Guidebook for European Investors in India

European Commission
Asia Investment Facility

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KQ-45-02-006-EN-C

OFFICE FOR OFFICIAL PUBLICATIONS
OF THE EUROPEAN COMMUNITIES
L-2985 Luxembourg

ISBN 92-894-4141-0

www.europa.eu.int/comm/europeaid/projects/asia-invest

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A great deal of additional information on the European Union is available on the Internet.
It can be accessed through the Europa server (http://europa.eu.int).

Cataloguing data can be found at the end of this publication.

Luxembourg: Office for Official Publications of the European Communities, 2002

ISBN 92-894-4141-0

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Printed in Spain

PRINTED ON WHITE CHLORINE-FREE PAPER

PREFACE

Asia Investment Facility

This Guidebook on India is part of a series of guides that are funded under the Asia Investment Facility, an instrument of the Asia-Invest Programme – a European Union initiative. The Facility is used to highlight investment opportunities in selected emerging and developing countries in Asia where there is relatively little information on the market.

The Facility covers studies to identify, evaluate and promote focused market opportunities. The studies cover a variety of issues like the countries' business and investment environments, the legal and institutional framework including analysis of sectors that offer the greatest potential for European companies. Detailed sources of information and contact points are part of the final reports.

Any organisation in Europe, especially intermediary bodies like chambers of commerce or sector associations, interested in hosting a workshop to promote the reports' findings should contact Asia-Invest.

We would like to ensure that all relevant organisations that may have an interest in India are informed about this guide. We encourage you to provide any such recommendations. To order a copy of other Guidebooks (on Bangladesh, India, Nepal and Sri Lanka) or additional copies of this Guidebook please contact Asia-Invest.

Asia-Invest, building partnerships between European and Asian companies

Asia-Invest is a European Union initiative that aims to promote and support business co-operation between South and South-East Asia and China. The Programme provides assistance to intermediary organisations to facilitate mutually beneficial partnerships between companies in the EU and Asia as well as to strengthen the framework conditions to increase trade and investment flows between the two regions.

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INTRODUCTION

This Guidebook for European Investors in India has been prepared under contract for the European Commission, with funding for both the research and production of the guidebook financed by the Asia-Invest Programme of the EuropeAid Co-operation Office.

The Guidebook and the research behind it are the work of PE International. In the course of their research, the consultants had discussions in many key business centres of the EU Member States and India in order to collect current financial and factual information, and to gain an insight into the perceptions, motivations and experiences surrounding European investment in India, from both viewpoints.

The Guidebook attempts to deal with the various topics that are likely to be relevant to potential investors and also includes useful Internet addresses in order to allow investors to update their information.

The material in this Guidebook is solely provided for the guidance of those contemplating investment, but it is no substitute for professional advice, which should be sought before taking any specific actions. The information in this document is believed to be correct as at November 2001, but no responsibility is taken for its accuracy.

This document has been produced with the assistance of the European Union. The views expressed herein are those of the consultant and can therefore in no way be taken to reflect the views of the European Commission.

EXECUTIVE SUMMARY

1. Since the beginning of the nineties, India has successfully achieved several reforms aiming at liberalising and modernising its economy. This has entailed dynamic performances in numerous sectors such as Food Processing, Information technology, Engineering or Telecommunication. This trend is expected to continue with further trade opening, an amelioration of the infrastructure and an important growth of consumption. Its huge market, stimulated by a relevant part of the population whose consumption is close to European standards, represents an attractive target for European businesses. Its democratic background and its sound domestic and external sector are positive factors that can reassure investors even if infrastructures and trademark protection are still in an early stage.

2. During the last ten years, the country has finally managed to integrate world trade and investment flows. India is now finishing its reforms to meet the WTO demands, and could be considered as a fair player of global exchanges. It ensures a continuous path toward further trade liberalisation and openness to foreign direct investment. The consolidation of its trade and cooperation with the EU, now catching up with the US influence, will offer numerous opportunities for European companies. The effort of both the European community and the Indian government to enhance those exchanges should benefit businesses that may find support or help in the political process.

3. Low labour costs, English speaking proficiencies, a solid educational system that forms highly qualified workers, a top Information technology sector, a diversifying and developing domestic market, a relevant share of the population with income comparable to that of Europe (above 35 million), a growing integration into world and regional trade flows, are all major arguments in favour of considering India as a prime location for business operations and investments. Incentives and supports from the government for export-oriented units, as well as a reasonably simplified taxation on profits and dividends, can attract further investment.

4. The huge potential of the Indian Food processing sector, still widely under exploited, leaves many opportunities for European companies, especially in the development of Bio alimentation and of semi-processed food.

5. The Engineering sector benefits from a wide and complete capacity of production. With a growing domestic market and low production costs, it remains an attractive sector for European investment.

6. The Telecommunication sector is enjoying a high growth rates both because of a low initial teledensity and of a deregulation of the sector. European participation is demanded mainly for technology and knowledge support, which offers plenty of opportunities for business operation.

7. The Indian IT sector is one of the world top industries of its domain. It is now looking for extension toward other countries and for the establishment of research and knowledge cooperation.

8. A good understanding of the local environment, both on a business and on a cultural basis, is crucial in achieving successful investment project. A realistic assessment of the market is also essential to allow a pertinent choice of location, potential partners and forms of investment. Administrative difficulties should also be assessed and considered before starting any operation for a good knowledge of Indian ways may considerably simplify procedures. Variation of states policies and characteristics may add to the complexity of choosing the right location for investment.

9. Initial procedures (licensing) have been simplified and strengthened to generate more foreign investment, especially for export-oriented operations that benefit from numerous incentives from the government. Difficulties and hurdles may still arise in dealing with local authorities or when trying to reach the domestic market.

10. Managing the local human resources and dealing with Indian partners require a deep understanding of local conditions and ways of thinking. Still, the general satisfaction of European companies settled in Asia is a significant evidence that, provided those key elements have been taken into account, pay-backs and returns on investment compare favourably with many other potential location for investment.

GLOSSARY OF ACRONYMS

AACMA	Auto Components Manufacturers' Association
ADRs	American Depository Receipts
AGM	Annual General Meeting
ASEAN	Association of South East Asian Nations
ATM	Automatic Teller Machines
B2B	Business-to-Business
B2C	Business-to-Consumer
BE	Bachelor of Engineering
BII	Bottled in India
BIO	Bottled in Origin
BIS	Bureau of Indian Standards
Bn	Billion
C&F	Carrying & Forwarding
CA	Chartered Accountant
CAD	Computer Aided Design
CDMA Code	Digital Multiple Access
CENVAT	Central Value Added TAx
CEO	Chief Executive Officer
CIF	Cost Insurance & Freight
CIOL	Cyber India Online Limited
CKD	Completely Knocked Down
CNG	Compressed Natural Gas
COAI	Cellular Operators Association of India
CRR	Cash Reserve Ratio
CV	Curriculum Vitae
DGFT	Directorate General of Foreign Trade
DoT	Department of Telecommunications
DS	Direct Selling
DTAA	Double Taxation Avoidance Agreement
DTH	Direct-to-Home
EOU	Export Oriented Unit
EPZ	Export Processing Zone
ERP	Employee Resource Planning
ESOP	Employee Stock Option Plan
EU	European Union
EXIM	Export-Import
FDI	Foreign Direct Investment
FEMA	Foreign Exchange Management Act
FII	Foreign Institutional Investor
FIPB	Foreign Investment Promotion Board
FLEX	Tech. That will allow carriers to provide highly cost-effective 2 way messaging
FMCG	Fast Moving Consumer Goods
FMCG	Fast Moving Consumer Goods
Gbps	Giga bytes per second
GDP	Gross Domestic Product
GDRs	Global Depository Receipts
GNP	Gross National Product
GoI	Government of India
HP	Horse Power
HR	Human Resources
HR	Human Resources
HVDC	High Voltage Direct Current
ICICI	Industrial Credit and Investment Corporation of India
ICWA	Institute of Cost and Works Accountants
IDBI	Industrial Development Bank of India
IFCI	Industrial Finance Corporation of India
IMF	International Monetary Fund
IMFL	Indian Made Foreign Liquor
InfoTech	Information Technology
INMARSAT	International Maritime Satellite Organisation
IPO	Initial Public Offering
ISDN	International Subscriber Digital Network
ISP	Internet Service Provider
IT	Information Technology
ITA	Information Technology Associates
JV	Joint Venture
Kbps	Kilo bytes per second
KVA	Kilo Volt Amperes
kWh	KiloWatt Hour
L/C	Letter of Credit
LIBOR	London Interbank Offering Rate
MAT	Minimum Alternate Tax
MBA	Master of Business Administration
Mbps	Mega bytes per second
MCA	Master of Computer applications
MM	Multi-level Marketing
Mn	Million
MNCs	Multi national companies
MoU	Memorandum of Understanding
MW	Mega Watts
NASDAQ	National Association of Securities Dealers Automated Quotation
NASSCOM	National Association of Software and Service Companies
NBFC	Non Banking Financial Company
NCAER Research	National Council for Applied Economic
NGO	Non Governmental Organisation
NLD	National Long Distance
NRI	Non-Resident Indian
OCB	Overseas Commercial Bodies
OECD	Organisation for Economic Cooperation and Development
OEM	Original Equipment Manufacturer
OEM	Original Equipment Manufacturer
OPEC	Oil Producing and Exporting Countries
PAT	Profit After Tax
PC	Personal Computer
PF	Providend Fund
PG	Post Graduate
PhD	Doctor of Philosophy
PLR	Prime Lending Rate
POCSAG	Post office code Standard advisory group
PPP	Purchasing Power Parity
PSUs	Public Sector Undertakings
R&D	Research & Development
RBI	Reserve Bank of India
Rs	Indian Rupee
SEBI	Securities & Exchange Board of India
SEC	Socio Economic Classification
SIA	Secretariat Of Industrial Assistance
SKD	Semi Knocked Down
SME	Small and Medium Enterprises
SOHO	Small Office-Home Office
SSI	Small Scale Industries
STP	Software Technology Park
TRAI	Telecom Regulatory Authority

UNCITRAL	United Nations Commission for International Trade Law
VAT	Value Added Tax
VCC	Venture Capital Company
VCF	Venture Capital Fund
VSAT	Very Small Aperture Terminal
VSNL	Videsh Sanchar Nigam Limited
WAP	Wireless Access Protocol
WiLL (WLL)	Wireless in Local Loop
WTO	World Trade Organisation
Y2K	Year 2000

1. INDIA – AN INTRODUCTION

India is the world's second most populous country, with a population of crossing the 1- billion mark in 2000. With an annual growth rate in excess of 2%, India will be the most populous country in the world by 2040 A.D to. Nearly one-fourth of the population lives in urban areas. The national average population density is 274 persons per sq. km, but densities in the populated urban districts can be as high as 6880 per sq. km. The metropolises of Mumbai, Calcutta, and Delhi all have populations exceeding 10 million people each. Twenty-three cities in India have population of more than one million people.

1.1 Demographic profile and social tradition

There are enormous contrasts in social and economic development levels between cities and villages. At the national level, nearly two-fifths of India's people live in poverty, unable to meet their essential food, clothing and shelter needs; most of them live in rural areas. The states of Uttar Pradesh, Bihar, Orissa and Madhya Pradesh have the highest populations living below the poverty line. Population control, literacy and elimination of poverty are the most formidable social challenges India has to face.

Language, religion and traditions

India's most unique feature as a country is its heterogeneous mix of people, offering enormous cultural and linguistic diversity. Travelling in various parts of India, one can experience the apparent differences in the lifestyle, physiognomy, language and traditions among people in these parts, who are descendants of Negroid, Austric, Sino-Tibetan, Dravidian and Indo-Aryan ancient races, besides settlers from other civilisations.

India has eighteen statutorily recognised languages, besides 180 minor languages and 7000 dialects, adding to India's linguistic diversity. Hindi, the most widely spoken language, is the national language, while the regional languages are the official languages of the States concerned. Given the complexities of dealing with several regional languages while administering the young nation, English was recognised under the Constitution as an additional official language and as the authoritative legislative and judicial language of the Union of India.

All inter-state correspondence-including Court language- is in English or Hindi, with translation in the regional language where necessary. Although the Constitution provided for delisting English as an official language within fifteen years, English still continues to be used widely as the official language, the business language and the mainstream higher education medium in India. English is often the only link language between persons from different parts of India.

Religions

The Constitution grants all citizens of India the right to freedom to practice any religion as a fundamental right. Hinduism is the predominant religion in India, practised by over 80% of the population. The other important religious denominations include the Muslims (12%), Christians (2%), Sikhs (2%), Buddhists (1%), Jains and Zoroastrians.

Social traditions

Enormous diversity exists in food habits, social customs and traditions in different parts, particularly between the northern and southern parts of India. However Indian families tend to be conservative, especially with regard to social habits of the young. Marriages and festivals are the most important occasions for social gatherings, celebrated with much fanfare all over India.

While the Constitution does not distinguish between any class of citizens, the centuries-old caste system continues to a part of the social fabric, albeit informally. The Hindus were classified into four castes based on their occupations. These were: the Brahmins (the educated ones and the priests), Kshatriyas (warriors), Vysyas (the merchants) and the Shudras (the menial workers). While the caste system has been abolished, it is still easy to infer a person's caste from the family surname. Hierarchies exist among castes and even within a caste, and can come into consideration during marriages.

A few essential facts about Indian social customs:

- At least one-third of India's population is strictly vegetarian- abstaining from meat, fish and egg products.
- Non-vegetarian food, drinking and smoking are considered socially unacceptable in some groups, and are not allowed in religious places or during festivals.
- The cow enjoys a special status among the Hindus and is revered as a holy animal. Beef consumption is banned in all but two states (Kerala and West Bengal).
- A vermilion dot on a Hindu woman's forehead indicates that she is married.
- Generally, women dress in conservative Indian clothes such as the salwar kameez or the saree, and rarely in Western clothes. However, the younger generation is increasingly influenced by international fashion trends.
- The traditional Indian greeting is to fold hands before the other person. It is not customary for women to shake hands with men, though trends are changing in business situations.
- Kissing in public is, by and large, disapproved.

Currency

India's currency is the Rupee, consisting of 100 paise. Standard denominations of the currency in circulation are:

Notes: One, Two, five, Ten, Twenty, Fifty, Hundred, Five-hundred, and Thousand Rupees

Coins: Five, ten, twenty-five, fifty paise; one, two, and five rupee coins

The exchange value of the Indian currency is 42 rupees per Euro (October 2001) and 47.50 per US Dollar.

Besides currency notes and coins, travellers' cheques (for travel only) and credit cards are popularly used in commerce, especially in trade of consumer products and services. All the major international cards, American Express, Diners Club, Master Card and Visa are available in India.

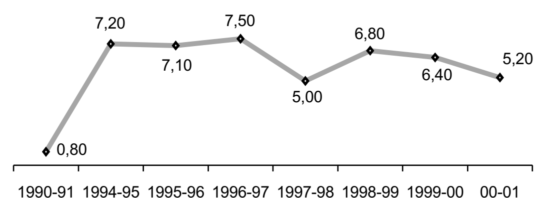
The Indian counting system also uses some traditional terms, which are quite different from international standards. Two such Indian terms are the **lakh** (hundred thousand) and the **Crore** (ten million), which are widely used in official reports, banking correspondence and even in the annual Finance Budget.

