audience in a different way.

Bollywood needs to be able to compete for the audience that enjoys foreign blockbusters.

²² The reason is that regional cinemas were the first who initiated digital solutions to cut costs, and thus the impact is most visible regionally. Bollywood has been late in the game of digitization, and particularly small exhibitors are still reluctant to make the needed investment. (Naachgaana, 2008)

7. Recommendations: Cluster

The trends already positively influence many of Bollywood's challenge. We give the following recommendations to further tackle the identified challenges (red addressing private business, blue addressing the government and black for both).

<p>Improve availability of viable stars and directors</p> <p>Provide incentives for setting up polytechnics, institutes and film schools, as well as that existing universities include Film, Broadcast, Event Management and Digital Technology in their curriculum.</p> <p>Enter into contractual relationships with directors and movie stars to ensure creative input (and hence replace the social network)</p>	<p>Respond to increasing international competition</p> <p>Further t integrate the value chain, so that studios with several projects on hand can raise funds in the market on a corporate level instead of each film scrounging separately</p> <p>Promote Bollywood branding abroad (e.g. through film festivals, etc.)</p>
<p>Better use of secondary markets</p> <p>Tap into consumer base for mobile phones, direct-to-home and conditional access systems before foreigners will do so</p> <p>Support digitization:</p> <ul style="list-style-type: none"> - As exhibitors bear the highest costs government should give incentives such as tax breaks for cinemas of a certain size so they can afford digitization, or should give similar incentives to digital technology companies to offer affordable technological solutions. - Introduce technological standards - Government and private sector should engage in creating additional IFCs, especially to reap the benefits of India's technology cluster. 	<p>Fight piracy</p> <p>Allocation of specific funds to be utilized in advocacy and awareness as well as enforcement and legal matters.</p> <p>Release films much faster on DVD and TV after the theatrical release to make piracy less profitable</p>
<p>Respond to diversification of demand (rural, urban, international)</p> <p>Adapt contents to audiences:</p> <ul style="list-style-type: none"> - Cater to new taste of young population (animated movies) - Keep traditional "masala movie" for growing rural market and export markets in developing countries - Improve storylines for middle-class audience <p>Employ better methodologies to achieve efficiency in film-making.</p> <p>More effective marketing and better subtitling for international markets</p> <p>Reinstitute tax breaks for multiplex operators to improve exhibition infrastructure and better cater to urban audience.</p> <p>Benefit from foreign knowledge to improve quality of movies</p> <ul style="list-style-type: none"> - foster co-production treaties with other countries - encourage development of Bollywood as a production hub by setting up a "single window clearance" system for shooting in India 	

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