1.2 Economic profile

Independent India's economic development program has been based on the key objectives of self-reliance and social equity. Till the eighties, India's industrial policy created India's industrial base under a system of licensing, strict foreign exchange controls and excessive protection from imports, which protected even inefficient and internationally non-competitive enterprises. While the Indian economy grew steadily under central planning, it remained isolated and insulated from the mainstream global market forces.

Two events in 1990, the Gulf War and the collapse of the Soviet Union, forced India into an impasse that necessitated a complete overhaul of its external sector policies, under the direction and guidance of the International Monetary Fund (IMF). Following a series of economic reform measures since 1991, India has responded positively to the dramatic changes that have been introduced over the last eight years. The Indian economy is presently maintaining a growth rate of 6.5%.

Figure 1 — GDP growth trends (%)



Source: Statistical Outline of India/ Economic Survey.

India's present economic status reveals the following profile:

- A Gross Domestic Product of Rs 17.6trillionwith a nominal GNP of US$ 370 per capita
- The fifth largest economy in terms of Purchasing Power Parity (PPP), with a GNP of US$ 1.66 trillion PPP, and lagging only behind USA ($7.2 tn), China ($4 tn), Japan ($ 2.93 tn) and Germany (1.70 tn). PPP is defined as the number of units of a currency required to buy the same amount of goods and services in the domestic market, as one US $ would buy in the USA.
- A strong agriculture sector accounting for nearly 25% of national output and 15% of exports, with self sufficiency in all important crops except oilseeds
- A diverse industrial base with self reliance in all core industries and a wide range of engineering products, but domestically weak in electronic hardware technology
- A robust services sector accounting for 45% of national product, and growing by 8% annually
- Mature financial sector and capital market with over 8500 listed companies and market capitalisation equivalent to US $ 2 trillion
- A stable external deficit between 1.5 and 2%, despite perennial import dependency in petroleum goods and fertilisers
- A long history of stable parliamentary democracy and western model of legal and accounting system
- A policy environment that provides increasing freedom to business enterprises and foreign investment, through periodic liberalisation of investment and trade regulations
- A diversified portfolio of foreign exchange reserves including foreign equity, demand and time deposits and institutional investments

1.3 Market profile

India's initial economic reforms in 1991, especially policies that allowed foreign participation in consumer goods, aroused great expectations in the international business world. India's one billion people represented a nascent but world-sized market for all consumer goods and durables, to be served through industrial/ manufacturing investments in India.

However, there were no past-consumption indicators for a whole range of consumer goods that had never been manufactured or marketed before in India, and market segmentation was based on official income classifications, which showed the Middle Class as consisting of more than 350 million Indians. The plans of several large foreign companies- white goods, passenger cars and other durables- were based on this market size estimate, which was bigger than the population of the world's most advanced economies.

Initial estimates of market size and spending power of India's middle class proved to be grossly off the mark: the absolute purchase power in a middle-income Indian home was much lower than world average levels. Even the purchase-power-parity criterion, according to which India ranks among the top six countries, was unrepresentative of purchasing power in respect of consumer durables like refrigerators, kitchen appliances, washing machines, etc. because the PPP compared parity among countries based on prices of food and essential commodities/ services and not using the same living standards. As a result of overestimation of market size, several sectors, especially the automobile sector, were saddled with enormous over-capacity.

Subsequent classifications, based on consumption levels and penetration trends of consumer goods, have resulted in a more realistic estimate of the market potential, according to which 35 million homes comprise the effective consumer base for durables like automobiles, white goods, and consumer electronics.

Table 1.1 — India's consumer classes

Consumer group	Number of households, Mn			Growth
	1995-96	2001-02	2006-07	1995-2007
The very rich*	1.2	2.0	6.2	416 %
The consuming classes	32.5	54.6	90.9	179 %
The climbers	54.1	71.6	74.1	37 %
The aspirants	44.0	28.1	15.3	- 65 %
The destitute	33.0	23.4	12.8	- 61 %
Total	164.8	180.7	199.2	21 %

* The term 'very rich' is not based on any international reference standard.
Source: National Council for Applied Economic Research.

Socio-economic classification

Consumers are also segmented on the basis of socio-economic classification (SEC), which groups households by the education level and the occupation of the chief earning member. The groups SEC A and SEC B represent educated urban consumers, making up 5.88 million households in sixteen cities. More than 75% of SEC A and B homes live in eight cities of India, and receive the greatest attention in respect of trendy and lifestyle products.

The rural market

India has more than 0.6 million villages, housing three-fourths of its people, earning one-third of the national income. Consumption of goods and services depends to some extent, on lifestyles, besides income levels. A large rural population, low penetration of English outside urban areas, disparity in education and literacy levels, mass media coverage and inadequate infrastructure - power, telecom and roads- in villages, all influence India's consumer markets significantly.

The rise of the rural market has been the most important marketing phenomenon of the nineties, providing volume growth to all leading consumer goods manufacturers. Rural consumers represent more than 50% of India's 'Consuming Classes' and have become the prime target of Fast Moving Consumer Goods (FMCG) companies who are repositioning several brands at this burgeoning segment.

However, unlike urban markets, rural areas have their own unique characteristics: seasonal demand, language barriers, gender dominance in decision- making, absence of organised distribution structures and perception barriers to several lifestyle products. As a result, penetration trends of some lifestyle products (white goods, especially) are much lower in the rural areas, despite a noticeable share of rural households in high-income households.

Table 1.2 — Rural market shares of selected consumer durables

Product	Rural share
Bicycle	78 %
Electric iron	43.45 %
Table fan	65.9 %
Storage water heater	1.55 %
Two-wheeler moped	39.27 %
Scooter	28.56 %
Refrigerator	24.3 %
Black and white TV	62.65 %
Washing machine	14.64 %
Cassette recorder	55 %
Ceiling fan	50.36 %
Instant geyser	2.04 %
Mixer/grinder	27.43 %
Motorcycle	47.87 %
Pressure cooker	51.51 %
Sewing machine	64.63 %
Colour TV	28.77 %
Electronic wrist watch	54 %

Source: National Council for Applied Economic Research.

Consumer Aspects

Dealing with the Indian consumer requires attention to the following aspects:

1. India is a very price-sensitive market, and market leadership strategies tend to be price-based, leveraging market shares and spreading overheads over a larger customer base.
2. Peer- consciousness is prominent in the Indian middle class, and new products and concepts must go through an initial phase of referrals and approval seeking, before they become popular with the target consumer classes.
3. Customer support and service standards are becoming crucial determinants of customer loyalty in all high value goods and in institutional sales.
4. The rural market cannot be ignored any more, considering the newfound rural spending trends, accounting for more than half of the total market volumes.
5. Some brands may require a cultural adaptation to the Indian market and may be unable to clone their Indian

plans based on successful models in other countries. Even powerful global brands such as McDonalds have customized their offerings to suit the unique requirements of the Indian consumer.

1.4 Business culture

India has a long-standing tradition of enterprise in trade and commerce. However, the sheer geographical size, disparities in regional development levels and the enormous cultural diversity in various parts of India have supported a highly scattered and dispersed business system, with local business thriving on local demand. Very few businesses operate at a national level characterised by high penetration levels in semi-urban areas.

Business control is mostly patriarchal and dynastic, even in large enterprises. Several enterprises are managed by the main shareholders themselves, through management control at the board, unlike the delegated control found in some other economies. However, the occidental structure of management based on professional trained manager is becoming increasingly popular even in family-owned business enterprises.

It is useful to keep the following considerations in mind while dealing with family owned Indian business:

- Family-owned businesses often reward allegiance more than competitive skills, which can frustrate younger professionals, some times
- Businesses often diversify into totally unrelated areas, especially in trendy new economy sectors
- Young family members and scions are given charge of new businesses at a young age, despite inexperience in the chosen areas of business
- Doing business with foreigners is considered prestigious, and joint venture partnerships are coveted, and the prospecting stage is marked by lavish gifts, ostentatious hospitality, invitations to family events such as weddings
- With foreigners, it is friendship before business. Personal rapport with the owner/key persons underlines business negotiations, and joint ventures are considered symbols of brotherhood and friendship rather than profit centres
- Involvement of advisors is disliked, and often considered a sign of distrust or doubt over the proffered friendship
- Low price is a major factor in clinching deals, and financial negotiations can be bargained very hard.
- However Indians tend to clue outwardly high quality
- Until money is actually put into the venture, everything is retractable and re-negotiable, technically and legally
- Important events, signatures and nowadays even the selection of a business site/ premises can be subjected to clearance by the family astrologer, after all negotiations are over
- Family members and loyal employees may be appointed or seconded to the JV with inflated remuneration terms and perks, not in line with market rates
- Disagreements are often acerbic and can lead to frustrating and vindictive conduct

Manipulation, favouritism, tax evasion and speed money are part of business practices in India, and often, an executive's 'contacts' have considerable weight in career advancement. To an extent, adulteration and consumer/ investor fraud are also known to exist in India, exposed by scandals every few years. Social contribution and environment protection are generally not voluntary activities in corporate India, and are mostly induced by tax-saving schemes or strict rules by the Govt. or intervention by court acting on public interest.

Corruption

The international NGO Transparency International ranked India among the ten most corrupt countries in the world. While many citizens do not go on record about their experiences, people would be quick to admit in private that life in India sees brushes with corruption at various levels.

India's prevention of corruption Act, 1988 deals with corruption and bribery amongst public servants, and covers all persons in the pay or service of Govt departments, local authorities, Govt. owned companies, persons of the judiciary, arbitrators, employees of any educational, scientific, social or cultural institution, and other types of persons who are required to perform public duties. The Act defines as a criminal misconduct certain acts and practices by public servants, which include: accepting, agreeing to accept or attempting to obtain any gratification other than legal remuneration as a motive or reward for doing or forbearing to do any official act, showing a favour/ disfavour to any person or for rendering any service/disservice to any person.

However, the penalties for corruption- prison sentence of six months to five years and a fine- are rather light in relation to the larger consequences of corruption on the social fabric.

Increasingly, Govt. bodies dealing with the public have mandatory vigilance cells and encourage the public to report any harassment or bribes sought by officials. Frequently, departments such as the Police, Municipal authorities and Income Tax advertise the details of their vigilance department and exhort the public to lodge complaints about demand for bribes or harassment by any official.

India's apex authority dealing with corruption in Govt. agencies is the Central Vigilance Commission. As part of its mission to offer corruption free public service, the CVC has introduced an extreme step of reporting on its web site, a list of all Govt. officials undergoing investigation for corruption charges.

1.5 Government and Administration

India is a federated Union of States, constituted as a Sovereign Socialist Secular Democratic Republic with a Parliamentary system of government. At present there are 30 states and five Union territories. Delhi is the Union Capital, and each state has its own capital.

Independent India has adopted a social, secular, democratic, federal form of constitution, which is unique in the world. Managing economic growth with social equity has been the

Table 1.3 — States

S no	State	Capital	Area (Sq Km)	Population (1990-91)
1	Andhra Pradesh	Hyderabad	275068	66,508,008
2	Arunachal Pradesh	Itanagar	83743	864,558,
3	Assam	Dispur	78438	22,414,322
4	Bihar	Patna	173877	86,374,465
5	Chattisgarh	Raipur		New State
6	National Capital region/Union Territory of Delhi	Delhi	1483	9,420,614
7	Goa	Panaji	3702	1,169,793
8	Gujarat	Gandhinagar	196024	41,309,582
9	Haryana	Chandigarh	44212	16,463,618
10	Himachal Pradesh	Simla	55673	5,170,877
11	Jammu and Kashmir	Srinagar/ Jammu	222236	7,718,700
12	Jharkhand	Ranchi		New State
13	Karnataka	Bangalore	191791	44,977,201
14	Kerala	Thiruvananthpuram	38863	29,698,518
15	Madhya Pradesh	Bhopal	443346	66,181,170
16	Maharashtra	Mumbai	307690	78,937,187
17	Manipur	Imphal	22327	1,837,119
18	Meghalaya	Shillong	22429	1,774,778
19	Mizoram	Aizwal	21081	689,756
20	Nagaland	Kohima	16579	1,209,546
21	Orissa	Bhubhaneshwar	155707	31,659,736
22	Punjab	Chandigarh	50362	20,281,969
23	Rajasthan	Jaipur	342239	44,005,990
24	Sikkim	Gangtok	7096	406,457
25	Tamil Nadu	Chennai	130058	55,858,946
26	Tripura	Agartala	10486	2,757,205
27	Uttar Pradesh	Lucknow	294411	139,112,287
28	Uttaranchal	Dehradun		New State
29	West Bengal	Calcutta	88752	68,077,965

Table 1.4 — Union territories

S.no	Union territories	Capital	Area	Population (1990-91)
1	Andaman and Nicobar Islands	Port Blair	8249	280,661
2	Chandigarh	Chandigarh	114	642,015
3	Dadra and Nagar Haveli	Silvassa	491	138,477
4	Daman and Diu	Daman	112	101,586
5	Lakshadweep	Kavaratti	32	51,707
6	Pondicherry	Pondicherry	492	807, 785

fundamental principle of India's economic policies since independence. Therefore, representation, consensus and balance among economically and culturally diverse interest groups are essential to its functioning as a pluralist nation.

Government

The Union Executive consists of the President, the Vice President and the Council of Ministers headed by the Prime Minister to aid and advise the President in the exercise of his functions. A Parliament consisting of the President and two houses, the Council of States (Rajya Sabha) and the House of the People (Lok Sabha), administers the Union. The President is the Constitutional Head of the Republic and the Supreme Commander of the Armed Forces.

The Legislature of the Union is called Parliament, consisting of the President and two Houses - an Upper House, also known as Council of States (Rajya Sabha), and a lower House also known as House of the People (Lok Sabha). Each House of Parliament has to meet within six months of its previous sitting. A joint sitting of the two Houses can be held in certain cases.

The structure of the State Government is similar to the Union Government, with a presidential appointed Executive - the Governor, the Chief Minister and Council of Ministers, a State Legislature with one or two Houses, a High Court and the Advocate-General.

Defense

The supreme command of the Armed Forces is vested in the President of India. The Chiefs of Staff of Army, Navy and Air Force are the administrative and operational heads with the administrative support of the Ministry of Defense. In a national emergency, even the Prime Minister can summon the army.

Judiciary

The main sources of Indian Law are the Constitution, Statutes, Customary Laws and Case Laws. Statutes are enacted by Parliament, State and Union Territory legislatures. A single integrated system of courts administers both Union and State laws. The apex court is the Supreme Court of India, and each state has its High Court to control the lower judiciary.

The Supreme Court has jurisdiction on enforcement of Constitutional rights and powers, and on interstate disputes, including disputes with the Union Government. In addition,

the Supreme Court advises the President on Constitutional matters like dissolving a government, declaring National Emergency, and other special matters of grave national importance. The legal system enjoys significant autonomy, and the President appoints the Chief Justices as well as other Supreme Court judges directly. The law provides independence to Supreme Court judges, who cannot be removed (barring cases of misdemeanour) except by a presidential order following a 2/3rds-majority vote in Parliament.

The Attorney General appointed by the President, handles the legal affairs of the Union Government in interstate and international disputes. At the state level, an Advocate General handles the legal affairs of the State Government.

Administrative services

The administration of the government is carried out through the Civil Services, which include the Indian Administrative Service (IAS), Indian Forest Service (IFS), Indian Revenue Service (IRS) and Indian Police Service (IPS). Recruitment to the Civil Services is made on the basis of annual Civil Services Examinations conducted by the Union Public Service Commission (UPSC). The highest level/rank in the IAS is that of Secretary to the Ministry, the Cabinet Secretary being the first among equals.

Enforcement Agencies

India has the Central Bureau of Investigation (CBI) and the Enforcement Directorate (ED) to check against serious frauds, corruption, foreign exchange law violations, tax evasion and other offences by individuals and corporate bodies.

Elections

The parliamentary system of government both at the Centre and in the States is based on adult suffrage, whereby all citizens who above 21 years of age have the right to be registered as voters in any election to the Lok Sabha and legislative assemblies of States. The Constitution also provides for determination of seats reserved for backward and scheduled tribes, and is considering reservation of 33% parliamentary seats for women, for which a Bill is pending before Parliament.

The Election Commission, an autonomous body with constitutional authority, carries out the role of a watchdog in maintaining the legality and prudential norms for conduct of free and fair elections. Its activities include preparation of electoral rolls, super-intendence, direction and control and other run up activities in conducting elections to Parliament, State Legislatures and to the offices of President and Vice President.

Elections to local bodies called Panchayats are conducted by the State Governments, under the supervision of a Village Administrative Officer. At the District level, a District Collector, District Courts and local administrative bodies discharge government functions.

Political culture

Despite its diversity, India has seen remarkable political stability under the democratic parliamentary form of government. To a considerable extent, this has been possible due to three tenets: independence of the judiciary and the armed forces, an independent election authority, and the President's power to intervene whenever democracy and constitutional principles are threatened. India has seen several instances of Presidential rule in some states, due to failure of elected governments, one national emergency lasting nearly two years, and three border wars, successfully returning to parliamentary rule each time, which are ample testimony to its resilient democratic constitution.

The past decade has seen India move away from an era of single-party governments to one of coalition governments. The present government is a National Democratic Alliance of more than 15 political parties, of which 14 are regional parties having primary interests in one or two states only. The major party in the ruling coalition, the Bhartiya Janata Party, is in power in only three of the thirty states of India, and supports its alliance members through vote-sharing arrangements in state elections, in return for support under a common manifesto for the parliamentary elections.

The fractured verdict of India's people reflects the transformation of its social edifice. Therefore, while coalitions may tend to be volatile and unstable arrangements, they nevertheless capture and express the agenda of a pluralist society more accurately than strong, single party governments. The divergent political agenda among coalition parties has also seen economic policy and investment facilitation as the major if not only points of convergence. Every successive government took the process of economic liberalisation forward, alleviating the concerns of reformists as well as the international business community.

At present there are two distinctly national parties: the Bharatiya Janata Party (BJP) -, and the Indian National Congress, and several regional parties that have shared issue-based relationships with one another as well as the Congress or BJP at the Centre.

The important political parties are:

The Bhartiya Janata Party: a right wing party with Hindu nationalist sentiments, which has steadily grown in popularity in the 1990s, and had the most seats in parliament during the last three elections

The Indian National Congress: India's oldest political party, formed on the secular, socialist doctrines, was in power for nearly forty years with two brief interruptions, but has been steadily losing ground in the 1990s

The Communist Party of India (Marxist) –in power for more than 20 years in West Bengal, and has a presence in Tripura and in Kerala.

Rashtriya Janata Dal: an important party in Bihar, with a love-hate relationship with both the Congress and the BJP.

Janata Dal (United): the remnant of the National Front after some parties, notably the Rashtriya Janata Dal, broke away.

Samajwadi Party: an important player in India's largest state, Uttar Pradesh

DMK and ADMK: the two electoral horses in the state of Tamil Nadu

Bahujan Samaj Party: a campaigner for the backward castes of India, prominent in Uttar Pradesh

Shiromani Akali Dal: a prominent party representing the Sikhs

Shiv Sena: a prominent right-wing firebrand party in Maharashtra, alliance partner of the BJP

Media

India has a well-established print media with more than 41000 newspapers and periodicals published in more than 100 languages and dialects. Several newspapers are more than hundred years old. Radio coverage is available to 98% of the population and 90% of the area, while television reaches 88% of the people and 70% of the areas. Satellite and Cable television is available in more than 30 million homes all over India, and the world's major satellite news channels CNN, BBC, CBS and NBC have footprints covering most cities and towns of India.

1.6 Legal system

India has a well-instituted legal system modelled on English Law and derives its powers from the Constitution, statutes enacted by legislature, customary laws and case laws. The legal system consists of the Supreme Court, India's apex court, High courts apex courts at the state level, and lower courts. The legal system enjoys considerable autonomy: all Supreme court judges and the Chief justice of High Courts are directly appointed by the President, and can be removed (except for misdemeanour) only by a presidential order following a two-thirds majority vote in Parliament.

However, India's well laid out legal system has an enormous handicap – it is painfully slow. Dispensation of justice can be a long-drawn, frustrating process in India, taking up to several years, even in straightforward matters like eviction of tenants, non- payment of agreed debt and dues, proven financial fraud, etc.

Shortages of judges, innumerable postponements on various pleas, and the sheer magnitude of legal suits have resulted in an enormous backlog of cases in al the important cities. The result: more than 28 million cases await disposal in Indian courts, including 3 million in the high courts. Several thousands have not seen a decision for over twenty years, lending testimony to the maxim ' Justice delayed is justice denied'. The government is the most important litigant, involved in two out of every three cases, and is often the litigant on both sides. India spends only 0.2% of its GNP on the judiciary, as a result of which, the structure has become severely overloaded over the years: there are only 13 judges per million people (against the recommended ratio of 60), compared to 103 in the US and 58 in Australia.

The congestion in India's courts makes it difficult to get court dates in quick succession, and enough legal provisions exist to allow numerous adjournments between hearings, which only add to the congestion. Issues are also not necessarily resolved at the first judgement. The Constitution gives citizens the right to appeal to the next higher court, and unrelenting litigants use their right to the hilt, using upto three levels of appeals lay up to the Supreme Court.

The tardiness in the legal system has become a big support to commit fraud and similar economic offences, several of them, such as financial fraud, which are bailable offences. Offenders often have enough time and opportunities to cover their tracks and destroy incontrovertible evidence before the law can take its rightful course, and, invariably, by the time defendants are prosecuted there is very little chance left of recovering any dues. The numerous scams of India- the stock market scam, the plantations scam and the fodder scam- involving well-known public figures are yet to be resolved several years after charge sheets have been filed and legal proceedings initiated.

India urgently needs to enact legislation to allow financial disputes including insolvency to be resolved by arbitration, or create special courts to deal or the expeditious settlement of financial disputes, financial crimes, fraud and embezzlement, which have ramifications affecting large sections of the economy, and cannot be treated on par with normal criminal charges. The separation of financial from other crimes would enable businesses to resort to arbitration for insolvency proceedings, and considerably improve Indian efficiency in settling commercial disputes.

2. ECONOMIC TRENDS AND OUTLOOK

2.1 Economic reforms

India responded remarkably well to its economic challenges, under the recommendations and conditions set by the International Monetary Fund, besides committed leadership under Dr. Man Mohan Singh who kicked off the initial phase of reforms in 1991. India's economic reforms have followed the following principles:

- Reducing fiscal deficit;
- Reducing the growth in inflationary money supply;
- Allowing market forces to determine resource costs;
- Managing external financing through investment rather than debt; and
- Generating sustained growth in export performance.

Implementing the reforms has seen India taking a series of important measures such as relaxation of industrial licensing regulations, easing of foreign exchange controls for exports and eventually for all trade flows, removing several import restrictions, attracting foreign direct investment in principal sectors of the economy, rationalising indirect taxes to boost competitive manufacturing and trade, reduction in fiscal subsidies, privatisation of Govt. interest in industries and control of Govt. expenditure.

Table 2.1 — Indicators reflecting impact of Economic Reforms

Indicator	1990-91	1995-96	1999-2000	2000-01 (estimate)
GDP growth (%)	1	7.1	6.4	6.0
Manufacturing growth (%)	1	14.9	6.8	6.4
Export growth (%)	(1.5)	20.3	11.6	20.4 (Apr-Dec)
Import growth (%)	-	21.6	16.5	9.0 (Apr-Dec)
External deficit (%)	(3.5)	(1.5)	(1.6)	
Foreign exchange reserves ($bn)	1	17	35	
Inflation (%)	13.6	4.4	2.9	

Source: Compiled from various official sources.

The results have justified the reforms: India recovered remarkably from its crisis in 1991 and has posted healthy growth since 1994, with the exception of one lacklustre year 1998-99, which saw industrial stagnation and reduction in exports as an after effect of the economic crisis in the ASEAN region.

2.2 Recent economic performances and outlook

India's GDP comes from three principal sectors, Agriculture, Manufacturing and Services. Agriculture and allied activities account for close to 28%, manufacturing 25% and services- including real estate, transportation, financial services and other business and social services-account for 35% of GDP.

Table 2.2 — GDP at factor cost by sector (1999-2000)

Sector	Rs bn	GDP Share
Agriculture and allied sectors	3168	27.5%
Manufacturing, construction, power, water and gas	2837	24.6%
Banking, finance, insurance, business services	2528	21.9%
Transport communication and trade	1465	12.8%
Public services and defence	1521	13.2%
Total Output value	11519	100%

Source: Economic Survey, March 2001.

India's economic growth has revealed a downward trend in the past four years, with GDP growth falling from nearly 7% in 1997 to 5.3% in 2000-01. This trend mirrors the overall slowdown in the world economy and in the domestic economy. The downward spiral continues unabated, and the 6.5% forecast for the year 2001-02 is likely to be revised downward substantially, taking into account the recent events of the region that have had a major effect on trade and investment flows. The slowdown has afflicted all the three principal streams of the economy- agriculture, industrial production and services.

Table 2.3 — Sector real growth rates in GDP *(at factor cost) (% change over previous year)*

Sector	1980-81 1991-92	1992-93 2000-01	1998-99	1999-00	2000-01
Agriculture and allied	3.9	3.3	7.1	0.7	0.9
Industry	6.3	6.5	3.4	6.0	5.2
Services	6.4	8.2	8.2	9.6	7.8
Overall GDP growth	5.4	6.4	6.6	6.4	5.3

Source: Economic Survey 2000-01 and RBI Annual Report 2001.

2.3 Principal sectors of the economy

Agriculture

Agriculture is India's largest sector, involving nearly 70% of its population and contributing to 28% of GDP. India's important crops are: rice, wheat, coarse cereals, cotton, sugarcane, tobacco, pulses and oilseeds, besides a large range of fruits and vegetables. India is among the top five producers of several food grains and horticulture produce as well as major plantation crops.

Agriculture performance is critically dependent on timely and adequate monsoons, as nearly 45% of the agriculture area is still non-irrigated. Delayed monsoons or even premature showers can have devastating effects on the crops and cause volatile fluctuations in crop harvests. There is considerable Govt. intervention through a system of price incentives and subsidies, besides budgetary assistance for rural infrastructure, extension services, distribution of farm inputs and training schemes to promote adoption of modern farm technology

With a food grain output close to 200 million tonnes, India has become a marginal exporter of food grains, travelling a long way from the days of grain shortage and famine in 1965.

Agriculture also plays an important role in India's exports, accounting for more than 15% of exports. Basmati rice, spices, cashew, and fishery products are the major product groups. However, India's share is less than 1%of the world trade in agricultural products, and increasing exports of added-value products rather than seasonal commodities remains a major area for future thrust.

Manufacturing

Industrial growth is the backbone of India's economic achievements, and manufacturing activities currently represent 25% of the gross domestic product (at factor cost). The industrial base covers almost all manufacturing activities, given India's traditional thrust on industrial self-reliance since the 1960s, and consists of several large public sector undertakings (government/state promoted units), a large private sector with more than 200,000 factories and 2 million cottage and small-scale enterprises. The industrial work force comprises 14 million workers, and 4 million trained technical personnel. Chemicals, machinery and equipment, food processing, textiles and apparel, transportation goods, metals and plastic products are the most important industrial groups in manufacturing, ranked by their importance in industrial output value.

After liberalisation in the foreign investment regulations, industrial production saw heady growth from 1994 through 1997, with double-digit growth for three years, driven by activity in principal sub-sectors- automobiles, capital goods and consumer durables.

Subsequent slowdown on account of capacity corrections, the effects of the East Asian crisis on India's exports, and overall sluggishness in the economy, have seen industrial growth drop to 3.4% in 1999 and slowly picking up to 5.2% in 2000-01. The upswing is partly due to a gradual pick up in infrastructure sectors. However, industrial goods production continues to be sluggish in the current year as well.

Services

Service sectors- trade, finance, hospitality, transport and communications, continued to grow faster than the manufacturing sector, with an overall growth of 7.8% in 2000-01. Interestingly, the GDP figures do not include software exports (more than US$ 6 billion in 2000-01), which continue to be reported under the 'invisibles' section of the trade balance, and not as part of the mainstream services sector. Taking into account the contribution of Information technology, service sector growth rates would have been much higher.

GDP growth for 2001-02 is forecast at less than 5%, taking into account various global and regional factors.

Infrastructure

India's physical infrastructure consists of the following dimensions:

- Road networks: 3 million km of roads, of which only 52000 km are national highways, servicing 50 million vehicles
- Railways: 63000-track km, 7000 locomotives carrying 4.4 billion passengers and 420 million tonnes freight annually
- Ports: 11 major and 148 minor ports handling 250 million tonnes cargo
- Airports: 23 airports handling 10 million passengers and 100 million tonnes cargo, including 8 airports handling 3 million international passengers
- Energy: 480 billion kWh generation, of which 80% is from thermal energy, with a peak load shortage of 12%
- Telecommunications: 33 million fixed line connections and 4 million mobile connections, adding 5 million lines per year, besides value added data transmission services

Infrastructure growth, while showing significant growth in nominal terms, has lagged behind. The acceleration in the economy in the 1990s and the pressure of high industrial growth is beginning to tell on the basic services like power, telecommunications, ports and roads which are considered to be one of the main bottlenecks to India's achieving its target of sustained 8% GDP growth.

Table 2.4 — Growth trends in infrastructure throughput
(% change over previous year)

	1997-98	1998-99	1999-00	2000-01 (6 mths)
Power	6.5	6.4	7.2	4.7
Railway freight	5.0	-2.0	8.4	5.2
Port cargo	10.7	0	8.0	3.9
Civil Aviation	3.62	-1.0	14.0	na
Telephone lines	27.1	16.4	29.7	29.8

Source: compiled from information published in Economic Survey 2001.

There is wide recognition of the critical importance of infrastructure development to sustain India's growth objectives. The Govt. has recognised its limitations in being a provider of infrastructure services, which entail huge investment outlays, long gestation periods, project risk and long pay-back periods, besides red-herrings such as differential and subsidised pricing, unmanageable cost structures, surplus manpower and operational inefficiencies that made several Govt. projects nonviable. On the other hand, infrastructure projects are quasi-commercial in character and cannot lend completely to free market mechanisms.

In keeping with the needs of infrastructure development, several incentives and policy initiatives have been initiated to enlist private participation in infrastructure building in seaports, airports and roads; power; and telecom. However, projects lie frustrated due to several procedural issues besides lack of clarity on high risk elements: pricing mechanisms, sovereign guarantees and state-level bottlenecks in implementation. The exit and withdrawal of several global players from their Indian ventures is a cause for serious concern. However, since 1999, substantial interest has been revived in roads and telecom, under more transparent and facilitating policy measures.

Financial sector

Banking

The banking network extends through nearly 62000 branches, with a deposit base of Rs.7.14 trillion (US$ 180 billion), and total liabilities of Rs. 8.20 trillion, at the end of 1999. There are more than 300 commercial banks, including public sector banks (nationalised banks), private Indian banks and foreign banks. There are 42 foreign banks, with close to 200 branches and representative offices in various cities.

Public sector banks (banks owned substantially by the Govt. substantially) include regional rural banks, co-operatives and special purpose banks and account for the bulk of commercial banking operations in India. Recent measures also include encouraging private sector investment in the banking sector and permitting public sector banks to sell shares to the public. Customer orientation is the most important focus area of banks, with retail operations getting the maximum attention at the leading banks. Cash collection facilities, e-banking, phone-banking, ATMs, and remote access centres in several lesser developed locations in India are the new customer-friendly services being provided by leading private banks to customers.

Development financial assistance to industry and trade is provided by three premier financial institutions - the Industrial Development Bank of India (IDBI), the Industrial Finance Corporation of India (IFCI) and the Industrial Credit and Investment Corporation of India (ICICI) - in the form of term loans, foreign currency credit lines, etc within the ambit of RBI regulations. Banking and finance sector operations are governed by the Reserve Bank of India (RBI), which is India's central banking institution.

Capital market

The Indian securities market is considered to be one of the most promising in emerging economies. In recent years, the markets have been driven by new economy stocks- IT/software, pharma/ biotech and media/communications, with increased participation by foreign institutional investors. The markets have adopted new capitalisation models of technology stocks, influenced by the NASDAQ models, even though less than ten Indian scrip are listed at NASDAQ. The securities market is regulated by the Securities and Exchange Board of India (SEBI), which has been set up to promote the development of the securities market and protect the interests of investors.

Other institutions

In addition to the normal banking network, special institutions like the Life Insurance Corporation of India (LIC), General Insurance Corporation of India (GIC), Unit Trust of India (UTI) and Mutual Funds form the base for long term funding to the Government Central Plan finances, and other long-term finances to the industrial and social sector. Foreign institutional investors have been allowed to invest in the primary as well as secondary markets, while insurance has been finally opened to private players as well in June 2000. A whole range of financial services has also been opened up for foreign investment.

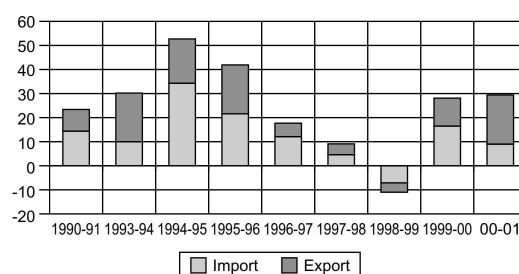
2.4. External Trade

In 1999/2000, India had an external merchandise trade of US$ 93 billion, consisting of $ 38 billion of exports and $ 55 billion of imports. The half-year results for 2000/01 reveal a trade value of $53 billion, 22% higher than figures for the same period in the previous year. The analysis of trade for the decade 1990-00 indicates volatile swings in external trade trends.

Principal trade items of India are: Imports: Petroleum and fuels, Capital goods, fertilisers, bulk commodities, food and allied products (chiefly, edible oils) Exports: Gems and jewellery, textile articles, agriculture and allied products, ores and minerals, and other manufactured goods. The fastest growing trade items include petroleum oil and lubricants, electronic goods, leather goods, textiles, primary steel, and chemicals.

India's important trade partners are: the US (23% export and 5.5% import); UK (5.4% export and 6.4% imports); Japan (4. 3% export and 4.3% imports); Germany (4.3% export and 3.3% imports); and other EU members (13% export and 9.5% imports). OPEC countries also account for a significant trade relationship with India. Asian trade accounted for 20% of India's exports and 13.7% of its imports.

Chart 2 — Trade as % of GDP



Source: Statistical Outline of India/ Economic Survey.

The effect of liberalisation is visible in external trade indices: post-liberalisation growth has been much higher in exports and imports both, and external trade now accounts for 20% of India's GDP, significantly higher than the 13% level in 1990-91 (the year before liberalisation was initiated). The percentages become even more significant, considering that most of the present external trade is in hard currency and not rupee- denominated trade as was the case before liberalization, when rupee-denominated trade with the erstwhile Soviet Union accounted for a significant share of exports and imports both.

Balance of payments

India has traditionally had a marginally negative Balance of Payments position, with a current account deficit between 1.5% and 2% of GDP. However, despite negative growth in exports the BoP position actually improved in 1998-99, due to a steep fall in international oil prices, which positively impacted India's import bill. The last year 1999-2000 has seen a 12.9% growth in exports and 9.6% growth in imports, indicated by data available up to December 1999. The current account deficit is expected to be around 1.8% of GDP in 2000.

Table 2.5 — External Sectors Balance, 2000

External Trade Indicators	1980/81-1991/92	1992/93-1999/2000
Annual average growth rates % per year		
Exports	7.6	10.0
Imports	8.5	13.4
Key Ratios Average for the period		
Exports/ Imports	62.3	74.0
Import cover (months)	3.8	7.2
Share of GDP %		
Exports	5.1	8.4
Imports	8.2	11.5
Trade balance	-3.1	-3.1
Invisibles (trade in services) balance	1.2	1.9
Current account balance	-1.9	-1.2

Source: Economic Survey, 2001

Foreign exchange reserves

Under its liberalisation programme, India has initiated major steps in restructuring capital flows, moving away from sovereign debt to equity inflows and currency deposits as the major form of capital inflows. India's foreign exchange reserves consist of gold holdings, special drawing rights and foreign currency assets held by India's apex financial institution, the Reserve Bank of India. Foreign currency holdings are the largest component of reserves and move on a day-to-day basis. Total foreign currency reserves as on January 2001 stood at a record high of US$ 38.3 bn, representing eight months of import needs.

The rupee's exchange rate against the US dollar has been market-determined. In 2000-01, the rupee came under considerable pressure and now stands in the band of 47-48 per US$ (as in Oct 2001).

External debt

At the end of 1999, external debt stood at US$ 99 bn, of which short-term debt (less than one-year maturity) accounted for $4.6bn. India ranks eighth among the world's most indebted nations, and maintains a debt classification of MODERATE.

Table 2.6 — India's external debt indicators

Category	1991	1995	1999	2000 P	2000 (end Sept)
Long term debt US$ Mn	75257	94739	93290	94390	93360
Short term debt US$ Mn	8544	4269	4387	4040	4500
Total External Debt US$ Mn	83801	99008	97677	98440	97860
Ratios (%)					
External debt to GDP	28.7	30.8	23.6	21.9	20.7
Short term debt to total debt	10.2	4.3	4.5	4.1	4.6
Concession to total debt	45.9	45.3	38.1	38.5	37.5
Short term debt to forex assets	382.1	20.5	14.9	11.5	13.8

Source: Economic Survey, 2001.

The present value of India's debt is US$ 76bn, of which concession debt accounts for more than 38%, and India is a large beneficiary of World Bank loans and other multilateral credit bodies in the region. Debt indicators are satisfactory, with external debt/ GDP ratio of 23.5% and short-term debt to reserves ratio of 15%, compared to the levels of 41% and 382 % in the crisis period of 1990-91.

2.5 Privatisation and disinvestments

Attaining the medium-term fiscal deficit target of 2% of GDP requires prudent expenditure management on part of the Govt., a boost in actual revenue collections and retiring of Govt. debt from the proceeds of disinvestment in the numerous Govt.-owned industrial undertakings. The Finance Ministry has initiated several steps this year towards widening the tax payers' base, improving collection efficiencies, simplifying the indirect tax structure and incorporating electronic governance to curb fiscal deficit without overly depending on increased tax rates.

During the last ten years, disinvestment flows totalled Rs 186 bn, against a target of Rs 563 billion. However, the bulk of such flows came from IPOs amidst buoyant stock market conditions, and not from privatisation by inducting strategic partners. With the fizz evaporating from the secondary markets and with government holdings substantially reduced, there is little scope for government to consider further disinvestment through the stock markets.

Table 2.7 — Disinvestment flows, RS billion

Year	Target	Realization
1991-92	25.00	30.38
1992-93	25.00	19.13
1993-94	35.00	Nil
1994-95	40.00	48.43
1995-96	70.00	3.62
1996-97	50.00	3.80
1997-98	48.00	9.02
1998-99	50.00	53.71
1999-00	100.00	18.29
2000-01	120.00	Nil (6 mnths)
Cumulative	563.00	186.38

Therefore, future infusions can only be expected from privatisation and reduction of government equity to a non-majority state. In that regard, the results are rather dismal. In 1999-00, only Rs 18 billion was actually raised against a target of Rs 100 billion, which was considered for the fiscal deficit estimate for the year. The picture is grimmer for the current year: half-year collections are *nil* against a target of Rs 120 billion to be completed by March 2002.

While the prospect of privatisation is interesting, bidders cite that many Public Sector Undertakings (PSUs) are loss-making units, and some of the offer conditions –retrenchment, restructuring of asset base, and government veto rights on certain decisions-are not commercially feasible if these units are to be turned around and operated efficiently. As a result, there were few bidders in even exclusive opportunities such as civil aviation, where 40% share-holding was on offer, including up to 26% for foreign carriers.

PSUs offered for disinvestment

PSUs	Government Decision
Air India	To bring down the GoI equity to 40% through sale of 10% to a strategic partner (SP), up to 10% equity to employees, 40% equity and the balance to financial institutions and / or on the share market. Foreign holding is to be limited to a maximum of 26% of the total equity.
CMC Ltd	To disinvest 57.3% of equity through strategic sale/ESOP/other means, with an appropriate role in management to strategic partner.
Hindustan Copper	Phase1: To restructure HCL by hiving off the Khetri unit and the Taloja paint into a new company and dilute the HCL's equity in the new company to 49% by issue of fresh shares.
HTL	To disinvest 74% equity in favour of a strategic partner, with transfer of management control
IBP	To disinvest 33.58% share-holding of IBP to a strategic partner with transfer of management control
Indian Airlines	To reduce the GoI equity to 49% through sale of 26% stake to a strategic partner within the parameters of the domestic air transport within the parameters of the domestic air transport policy followed by sale of 25% equity to domestic financial institutions, employees and other investors. Foreign holding to be limited to a maximum of 40% of the bidder's equity.
IPCL	To offer 25% equity to a strategic buyer along with transfer of management control.
India Tourism Development Corporation	On 16.9.97, to appoint an advisor to examine all alternatives and options for disinvestments, including the ones recommended by the disinvestment commissions. On 6.7.99, the Government reviewed its earlier decision and decided to accept and implement the disinvestment commission recommendations
Maruti Udyog	MUL to offer shares on a rights basis to the existing shareholders with renunciation option for the Govt.
Minerals and Mineral trading Corporation of India	To reduce the Government share-holding to 265 through strategic sale. Out of the 26% equity remaining with the Government, 105 equity to be used for issue of employees stock option
Paradeep Phosphates	To disinvest 74% of the share-holding in PPL to a strategic buyer through strategic sale.
State trading Corporation	To reduce the Government share-holding to 26% through strategic sale. Of the 26% equity remaining with the Government, the balance 10% to be issue of employees stock option (ESOPs)
Videsh Sanchar Nigam	To disinvest of 25% of equity of VSNL to a strategic partner and 1.97% to employees.

Source: Business India, Sept 2001. Only cases that are still open are listed.

2.6 Fiscal developments

Despite improved economic performance, a rising and unmanageable fiscal deficit has been a cause for concern and criticism for India. Fiscal deficit has been on the rise, touching 5% of GDP in 1998-99 and has been estimated at 5.1 % for 2000-01. The Economic Survey reports only the deficit of the Union govt., and the total deficit including deficits of state Governments actually exceeds 10% of GDP.

The most worrying aspect of the fiscal deficit is the ballooning Govt. expenditure, most of which is towards interest payments, besides rising departmental expenditure. With increasing pressure to reduce tax rates and import tariffs, which are still high by international standards, the Govt's challenge is to arrest expenditure and raise resources to retire public debt.

Interest and Inflation

Interest rates have been liberalised: banks are allowed to exercise their lending and borrowing rates while keeping minimum liquidity ratio and a cash reserve ratio (CRR) of less than 10%; and interest rates of contracted saving schemes have been lowered. Real interest rates (adjusted for inflation) are in the region of 8% for term savings and 6% for bank deposits, moving to a low-interest regime in India.

Table 2.8 — Real interest rates

Date	Provident Funds 8 -15 yrs	Post Office Deposits 5 yrs	Bank Deposits > 1yr
April 99	5.1%	4.6%	2.4%
July 99	6.0%	5.5	3.2
October 99	7.5	7.0	4.8
December 99	8.5	8.0	5.8

Source: Economic Survey.

Compared with the double-digit inflation levels of the early nineties, point- to-point inflation has ranged between 3.5 and 8% during the last two years, reflecting the structural changes in the economy, such as the decontrol of manufacturing - leading to price competition and economical production levels, opening up of imports and progressive lowering of tariffs. Inflation levels are expected to remain low as the market access conditions improve in India.

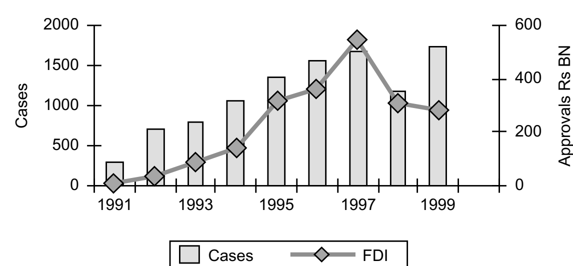
2.7 Foreign investment trends

India's rationale for attracting foreign direct investment is based on tested economic principles. Economic data on India's GDP-investment relationship indicates an incremental Capital Output Ratio (ICOR) of 4.3 i.e. sustaining a GDP growth of 7%, requires a matching investment growth of at least 30.1%. To the contrary, domestic savings growth has been falling, and currently stands at 23% of GDP, unable to sustain the growth target without external flows.

Mobilising FDI has been the main plank of economic reforms given the steady decline in availability of concession debt flows globally, and the spin off benefits that long-term foreign equity may bring along to the Indian economy. The series of policy and facilitation measures initiated since 1991 have had a positive impact on the pattern of inflows and in 1997, FDI inflows overtook portfolio and institutional investments for the first time.

Since 1991, approvals were accorded for a cumulative FDI of more than US$ 65 bn including GDRs, while total inflows till Dec 2000 touched 22 bn, reflecting a conversion rate of less than 33%.

Figure 2.2 — FDI Approval trends 1991-1999



Source: Economic Survey 1999-2000

While FDI approval trends were positive, the actual inflows have been considerably lower: conversion ratios have been below 33% of approvals accorded. Further, the infrastructure sectors, which had the highest share of FDI values approved, had the poorest conversion trends reflecting the delays and implementation difficulties reported in several projects. A few important observations on the foreign investment trends are enumerated below:

- Inflows have had a positive growth trend in the decade, with the highest inflows took place in 1997 followed by 1999.
- On an average, India has received more than 1500 investment applications per year since 1996.
- The major sectors attracting foreign investment have been transportation (automobiles), telecom, power, electrical equipment, refinery, services, chemicals and engineering.
- The most important investors, ranked by inflows are: Mauritius (17.82%), USA (11.94%), Japan (4.25%), Germany (3.36%), UK (3.19%) and the Netherlands (3.11%), cumulatively accounting for 47% of total inflows since 1991.
- Delhi, Maharashtra, Karnataka, Tamil Nadu and Gujarat have been the largest beneficiaries of FDI approvals since 1991.
- Excluding the long gestation infrastructure projects, conversion of approvals into actual inflows stands at 60%.

Foreign Institutional investments

As on March 2000, there were 555 registered FIIs in India, of which 60 were registered during `the year. Cumulative net FII investments crossed US$ 12 bn in January 2001. The relaxation of investment regulations for FIIs permitting them to deal in all securities, the rejuvenation of IPOs led by technology stocks, and the emergence of new instruments such as book building placement market has revived FII interest in India.

2.8 International competitiveness

India has ranked 43rd among 47 economies surveyed in the World Competitiveness Yearbook for year 2000, slipping from the 39th rank of last year. Faltering budgets, non-curbed Govt. expenditure, inconsistency in foreign investment flows and trade have been reported as the major impediments to competitiveness.

The Global Competitiveness Report lists the following eight factors of Global competitiveness of nations:

- Openness of economy to international trade and finance
- Role of Govt budget and regulation
- Development of financial markets
- Quality of infrastructure
- Quality of technology
- Quality of business management
- Labour market flexibility
- Quality of judicial and political institutions

Table 2.9 — India's competitiveness ranking, 2000

Economy	Score	2000 Rank	1999 rank
USA	100	1	1
Singapore	75.2	2	2
Finland	74.0	3	3
Netherlands	72.1	4	5
Switzerland	68.5	5	6
Luxembourg	68.1	6	4
Ireland	64.8	7	11
Germany	64.5	8	9
Sweden	63.9	9	14
Malaysia	-	25	27
South Korea	-	28	38
Thailand	-	33	34
India	19.9	43	39
Indonesia	-	45	48

Source: excerpted from IMD

These factors impact the four external performances of an economy, i.e., its overall trade balance, sector trade balance (its competitive potential in low, medium and high tech trade), world market share in a given industry (its areas of global excellence) determined by its domestic firms, its transnational companies operating internationally and the foreign corporations operating on its soil; and its national productivity (per capita output).

FDI inward Index

As a market driven activity, FDI flows of an economy are generally expected to follow the patterns of trade, investment, technology and industrial production. Richer, more competitive and more advance countries make and receive more international direct investment than other economies.

Table 2.10 — FDI Inward Indices of Select FDI recipients

Country	Index (1988-90)	Index (1998-00)
China	0.8	0.9
Hong Kong	5.9	10.6
Malaysia	2.6	1.0
Egypt	1.6	0.4
Thailand	1.5	0.5
Mexico	1.2	0.7
Singapore	13.5	3.3
Brazil	0.5	2.0
Taiwan	0.9	0.4
Indonesia	0.5	-0.4
India	**0.2**	**0.2**

Source: World Investment Report 2001.

However, in practice, the FDI flows do not match other economic aggregates of countries, because there are a number of location factors, which do not relate directly to economic conditions influencing the FDI. Political risk, international perceptions, government policies, regional image can affect FDI differently from other aggregates. There can therefore be significant variations in national abilities to attract inward FDI.

How well a country is doing in attracting FDI in relation to other economies can be ascertained through an index called the *Inward FDI Index*, which is the non-weighted average of three ratios- GDP, employment and exports reflecting the propensity to attract FDI after adjusting for the relative economic size and strength of a host economy in the world.

Countries with an inward index of more than 1 have FDI inflows exactly matching their average shares of world GDP, employment and exports. On the other hand, countries with an FDI index close to 0 or negative are under performers in terms of FDI conversion.

3. BUSINESS REGULATIONS

3.1 Overview

India's business regulatory environment covers all aspects of trade, industrial activity, taxes, foreign exchange, competition, intellectual property and social security. India administers policy regulations and procedures through a system of notifications, which requires interested persons to continually keep track of the latest amendments applying to their business interests.

The regulatory environment in India broadly applies to the following aspects of business:

1. Foreign currency regulations: Remittances are allowed only for approved categories of trade and capital transactions, and cover foreign inward remittances of equity, sale/transfer of shares to residents, repatriation of profit/dividend, royalties and technology fee, repatriation of share capital following disinvestment or winding up, capital gains and savings overseas borrowings, overseas placement of equity, acquiring or investing in overseas ventures. (Foreign Exchange Management Act, FEMA).
2. Industrial regulations: Establishment of industrial units attract the provisions of Industrial Licensing (only in a specified list sectors), local permissions for pollution control, power and water connections, employment regulations, industrial safety and working conditions, workmen statutory benefits registrations, use of contract labour, and other industrial regulations (Industrial Disputes Act, Factories Act, Payment of Bonus Act, Environment Protection Act, etc)
3. Regulations for managing business enterprises: Conduct of company affairs, accounting practices and other compliance (Companies Act, Accounting Standards, Corporate Governance reporting, Transfer Pricing rules, etc); competition regulations
4. Regulations concerning taxation (Income Tax Act, Customs Act, Excise and Salt Duties Act)
5. Regulations covering capital markets: listing requirements, initial public offerings, rights and preferential issue of capital, share buyback and delisting, (guidelines issued by the Securities and Exchange Bureau of India SEBI)
6. Regulations concerning business and trade practices and anti trust matters (Consumer Protection Act, Corporate Governance rules, Substantial Acquisition and Takeovers Act, Competition Policy)
7. Trade regulations – regulations covering export and import of goods and services (EXIM Policy, GATT agreements)
8. Intellectual Property Regulations: Regulations dealing with the proprietary rights and protection of intellectual property (Patents Act, Trademarks Act, Industrial Designs Act, Copyrights Act, Geographical Indications Act)

3.2 Foreign exchange regulations

Liberalisation of trade and investment policies in the 1990s has progressively seen India move toward liberalising its foreign exchange regulations. Foreign exchange related regulations are embodied in the Foreign Exchange Management Act (FEMA), which has progressively simplified foreign exchange transactions:

- For Indian business-entities, the Indian Rupee is now fully convertible on the current account (covering trade transactions and invisibles – travel, tourism and services), although not yet on the capital account
- Indian companies can raise borrowings and equity funds abroad without prior permission, within specified ceilings and in accordance with guidelines. Part of these funds can be retained abroad and invested for specific purposes

The most important FEMA regulations applying to foreign entities and persons resident outside India are:

1. Foreign entities and persons residing outside India shall not make investment in India, in any form, in any company or partnership firm or proprietary entity, whether incorporated or not, in the following businesses:
   - Business of chit funds,
   - Agriculture or plantation activity
   - Real estate business or construction of farm houses
   - Trading in transferable development rights (certificates issued by the Govt. for land acquired for public purposes)
2. All payments for investments allowed under capital account transactions must be remitted through official channels and accompanied by a declaration as specified by the Reserve Bank of India.
3. Foreign investments, which are converted into rupees after receipt into India, can be repatriated on the capital account, for both principal and profits (dividends), subject to clearance of all tax dues in India.
4. Foreign nationals/ entities may not acquire or sell immovable property in India without prior permission of the Reserve Bank of India. However, an Indian company, even being a subsidiary of a foreign company, can buy land for based industrial activity as specified in its approval letter. Such title can be sold subsequently, but capital gains from the sale of such immovable property may not be allowed to be repatriated outside India.

3.3 Industrial licensing regulations

India's New Industrial Policy (first announced in 1991 and modified several times subsequently) monitors certain types of industrial activities through compulsory licensing. As of now, licensing is compulsory for the following:

- Industries requiring compulsory licensing (Appendix I)
- Industries reserved for exclusive manufacture in small-scale industries (a list of nearly 820 products considered to be low technology and labour-intensive)
- Industries not falling under the above categories, but falling within the urban limits of specified cities (indus-

tries located within 25 km of highly populated cities require specific licenses)

Industries not governed by licensing are called Delicensed Industries, and may be established without a prior approval, and require only filing an Industrial Entrepreneurs Memorandum (IEM). However, they must follow other guidelines, especially with respect to foreign investment ceilings specified under the foreign investment regulations.

3.4 Trade regulations

Simplification of export-import regulations has been a highlight of India's reform process, especially in the post WTO period. India's current trade regulations consist of import and export restrictions applying to specified goods on one or more of the following grounds:

- Religious, social or defence security concerns
- Safety, hygiene and phytosanitary considerations
- Sensitivities of domestic self-sufficiency and availability for internal consumption
- Preservation of endangered species and conservation of biodiversity

Barring a short list of goods, all other products are freely allowed for imports and exports, including for trading purposes. The categories of restrictions in brief are enumerated below:

Import restrictions

- Prohibited items like tallow, animal fats etc
- Restricted items-which can be imported against a specific import licence or by special notifications and special permissions. Restrictions may be on account of phytosanitary considerations for propagating materials (seeds, cuttings, etc.), or on grounds of non-essentiality such as alcoholic spirits, and certain types of consumer goods.
- Canalised items – which are allowed to be imported only though designated State Trading Enterprises (STEs). At present, agro commodities like edible oil and wheat, fertilisers and certain petroleum products are canalised. The WTO allows canalising agencies even after lifting import restrictions but requires that they operate on commercial terms and do not cross subsidise any products.

Export restrictions

Exports of all categories of goods is freely allowed and encouraged, except for the following:

- Prohibited items - on religious grounds (beef for example) or environmental and bio-conservation grounds- all wild animals and exotic birds and their parts, and endangered plant species declared under the CITES convention; seashells of certain species
- Restricted items – chemicals included in the Chemical Weapons Conventions; cattle, camel and horses; agriculture products that are seasonal or in which India is not fully self-sufficient, and requiring an export quantity registration or licence from the Export Development Authority (skimmed milk powder, pulses, edible oil in bulk, sugar, wheat and non-basmati rice etc). Restrictions may also be extraneous- such as those specified by the destination country on health and phytosanitary grounds (as in the case of mango exports to Japan)
- Canalised items- several mineral products- mica, iron ore, other ores, slag and ash; petroleum crude, naptha, kerosene and motor spirit; and onion, niger seeds, are canalised through nominated state agencies.
- Import safeguards – anti dumping, quality standards

All other tariff lines are allowed to be imported/ exported without any quantitative restrictions. However, all imports attract specified levels of import duties, which can be varied from time to time, under the provisions of India's trade policies, including allowable measures under the WTO with respect to tariff bindings, import safeguards and anti dumping.

3.5 Labour laws and social security system

India has an extensively regulated system for protecting the interests of industrial workers, employees in government enterprises, and government-controlled sectors like banking and infrastructure, where collective bargaining determines working conditions and regulations. However, regulations are not as strong in employment categories such as administrative and management staff, employees in non-manufacturing enterprises, casual workers, domestic help etc., where individual contracts govern the employment conditions. Disputes on employment related issues are heard by Labour courts in case of industrial employees and by civil courts for other categories.

Labour laws fall under the following groups, governed by several Acts:

Industrial relations - Industrial Disputes Act, Trade Unions Act

The Industrial Disputes Act governs the conduct of industrial relations and provides the framework for fair and just settlement of disputes by negotiation, arbitration, conciliation, compromise or adjudication. The Trade Unions Act provides for the registration of trade unions, to manage industrial relations on behalf of the workers. Collective bargaining, conciliation, arbitration and adjudication usually negotiate wages in the organised sector. Most trade unions are connected with a political party, and the leading political parties sponsor trade union wings.

Wage regulations

The Minimum Wages Act empowers the Government to fix minimum wages for employees working in specified employment categories, especially in industry. India's minimum wages range between Rs. 1500 and 3000 per month depending on the location and skill levels, and are subject to periodic review and revision. Prevailing wages generally tend to be higher than the stipulated levels, but can be lower in situations where collective bargaining is not in place- contract labour, for instance.

Table 3.1 — Minimum wage structures in India

Category	Monthly wage
Unskilled worker	Rs 1000-1253*
Skilled	Rs 1600-2120*
Other benefits:	
Bonus	8.33- 20 %
Contribution to PF	12% employer contribution
Insurance scheme	4.75% employer contribution
Terminal gratuity	15 days wage per full year of service

* Figures vary marginally from state to state.

The Payment of Bonus Act provides for a minimum bonus of 8.33% of salary, and a maximum of 20 % of the annual income. For bonus calculations, the upper limit of salary is fixed at Rs. 3.500 per month (even if the salary is higher, say Rs 5,500). All establishments employing twenty or more persons even for one day during a year are required to pay bonus. New units are exempted till they start making profits or for five years of operation, whichever comes first.

The Payment of Gratuity Act provides for payment of gratuity to employees having completed five years service, at the rate of 15 days' salary for each completed year of service, payable at the time of retirement/ settlement, and tax-free up to Rs. 350,000. Every establishment having more than ten employees is required to register under this Act, within five years of being set up.

Social Security - Provident Fund, Employee State Insurance Act, Maternity Benefits Act, Workmen's Compensation Act, etc

The Employees Provident Fund and Miscellaneous Provisions Act provides for the retirement benefits in the form of provident fund, family pension and deposit-linked insurance to employees. Companies employing more than 20 persons are covered by the Act, and employee and employer are required to contribute a minimum of 10% of the basic salary to the regional Employee Provident Fund; these contributions attract tax exemptions/concessions.

The Employees State Insurance Act provides for medical care benefits in case of sickness, maternity, employment injury and pension for dependants in the event of the death through accidents at the workplace. The Act specifies a deposit of 6.5% of the salary, of which 1.75% is to be contributed by the employee, the rest by the employer, and applies to all employees with salaries below Rs 6500 per month under this Act.

The Maternity Benefit Act regulates the provision of maternity and other benefits to women employees for a certain period before and after childbirth. A woman employee is entitled to post natal leave of six weeks, with full pay.

The Workmen's Compensation Act provides for payment of compensation to workmen and their dependants in case of injury and accident (including certain occupational disease) arising out of and in the course of employment and resulting in disablement or death. Compensation is determined on the basis of loss of earning ability created by the accident and is linked to current salary.

Working conditions

The Factories Act is the principal legislation for regulating various aspects relating to safety, health and welfare of workers employed in factories. It forbids employment of children less than 14 years of age in any factory, prescribes a 48-hours limit per week for adult workers, and sets the minimum standards of lighting, ventilation, safety and welfare services, which employers must provide in their factories. The Act applies to all establishments having not less than ten persons carrying on a manufacturing/ industrial activity using electricity, or having twenty or more persons carrying on manufacturing or industrial activity without the use of electricity.

The Equal Remuneration Act provides for payment of equal remuneration to men and women workers for the same work and prevents discrimination against women in matters of recruitment and also in relation to matters such as promotion, training or transfer.

The Child Labour Act prohibits employment of children in certain hazardous occupations and processes and regulates their employment in some other areas. Legislative provisions have also been made in various laws to protect children from exploitation at work and to improve their working conditions.

The Contract Labour Act regulates establishments and contractors employing at least twenty workmen as contract labour on any day during the year, and provides for the welfare and health of contract labour involved in any activities that are not intermittent or casual in nature. All contract workmen employed for more than 200 days during a year, are entitled to wages and other benefits on the same lines and terms as regular employees, and are to be absorbed as regular employees of the establishment.

Temporary, permanent and contract employees

A fundamental distinction exists among temporary, permanent and contract workmen in the context of the workplace.

Indian laws recognise a category of regular workers called contract workers, who are not on the rolls of the enterprise itself, but are provided through registered external contractors. Contract labour is essentially used for jobs that are of an intermittent or casual nature- landscaping, cleaning and estate maintenance, construction, etc., but not any jobs that are related with the main business process of the enterprise. Contract labourers do not get wages and benefits similar to the permanent employees of an enterprise, nor the membership of the trade unions recognised by the enterprise.

The exploitation of contract workers through sham contracts, where the contractor is merely a front for the enterprise, has led to the enactment of the Contract Labour Act, Contract workmen are entitled to all statutory benefits such as provident fund and insurance to be normally provided by the contractor, but binding on the enterprise in case the contractor fails to provide the same. Under certain conditions, contract employees may become the permanent employees of an enterprise if they work in the enterprise for more than 200 days in a year.

Changing business conditions, especially the emergence of business enterprises engaged in non- industrial activities, services including Information technology, seasonal industries and sporadic opportunities (especially export contracts) have necessitated a review of the legislation on contract labor in its present form. The Contract Labour Act is presently under consideration of Parliament for a major amendment- the Act shall apply only to enterprises having more than 1000 workers. If the amendment is approved, outsourcing will emerge as a major business in India, governed by contractual laws and not labour laws.

3.6 Intellectual property protection

Before joining the WTO, India recognised only the following forms of intellectual property:

- Patents
- Trade Marks
- Copyrights
- Industrial Designs

Agreement on Trade Related aspects of Intellectual Property Rights (TRIPS) required India to enact new legislation in respect of ‘Geographical Indications of Goods’ and ‘Integrated Circuits and Industrial Secrets’, besides effecting significant changes in existing laws on Patents, Trademarks and Copyrights.

India has now put in place new laws extending intellectual property rights to all convention countries on a Most favoured nation (MFN) basis. While new laws on Trademarks, Geographical Indications and Copyrights have been framed without any controversy and in harmony with prevailing international practices, the issue of Patents has attracted enormous controversy and divided opinions within the country, despite a new Patents Act coming into force in 1999.

The salient features of current laws on intellectual property protection are enumerated below.

Law of trade marks

In India, a trademark can be registered under the Trade and Merchandise Marks Act.

The major features of India’s trademark protection regime are:

- Trademarks can be assigned to goods and services
- Certain kinds of marks are not be allowed (obscene text, marks affecting religious sentiment, prohibited names etc)
- Trademarks from a convention country shall be allowed registration in India with retrospective effect (if applied for within six months)
- Registration is valid for ten years, with the option for renewal for similar periods.
- Trademarks are licensable/assignable against consideration.
- Trade marks registered in other convention countries are accorded protection in India (on bilateral basis) even if they are not in use or well-known in India

Law on Copyright

India enacted its first legislation to protect copyright in 1957, and amended it last in 1999. Copyright registration in India classifies works in six categories:

1. Literary works other than computer programmes, tables and databases and dramatic works
2. Musical works
3. Artistic works
4. Cinematographic films
5. Sound recordings
6. Computer programmes, tables and compilations including databases

Copyright is available during the lifetime of an author and for a further sixty years from the year of the author’s death.

While the subject of copyright is fairly old, new dimensions have arisen in areas such as computer software development where professional skills are the most important element in bringing revenues. India’s Copyright Act provides that the company or employer indeed owns the copyright on works developed by employees. Similarly, a client has copyright in respect of all materials that are commissioned on others for exclusive development on behalf of the client.

Law of Patent

India’s patent laws deviate from laws in developed countries in the following respects:

- Patents are not given for testing methods, agriculture/ horticulture production methods, and discovery of a new application/property of a known item, inventions in atomic energy, inventions that are contrary to the law, and frivolous inventions.
- Plants, animals and biological processes- especially genetically engineered species are not patentable.
- Product patents are not allowed in case of food, drugs, medicines and a few specified chemicals, unlike in several other countries. Only process patents are allowed in these areas.
- Patent period is shorter - 14 years for products, and 7 years for processes relating to food, drugs, medicines and specified chemicals, unlike the 20 year protection given in several other countries.

However ,under the TRIPS - India has a transition period of 10 years, expiring on Jan1, 2005, to enact a product patent system In order to give effect to those provisions. By then, India must move to a system of product patents in respect of all products except life forms, and enact a sui generis system of protection to plant varieties which would be in the nature of a separate law and not governed by patent protection. India has a draft Plant Protection Bill that was introduced in Parliament in 1999 and is under deliberation.

Meanwhile, until India is able to put in place a product patent regime, it needs to provide for the following systems to protect materials patented or accorded exclusive rights in other WTO member countries:

- A 'mail-box' facility to accord pipeline protection to patents filed and accorded after Jan 1, 1995 in food, drugs etc. (for which India does not grant product patents), to be opened in chronological order after India accords product patents
- Exclusive marketing rights (EMRs) in India for a period of five years or till the date India grants a patent for the material (whichever is less) pending patent acceptance/rejection.

The changes have been challenged at the WTO by the US and the matter is sub judice.

3.7 Business regulations for foreign companies

All private and public limited companies incorporated under Indian laws are required to conduct their affairs in accordance with the provisions of the Indian Companies Act, 1956. However, foreign companies i.e. companies that are not registered in India, operating from a place of business in India (branch/ liaison offices) is required to:

- Notify the Registrar of Companies of their place of business, within 30 days of establishing the same
- Notify the Registrar of its authorised persons in India to receive notices or documents issued on the company
- Display on the premises, the full name of the parent company with the country of origin
- Notify the Registrar of any changes in the Memorandum and Articles of the parent company as well as change of address etc.
- File annual statement of operations, authenticated bank account statements, etc duly certified by a practicing accountant/ auditor.

3.8 Employment regulations for foreign nationals

Foreign nationals are allowed, in principle, to be employed in India either on a short duration or in regular employment on a non-permanent basis, for periods usually up to three years.

The basic requirements are:

a) A valid business visa/working permit
b) Prior approval by the Reserve Bank of India, for repatriation facilities.
c) Permission from the Ministry of Home Affairs, for extended stay in India (exceeding three months)
d) Permission from the Dept of Company Affairs for appointment of an Expatriate as Whole-time Director if he was not resident in India during the past twelve months
e) Clearance from the Dept of Company Affairs for managerial remuneration to the Managing or Whole-time Director, in excess of specified norms

With the exception of short-term engagements, all other forms of employment of foreign nationals require prior approval as listed above. Initial permissions are usually granted for terms up to three years. Although there are no restrictions on the number of expatriates in any company, the Government policy is to encourage indigenous skills as much as possible.

Foreign nationals in regular employment of Indian Companies (including joint ventures) can remit up to 75% of their monthly earnings abroad to meet their overseas expenses or maintain the family etc, after payment of any taxes in India. Retirement facilities to foreigners allow capital repatriation up to Rs 1 million, besides all savings generated from bonified income, without any restrictions.

3.9 Capital market regulations

Well-defined and detailed guidelines exist in India for the following types of capital market operations:

- Public issue of shares by companies having a track record/ without a track record
- Issue of equity under the book-building route
- Issue of Employee Stock Option Plans
- Buyback of shares by a company
- Substantial acquisition/ take-over of a company shares from the secondary market
- Code of Corporate Governance for all public companies
- Operating guidelines for Foreign Institutional Investors
- Operating guidelines for Venture Capital Companies/ Funds/ Mutual Funds
- Code of Conduct of Merchant Bankers, Brokers and Depository participants

3.10 Competition Regulations

India's earlier competition laws were based on size-turnover, market share and asset base- of companies, and need to be reviewed in the context of globalization and open market competition. A review of India's current regulations- the Monopoly and Restrictive Trade Practices Regulations-on the above areas has been proposed through a new National Competition Policy, currently before Parliament for approval.

Based on international models, the proposed competition legislation focuses on the following areas:

- Agreement among enterprises that may restrict competition: Agreements may be horizontal (agreements of collusion amongst competitors), or vertical (agreements between buyer/seller firms). Horizontal agreements relating to collusive tendering, price-fixing, production controls, etc. as well as vertical agreements for exclusive supply/distribution contracts and refusal to supply are all considered anti-competitive.
- Abuse of dominance: Abuse of dominance will include practices like quantity restrictions, predatory pricing to eliminate competitors and marketing below costs to drive out competitors in order to recover market shares, etc. However, in determining competitive pricing, the pro-

posed law makes a significant departure by recognizing the important benefit of competition- consumer welfare and social benefits and not always taking an adverse view. In this regard, predatory pricing will be considered adverse only if used by a dominant undertaking and dealt with on the basis of rule of reason.

- Mergers and combinations among enterprises: The proposed law cautions against monitoring all types of mergers, given that several Indian enterprises do not have international scale of operations and could benefit by restructuring through mergers and acquisitions. Therefore, it proposes to have a system of prior notification for mergers beyond a threshold limit: asset values exceeding Rs 5 bn for the merged entity, and/ or Rs 20 bn for the parent group holding the merged entity. Notifications shall be considered as approved if no objections or orders are issued within 90 days by the adjudicating authority.

3.11 Corporate governance

While India's Companies Act has several regulations dealing with statutory declarations of business results and general conduct of a company through its Board of Directors, the subject of Governance is more specific on the responsibilities of the Board of Directors towards ensuring transparency, unbiased conduct and non-concealment of important and material facts of interest to investors and other stakeholders. In this regard, obligatory Corporate Governance guidelines have been specified for all public listed companies, with the following important provisions:

1. Composition of the Board of Directors: to include non-Executive Directors. Independent Directors – who have no pecuniary interest outside their director's remuneration or material transactions with the company or its subsidiaries or its promoters that may influence their judgement- must form at least one-third of a Board's strength where the Chairman is a non-Executive Director, and half its strength where the Chairman is an Executive Director.
2. Audit Committee: Every company shall have an audit committee of at least three members, all being non-executive Directors, at least two being independent and at least one possessing financial and accounting knowledge. The committee must meet at least thrice a year and perform its role (specified in detail in the guidelines) to overview the company's financial reporting process and ensure the correctness and credibility of its financial statement.
3. The company must attach a Management Discussion & Analysis Report with the Annual Report to the shareholders covering important matters on the sector outlook, risks and other internal aspects of the company.
4. The Annual Report shall contain a corporate governance section with a detailed compliance report on the guidelines. And also obtain a compliance certificate from statutory auditors.

The guidelines are mandatory and must be implemented latest by March 31, 2003 for all companies presently listed with paid up capital of Rs 30 Mn or more; and at the time of listing for all companies seeking listing for the first time.

3.12 Environment regulations

India's Environment Protection Act deals with all statutory regulations dealing with the environmental impact of various industrial and commercial activities. The Act addresses prevention as well as control aspects that potentially affect the quality of environment.

All industrial units require prior environmental clearances under the Water Pollution Act and Air Pollution Act, which are screened by the state Pollution Control Boards. Industrial units falling under 17 highly polluting categories- including steel, aluminum, pesticides, refineries, paper, leather, dyes and pigments, etc- is actively monitored, and are required to set up captive effluent treatment plants meeting the specified discharge levels for their activities.

Of late, the judiciary has been playing a proactive role in matters concerning public health and safety, especially in urban areas. The most notable example in recent times is the Supreme Court's intervention in control of vehicular pollution in Delhi, which had become one of the world's most (air) polluted cities. The court banned all commercial vehicles more than eight years of age from plying in the city, and mandated all public transport to switch over to CNG from diesel and petrol within a six-month period.

3.13 Technical and quality standards

Businesses are required to observe mandatory quality standards in all products/ services affecting health, hygiene and public safety. Food, medicines and several service industries are governed by safety standards instituted by the Ministries of Health, Food Processing and other administrative authorities governing various services like public transport, civil construction, etc.

Besides mandatory standards, India has its own Bureau of Indian Standards, which develops national standards for several categories of industrial and consumer products, which differentiate products and brands based on these qualifying standards. Manufacturers complying with Indian standards are allowed to use the BIS certification mark on all their products passing the IS requirements. BIS certification is often included as a pre-qualification in public tenders.

Besides product standards, India has also introduced quality system standards in line with international standards such as the ISO 9000 series. Certification under quality standards is increasingly becoming a prerequisite for procurement by large institutional buyers and in international contracts.

3.14 Business and corporate social responsibility

While profits are the primary motive of business, there is a ground-swell of opinion that business, being a part of the social system, must seek to serve social causes, as well. In this regard, ethical and socially responsible conduct are becoming not only desirable values but also guiding business principles in several companies, world-wide.

Internationally, several businesses follow a formal code of ethics that encompasses one or more of the following:

- Business conduct
- Law and Government
- Community and Society
- Environment

On the other hand, when businesses accept and indulge in corruption, bribes and other forms of gratification as normal costs of doing business, they give their tacit approval to a value system that punishes honesty, diligence, merit and excellence as cherished qualities in society.

In India, there are few examples of companies having formal codes addressing social responsibility and explicitly defining business conduct ethics, partly due to the systemic inadequacies and challenges in which business enterprises must operate. Indeed, tampering with Govt. contracts and tenders, obtaining undue information about competitors' offers, tax evasion and speed money exist as business practices in India, and 'good liaison skills' are considered important for business.

However, subsidiaries of foreign companies may at times be bound by the regulations of the parent companies, especially with regard to dealing with Govt. officials. For instance, US laws require US companies are required to report business gratification payments exceeding US$ 10,000 made in foreign countries, which also applies to their Indian subsidiaries. To circumvent direct dealings, some companies are known to out-source liaison activities, maintaining a distance from the bureaucratic machinery.

Adulteration and consumer/ investor fraud are also known to exist in India, exposed by scandals once every few years. The inadequacy of the enforcement machinery and the painfully slow legal process of prosecution and sentencing assist and even encourage unscrupulous activity.

While business laws govern corruption and adulteration, social contribution and corporate responsibility are generally viewed from a minimalist agenda (not adding to pollution) rather than positive and restorative activities (sponsoring a river cleaning project), unless there are gains in the form of tax-benefits and special incentives.

4. COMMERCIAL LAWS AND TAX SYSTEM

India has a tax system covering business income, personal income, capital gains, wealth formation and most forms of commercial transactions. Tax rates have been consistently falling in the 1990s as a part of economic liberalisation. However, because duties and taxes account for 66% of the government's revenue, the scope for any drastic reduction in tariffs and tax rates from existing levels is rather limited.

Indian taxes can be grouped in two categories:

- Direct Taxes: Income Tax; Wealth Tax; and Gift Tax, which apply on income
- and Indirect Taxes: Customs Tariffs; Excise duty; Sales tax; Service tax; Octroi/ entry tax; Stamp duty (on conveying/ transfer of title); Property tax; etc., which relate to commercial transactions.

Taxes are collected by the central as well as state governments. The central government levies all direct taxes such as personal income tax, corporate tax, capital gains tax, and transfer of property, besides some indirect taxes such as customs duties, excise duties and central sales tax. State Governments levy local taxes such as land revenue, tax on agricultural income, property tax, octroi, entry tax and local sales tax.

4.1 Trade policy

Until 1994, India had been following a restrictive trade policy that deterred imports through quantitative licensing requirements as well as steep import tariffs. Imports of several consumer goods were prohibited or severely restricted as 'non-essential' imports, while industrial raw materials, intermediates, capital goods and finished goods were allowed to be imported under actual user licenses, and attracted a cascading import duty structure that facilitated domestic value addition.

After the Uruguay Round, India amended its trade policies significantly to comply with market access commitments and other requirements of the WTO principal agreements, notably the GATT 1994 and the Agreement on Agriculture. At present, India allows import and export of nearly all its tariff lines, barring a very small list of products (called the negative list) for external trade, on these grounds:

- Religious, social or defence security concerns
- Safety, hygiene and phytosanitary considerations
- Sensitivities of domestic self-sufficiency and availability for internal consumption
- Preservation of endangered species and conservation of biodiversity

The categories of restrictions in brief are enumerated below.

Import restrictions

- **Prohibited items** like tallow, animal fats, etc.
- **Restricted items,** which can be imported against a specific import licence or by special notifications and special permissions. Restrictions may be on account of phytosanitary considerations for propagating materials (seeds, cuttings, etc.),
- **Canalised items,** which are allowed to be imported only though designated State Trading Enterprises (STEs). At present, agro commodities like edible oil and wheat, fertilisers and certain petroleum products are canalised. The WTO allows canalising agencies even after lifting import restrictions but requires that they operate on commercial terms and do not cross subsidise any products.

Export Restrictions

Exports of all categories of goods is freely allowed and encouraged, except for the following:

Prohibited items

On religious grounds (beef for example) or environmental and bio-conservation grounds- all wild animals and exotic birds and their parts, and endangered plant species declared under the CITES convention; seashells of certain species

Restricted items

Chemicals included in the Chemical Weapons Conventions; cattle, camel and horses; agriculture products that are seasonal or in which India is not fully self-sufficient, and requiring an export quantity registration or licence from the Export Development Authority (skimmed milk powder, pulses, edible oil in bulk, sugar, wheat and non-basmati rice etc). Restrictions may also be extraneous- such as those specified by the destination country on health and phytosanitary grounds (as in the case of mango exports to Japan).

Canalised items

Several mineral products- mica, iron ore, other ores, slag and ash; petroleum crude, naptha, kerosene and motor spirit; and onion, niger seeds, are canalised through nominated state agencies.

Box 1 — Impact of the WTO on India's trade policy

As a signatory to the various agreements of the Uruguay Round that ended in 1994, India has offered a schedule of commitments to increase market access opportunities for industrial as well as consumer goods, to be introduced in a phased manner since 1997. The essence of India's important commitments in respect of border measures is given below:

Elimination of all quantitative restrictions: As a developing country member, India was required to eliminate all Quantitative Restrictions (QRs) on imports over an implementation period of 10 years (i.e. before April 1, 2004). This necessitated opening up imports on all agricultural and consumer goods, which India had been severely restricting for imports, as non-essential and non-priority import categories.

Following the agreement in 1994, India removed QRs on all tariff lines except nearly 2700 items (mostly consumer goods and food products) on which it retained QRs on balance-of -payments grounds. However, several trading partners challenged the justification of QRs on such grounds. In 1997, India negotiated a phase-out schedule consisting of three stages, which was accepted by the EU and other trading partners, but was formally disputed by the US at the WTO. India lost the dispute, and accepted April 1, 2001 as the final date for eliminating quantitative restrictions on all items (except a few socially and culturally sensitive items like beef, adult content publications, etc) for imports, as committed.

Tariff Ceiling Bindings

For all industrial products and several consumer products India has committed to bind border tariffs as set out in the National Schedule of Ceiling Bindings, a document of the WTO agreements. Most products have been bound at one of three levels: 40% (several industrial goods and some consumer durables), 25% (capital goods, metals and other items not made in India), and 150-300% (consumer products considered non-essential in nature and products of elitist consumption).

However, the ceiling duties are misleading as they reflect only one component (the basic duty) of India's multiple duty structure. India has at least four import tariff components, in a cascading structure (tariffs applying even on other tariffs), with the result that the actual tariffs are much higher than the WTO 'bound' levels.

Unbound items: On all items that have not been bound, India is technically justified to impose any level of tariffs. In April 2001, when alcoholic products were opened up for free imports, import duties were raised to unprecedented levels ranging from 460 % to 700% ad valorem. Similarly, tariffs were raised on some essential items like edible oils from the earlier 25% to 75% (still well below the bound rate of 300%), following large-scale imports from the Far East. The judicious selection of bindings gives India still enough control over the import of principal and sensitive products.

Re-negotiation of earlier bound tariffs

Way back in 1962, under difficult times for food security, India had already bound at a 'nil' rate of import duty for thirteen essential food products- rice, wheat, coarse cereals, milk powder, oilseeds and edible oils, which were being imported only by Govt. owned State Trading Enterprises (STEs). With the commitment to open up all imports by 2001, India is renegotiating the 'nil' ceiling bindings with important partners who have negotiating rights on these goods. New ceiling tariffs have already been finalised for maize and milk powder and follow the tariff rate quota model for market access, where by a ceiling quantity will be allowed for import at low duties, the rest being at the new notified binding rates.

Safeguard Duties

Under the WTO provisions, safeguard duties may be applied in respect of any item whose import volumes exceed the preceding three-year average by more than 25% or whose average CIF price falls below the preceding three year average by more than 10%. Even though trade volumes for most goods have been negligible before the removal of QRs, technically, WTO rules facilitate imposition of safeguard duties even on goods that may have a very small share of total imports, which leaves much room for discrimination. After the elimination of QRs on all goods in 2001, India has announced a close watch on 300 'sensitive items' to guard against import surges following the removal of opening up of imports.

Antidumping Duties

India applies antidumping duties using the provisions of the WTO Agreement on Dumping, in cases where the normal price exceeds the landed price in India by more than the de minimis margin of 2% and the volume of dumped goods exceeds 3% of domestic market from a single origin or 7% in case of dumping by more than one origin. India's anti dumping legislation does not consider the consumer interest aspect and is based on industrial representations alone. As a result, antidumping actions can be initiated even when the Indian market prices are higher than international levels, because of a monopoly or dominant Indian player's intervention

Import Tariffs

Since 1995, India has drastically brought down import tariffs to the present peak tariff levels of 40% in most tariff lines, in line with WTO agreements. Presently, there are seven basic tariff levels in force: 5%, 15%, 25%, 35%, 40%, 100% and 210%.

More than 90% of India's tariff lines attract a basic duty up to 35%, which is below the bound rates of 40% committed; tariffs on other products are at the respective bound levels, 40% in specified industrial products, 100% in sugar, wheat and certain alcoholic beverages such as beer, while wines and spirits with high alcohol content attract a deterrent rate of up to 706%.

In general, capital goods attract the lowest duty rates, followed by raw materials, intermediates and finished goods, in ascending order of import tariffs. Till 1998, India maintained a zero duty for several essential goods such as newsprint, timber and a few other inputs in which India has traditionally

been scarce, but has revised the minimum rate to5% even as tariffs in several other goods have been brought down.

While border tariffs have been brought down substantially from the pre-liberalisation years, they reveal only one part of the story. India applies four types of import tariffs on all imports:

1. Basic Duty: the tariff notified to the WTO as the border measure and monitored for bindings;
2. Special basic duty: a surcharge applying as a 10 % of the basic duty
3. Additional Duty: the equivalent of the VAT applying on similar goods manufactured in India- this can be either 24%, 32% or 40% depending on the category of goods; and
4. Special Additional Duty: the equivalent of the inter state sales tax, applying at 4%

India's commitments to the WTO refer only to border tariffs, in other words, only the basic duty. Accordingly, the peak rate of the basic duty has been reduced to 35% to meet the commitments on ceiling bindings. But the cascading manner in which other duties are applied on imports, lead to actual tariffs being much higher than the border tariffs and even bound rates notified to the WTO (also see box in Chapter 5).

India's import tariffs are six times European levels and thrice ASEAN levels, even though, technically, India has abided by its tariff commitments at the Uruguay Round.

Import duties account for 28% of the total tax revenues of the Govt., and reduction of tariffs without concomitant measures on expenditure control is not maintainable. As a result, further reductions in the import tariffs are not to be expected especially in view of India's compliance with the WTO bindings.

Export tariffs

Depending on the product, export tariffs ranging from 10% to 40% ad valorem or specific rates per unit apply to several categories of agriculture goods, mineral products and skins. In several products, a cess- normally 0.5% of the export value- applies, the proceeds of which go to the concerned development authority.

For some products, India also specifies a Minimum Export Price (MEP), which is the floor price for exports of those products. MEPs are set either seasonally or for a longer period of time. Agriculture products, especially onion, mineral products like mica and other natural materials such as marble and granite blocks are covered under the MEP.

4.2 Taxation principles

Indian Income Tax Law assesses individuals, partnerships, association and companies as business. Each enterprise is treated separately to determine taxable income. Tax liabilities are calculated on a self- assessment basis and it is mandatory to pay all taxes for the operating year before the end of the financial year. The tax year ends on 31st March in India.

Taxable business income includes: income from properties, business activities, capital gains, and any other sources, such as dividends, interest on deposits, etc.

Allowable expenditures

The Income Tax Act provides for the following expenditures to be included for tax calculations:

- Interest on borrowings
- Depreciation in respect of plants, machinery, furniture, buildings used for business owned by the assesses
- Rent, repairs, insurance premium against risk of damage or destruction of the premises
- Research and development expenditure (up to 150% of actual expenditure in a business year)
- Capital expenditure on technology know-how, patents, instalments and copyrights, deductible in annual instalments
- All other expenditure incurred wholly for the purpose of business, and not covered under other deduction
- Donations to registered charitable and welfare/relief funds (within set limits)

4.3 Computing taxable business income

Corporate tax is applicable to all business enterprises, including foreign companies operating in India as liaison offices, branch offices, all of which must file income tax returns under Indian laws. Foreign entities not located in India

Table 4.1 — Corporate tax rates

Tax Year	April 1 to March 31
Due Date for Filing Tax Returns	October 31
Type of Company	Rate of Tax (%)
Domestic Company	
Income	35.7 (35% plus 2% surcharge)
Long term capital gains	20.4(10.2% in case of gain on listed shares without indexation benefits)
Other income	35.7
Distribution Tax	20.4% of dividend distributed. (Basic Rate 20% + 2% surcharge thereon)
Minimum Alternate Tax ('MAT')	7.65% of book profits unless specifically exempt
Carry forward of unabsorbed losses and depreciation	8 years
Foreign company	
Withholding taxes:	
Royalties and fees for technical services- under approved agreement made before 31.5.1997/approved agreement made after 31.5.1997	(15% under most DTAA treaties)
Interest on foreign currency loans	20
Dividends, income from specified mutual funds or unit trust of India ("UTI") purchased in foreign currency	20
Business and other income in India	48
Capital Gains of FIIs from sale of Indian securities	10
Capital Gains of foreign companies from sale of Indian securities	20(10% in case of gain on listed shares without indexation benefits)

Source: internal compilation.

but receiving certain forms of income- royalties, interest, etc.- from India, are levied a prescribed withholding tax as applicable to the nature of the income. Remittances are made on a net basis, i.e., after deduction of the withholding tax.

Businesses pay taxes on taxable income, distributed profits (dividends) and capital gains from sale of assets.

Presumptive Tax Provisions

A system of presumptive taxes (ranging from 7.5 to 10% of gross receipts) based on assumed profits as a percentage of gross receipts is applicable for specified services such as civil construction, shipping, hiring of plant and machinery, operation of aircraft, turnkey power projects.

Minimum Alternate Tax

Tax incentives, especially export-linked incentives,- result in several companies using innovative tax planning to exempt all their taxable income, despite having high book profits. In order to bring back such 'zero-tax' companies under the tax bracket, a Minimum Alternate Tax (MAT) applies to all zero tax companies, applicable at a rate of 7.65% of book profits as determined under the Companies Act. However, export oriented units and Infrastructure projects, which have been specifically exempted from income tax, do not have to pay MAT.

Capital Gains Taxes

Capital gains are classified into short-term capital gains (not more than12 months for shares/ securities, and not more than 36 months for other assets) and long-term capital gains.

Short term capital gains are treated at par with ordinary income, while long term capital gains attract a lower flat rate of tax, after deducting the

- Cost of acquisition - purchase, brokerage, stamp duties/registration charge
- Cost inflation indexed for the year of sale

Table 4.2 — Taxation rates on capital gains

Taxpayer Status	Flat Tax Rates [%]
Resident individual	20.4
Non-resident Indian/ FII	10.2
Domestic company and partnership firm	20.4 (10.2% for listed scrips, without indexation)
Venture capital company	20
Foreign company and non-residents	20

Source: internal compilation.

For calculating long-term capital gains on shares, deductions are allowed for the cost of acquisition, as well as the cost of conversion (exchange fluctuations) into the currency in which they were purchased originally. Capital gains losses can only be carried forward and set off against capital gains over eight subsequent years.

Dividend tax

Tax is withheld at 10.2% or a lower rate (under a bilateral tax treaty) on dividends paid to foreign companies. With certain exceptions, such as scheduled banks and public financial institutions, investor companies are allowed a deduction (up to 60%) on inter-corporate dividend income they themselves declare during the relevant period.

4.4 Taxation of foreign companies

Indian tax laws distinguish between domestic and foreign companies in administering tax rates. Indian Companies are taxed on their worldwide income, while foreign companies are taxed only on the income that arises from Indian operations.

Indian income includes royalties, technical service fees, dividends, and capital gains on sale of Indian company shares, besides business income originating from branch or project operations. Certain categories of business expenditure are also disallowed or capped, for computation of net income, chief among which are: entertainment expenses, interest remittances abroad without withholding taxes, administrative costs of overseas headquarters, etc.

Foreign companies (companies registered and located outside India) not having a permanent establishment in India are taxed under the withholding provisions of bilateral Double Taxation Avoidance Treaties, in respect of royalties and fees for technical services, interest on foreign currency loans, dividend and income from specified on mutual funds, remitted from India.

Liaison office

A liaison office is not taxable in India, as it is not allowed to undertake any business/commercial activity.

Branch operations

A branch of a foreign company is a permanent establishment, and the profits attributable to the branch are subject to tax as an independent enterprise. A foreign company operating branches in India is assessed on income arising in India. If both the manufacture and sale are in India, the entire profit is taxed in India. A Project office, although not a permanent establishment, is treated like a branch office for tax purposes.

Branch operations attract higher rate of income tax (48%) than Indian subsidiaries/ joint ventures (35.7%). In determining taxable income, a maximum deduction of 5% of total income is allowed on account of administration expenses of the overseas headquarters. The foreign company is not liable to any additional branch tax or withholding tax on remittances to the head office.

Subsidiary/wholly owned company

By definition, a wholly owned subsidiary company is an Indian corporate entity - either private or public limited company, and is taxed in India like Indian companies. Additionally, the parent company is taxable on dividends repatriated from the subsidiary, under the provision of bilateral tax treaties and Double Tax Avoidance Agreements (DTAA).

Foreign Institutional Investors

Dividends, interest, royalties, and capital gains earned on portfolio investments of registered Foreign Institutional Investors (FIIs) are treated in the same manner as income received from Indian subsidiaries.

The tax rates for Foreign Institutional Investors are:

- Income received in respect of securities- 20%.
- Income by way of long-term and short-term capital gains from the transfer of securities, 10% and 30% respectively.

Double Tax Avoidance Agreements

India has signed bilateral treaties with several countries, providing tax credit for the foreign tax paid on overseas income. Credit is generally given for those foreign taxes withheld or paid that correspond to Indian income tax. The tax credit is limited to the lower of the tax paid abroad and the Indian tax on the foreign company.

The Indian income tax for overseas companies is determined by dividing the Indian income tax on the total taxable income (including the doubly taxed income). Foreign taxes, to the extent they cannot be set off against the Indian tax liability for the year, are permanently lost. Taxation treaties exist between India and several countries including the Netherlands, addressing the issue and avoidance of double taxation.

4.5 Individual taxes

For tax purposes, individual income includes:

- Salary- including various allowances received by him (annuity, gratuity, any fees, commissions, profits)
- Benefits and income paid abroad while the individual is located and serving in India.
- Perquisites including rent- free accommodations, value of any amenity granted or provided free of cost or at a concessional rate.
- Income from property in India.
- Professional and business income.
- Capital gains.
- Other sources.

Income tax liabilities are calculated on the basis of a slab structure, providing for standard deductions, and special tax saving schemes.

Table 4.3 — Double taxation avoidance agreements

Afghanistan	Norway
Australia	Oman
Austria	Pakistan
Bangladesh	Romania
Belarus	Russian Federation
Belgium	Saudi Arabia
Brazil	Singapore
Bulgaria	South Africa
Canada	Spain
China	Sri Lanka
Cyprus	Sweden
Czech Republic	Ethiopia
Namibia	Finland
Nepal	France
Netherlands	Germany
Tanzania	Greece
Thailand	Hungary
Trinidad and Tobago	Indonesia
Turkey	Iran
Turkmenistan	Israel
United Arab Emirates	Italy
United Arab Republic	Portugal
United Kingdom	Qatar
Japan	Poland
Jordan	New Zealand
Kazakhstan	Philippines
Kenya	Yemen Arab Republic
Korea	People Democratic Republic of Yemen
Kuwait	Uzbekistan
Lebanon	Vietnam
Libya	Zambia
Malaysia	Syrian Arab Republic
Malta	Swiss Confederation
Mauritius	United States of America
Mongolia	
Morocco	

NB: List of Countries having Double TaxatioFn Avoidance Agreements with India.

The following perquisites are tax-exempt:

- Leave travel assistance,
- House rent allowance (can be up to 40% of base salary in urban cities),
- Medical expenses up to Rs. 15,000,
- Retirement benefits up to maximum of 27% of base salary.

A foreign national in regular employment/service contract in India is taxable on his earnings in India on the same lines as any Indian national residing in India.

Table 4.4 — Individual income tax structures

Annual Income Slab	Rates of Income Tax
Up to Rs.50, 000	Nil
50 - 60.000	10% of income over Rs.50.000
60 - 150.000	Rs.1.000 + 20% of income over Rs.60.000
Above 150.000	Rs.19.000 + 30% of income over Rs.150.000

NB: For incomes over Rs 60,000, a Surcharge of 2% is payable on the tax value.

However, remuneration received by a foreign national for the services rendered by him to foreign companies in India is exempt from Indian Income Tax, provided the following conditions are fulfilled:

- The stay in India does not exceed in the aggregate a period of 90 days (183 days under most DTAA treaties) in the financial year; or
- The company agrees to pay tax on behalf of the employee, and does not seek deduction to such effect in its business income.

Wealth Tax

Certain non-productive assets like any building or land, jewellery, aircraft, cars, urban land etc., valued beyond Rs. 1.5 million are taxable at 1% for the amount exceeding this limit under the wealth tax. Debts which have been secured on, or which have been incurred in creating such assets are deductible in the computation of net wealth.

4.6 Indirect taxes

In India, indirect taxes are imposed both by the central Government and the State Government. Central Excise Duty and Custom Duty are the main indirect taxes levied and collected by the Central Government. Central Excise accounts for 35.6%, and custom duties 33.6%, of total tax receipts of the Central Government.

Central Excise Duty

Central Excise Duty is collected by the Central Government on almost all articles produced or manufactured in India. Duty paid on all inputs and capital goods is allowed a setoff against the duty payable on the finished goods through a duty credit procedure referred to as the MODVAT scheme.

India presently uses a two-tier system of excise duty classification:

- The first component is a fixed Value-added tax termed 'CENVAT' is fixed at a uniform rate of 16% for all classes of goods, except 11 specified items consisting medical and household consumption articles, and is eligible for credit on excise-duty paid inputs; and
- The second component is variable of special excise duty applying at 8%, 16% or 24% depending on the classification of the product in the excise tariff schedule, with no duty credit applicable on this component.

Therefore, all excisable goods in India fall into three classes of duties: 24%, 32% and 40%.

Sometimes, states exempt excise duties on goods manufactured in their jurisdiction, as an investment incentive for new units.

Central Sales Tax

Central Sales Tax governs the sale of goods involving the movement and transfer of goods from one state to another state. The rate of tax depends upon class of goods sold and is normally 4%.

India is moving toward a uniform system of VAT, which is proposed to be implemented in a few states by April 2002, and progressively extended to other states as well.

4.7 Custom duty

Customs duty is collected by the central government on goods imported into India, besides on some goods exported from India.

India applies the following four classes of import tariffs 'applying on a progressive basis':

- Basic Duty: the tariff notified to the WTO as the border measure and monitored for bindings;
- Special basic duty: a surcharge applying as a 10 % of the basic duty
- Additional Duty: the equivalent of the excise duty (India's version of VAT) applying on similar goods manufactured in India- this can be either 24%, 32% or 40% depending on the category of goods; and
- Special Additional Duty: the equivalent of the inter state sales tax, applying at 4%

Tariffs apply on a cascading basis, i.e. they increase with the level of value addition in the imported item, capital goods and raw materials attracting lower rates than intermediates and semi processed forms, which in turn attract lower duties than finished goods.

Table 4.5 — Tariff spectrum for selected goods

Category	Tariff range (%)
Animal products	
• Meat and meat products	40.40 – 108
• Fish and other aquatic products	40.40
• Milk and milk products	35 – 60.40
Chemical and allied components	38.736 – 62.864
Metals	38.7360 – 62.864
Engineering/ capital goods	30 – 62.864
Consumer durables including vehicles	50.80 – 147.312
Personal accessories and misc goods	62.864

Source: compiled using customs tariff schedule, 2001-02.

At the Uruguay Round, India had committed to bring down border tariffs of all industrial goods below 40%. Accordingly, the peak rate of the basic duty has been reduced to 35%. But the cascading manner in which duties are applied lead to actual tariffs being more than twice the ceiling bindings notified to the WTO. India's tariffs are six times European levels and thrice the ASEAN levels. India is committed to bring down the peak rate of duties to 20% (meaning an average tariff of around 10%) by 2005.

Export duties

Export duties and cess apply to a limited list of 26 items including animal skins, certain agriculture commodities. The

Box 2: Cascading Duty structure: an illustration

Let us consider a case where the following rates are specified in the Customs Tariff: Basic Duty 35%; Additional Duty 16%; and Special Additional duty 4%, applying on a CIF value of 99 units.

Heading	*Amount*	*Cumulative*
CIF Value		99
Landing charges @ 1%		1
Assessable value	100	
Basic duty 35% of landed value		35
Subtotal 1		*135*
Additional duty @ 16% on subtotal 1		21.6
Subtotal 2		*156.6*
Special Additional Duty @ 4% of Subtotal 2		6.264
Total value:		*162.864*
Effective import duties		***62.864***

When safeguard or antidumping duties are leviable, these will be added in subtotal 1.

Under its WTO market access commitments, India has bound Basic Duty for several items (40% in most cases), but final tariffs after imposition of the subsequent tariffs add up to several points higher than bound rates, as in this example, where the basic duty is 35%

tariff ranges from 0.5% to10% depending on the product and, in several cases, a floor price is set for export FOB prices.

Service tax

A Service Tax of 5% on the value of invoices levied on services provided in relation to security transactions, telephone services, advertising, courier, civil contractors, paging services and general insurance business.

4.8 State government taxes

Local sales tax

Local sales tax is imposed on all sales within the state, and varies from state to state. Different rates exist for different products groups. Sales tax rates for the same product varied widely among states, due to policies to attract business and investment, and created trade distortions besides losses to the exchequer. Several states have also used Sales Tax Holidays as an investment incentive to new units.

In January 2000, the Union Govt. overruled the States' jurisdiction and enacted a uniform Sales Tax policy for the entire country. While existing sales tax holidays granted in various states continue to remain in force, no new schemes are allowed.

Octroi

Octroi is an entry tax on goods levied in the state of destination of the goods. Octroi is a state subject and the rates may vary from state to state, but many states have exempted octroi altogether.

Stamp duty

Under the Stamps Act, transactions are required to be recorded on instruments containing stamps of a value as specified by the Act. The duty amounts to the value of the stamps rather than determined by the value of the transaction itself.

4.9 Accounting system and standards

India follows a standard accounting practice defined under the provisions of the Companies Act,

The professional body is the Institute of Chartered Accountants of India.

Accounting and reporting

Books of account are required to be kept by all companies to give a true and fair statement of the position of the company's affairs. Statutory registers, records and books of account need to be maintained at the registered office.

Filing of returns

The fiscal year in India is from 1st April to 31st March. All Companies are required to file the annual return, balance sheet and profit and loss account, the auditor's and Board of Director's reports and charges, to the Registrar of Companies.

All listed companies have to publish half-yearly financial statements - at the end of September and end of March. Copies of the approved Annual Report are also to be filed with the Registrar of Companies, as a public record.

Audit

Every company has to get its accounts audited by a member of the Association of Chartered Accountants of India. The auditor of a company reports to the shareholders on every bal-

ance sheet and profit and loss account and that is presented before the company in the Annual General Meeting during his tenure of office. Besides internal audit, tax audits are mandatory for companies exceeding a prescribed turnover.

At every AGM, companies must place before members the financial statements comprising a balance sheet and a profit and account (income statement) for the accounting period, along with the Auditors' report and the Board of Directors' report.

Accounting standards

The guiding principles in the Indian accounting system are: reliability and relevance; faithful representations; neutrality, prudence and completeness. Indian companies are required to accounting policies and financial reporting systems complying with the Accounting Standards as provided by the Accounting Standards Board, a body under the authority of the Institute of Chartered Accountants of India. So far ASB has issued twenty-three accounting standards (AS series 1-23), which are equivalent to or based on prevailing international financial reporting standards. Statutory auditors are required to qualify any deviations from the relevant accounting standard, considering the materiality of the relevant item.

Important changes in the Indian financial reporting system that converge with international practices include:

- Consolidation
- Segmental reporting
- Earning per share
- Related party disclosure
- Deferred tax accounting
- On balance sheet presentation of lease items

Transfer pricing regulations

In August 2001, India introduced transfer-pricing rules- under the Income Tax Act- to deal with international transactions between associated enterprises (defined based on the extent to which one enterprise controls or accounts for the other's equity holding, representation in the board of directors, selling and buying relationships, borrowings, and other specified criteria), in line with international principles, such as OECD transfer pricing guidelines for multinational enterprises and tax administrations.

The essential provisions are:

- International transactions include sale and purchase of goods and services, transfer of know-how, trademarks and any other forms of intellectual property, marketing and promotion, transportation and distribution, financing, etc.
- All international transactions of an enterprise must be verified by an independent accountant and submitted in a prescribed form.
- Transfer pricing guidelines require the computation of incomes from international transactions among associated enterprises, having regard to the arm's length price, which may be determined by the following methods:
  a. Uncontrolled price method
  b. Resale price method
  c. Cost-plus method
  d. Profit split method
  e. Transactional net margin method, or
  f. Any other method prescribed by the Central Board of Direct Taxes.

Table 4.6 — List of Indian accountancy standards and corresponding international standards

AS no.	Title	Equivalence
AS 1	Disclosure of accounting policies	IAS 1
AS 2	Valuation of inventories	IAS 2
AS 3	Cash Flow Statement	IAS 7
AS 4	Contingencies and events occurring after the balance sheet	IAS 10
AS 5	Net profit/loss for period, prior period and extraordinary items and changes in accounting policies	IAS 8
AS 6	Depreciation accounting	IAS 16
AS 7	Accounting for construction contracts	IAS 11
AS 8	Accounting for research and development	
AS 9	Revenue recognition	IAS 18
AS 10	Accounting for fixed assets	IAS 16, 23
AS 11	Accounting for effect of changes in foreign exchange rates	IAS 21
AS 12	Accounting for government grants	IAS 20
AS 13	Accounting for investments	IAS 39, 40
AS 14	Accounting for amalgamations	IAS 22
AS 15	Accounting for retirement benefits in the financial statements of employers	IAS 19
AS 16	Borrowing costs	IAS 24
AS 17	Segmental reporting	
AS 18	Related party disclosures	IAS 14
AS 19	Leases	IAS 17
AS 20	Earnings per share	IAS 33
AS 21	Consolidated financial statements	IAS 27
AS 22	Accounting for taxes on income	IAS 12
AS 23	Accounting for investments in associates in consolidated financial statements	IAS 28

Source: Institute of Chartered Accountants of India.

Transfer pricing guidelines are expected to have varying degrees of impact on transactions between foreign companies and their Indian subsidiaries, and consequently on the profitability of Indian operations.

4.10 Incentives and subsidies

Corporate Income tax concessions/ exemptions/deductions:

- Units set up purely for exports (100 % EOUs) either in India's six Export Promotion Zones (EPZs) or in other areas under customs bonded premises, enjoy 100% income tax exemption until 31March 2009-10.
- Profits (of companies that are not EOU/ EPZ entities) from exports of goods and software are partially deductible for calculating taxable income. This benefit is being phased out and will be completely removed by 2004, in accordance with export subsidy commitments made to the WTO.
- Financial institutions and banks are allowed deductions upto 40%, if their profits are set apart in a special reserve account for deployment in infrastructure development funds
- All new industrial units engaged in infrastructure development are allowed a deduction of 100% for the first five years and 30% for the next five years, in order to arrive at

taxable income - in some backward areas, more concessions are allowed

- A deduction of 50% on foreign exchange earnings from hotels, construction, and commissions earned in foreign exchange
- Defense projects: technical fees received by foreign companies pursuant to agreements with the Central Government for services in connection with projects related to the security of India.
- Export Subsidies and Incentives:
- Exemption of customs duty on all imported capital goods and raw materials and other inputs, and excise duty and sales tax on domestic inputs, for all export-oriented units
- Concessional rate of customs duty (0% and 5%) for capital goods imports based on export obligations of five times the CIF value of imports, to be met in six years
- Preshipment Credit for exports (at concessional interest rates) under Duty Entitlement Passbook Schemes
- Duty free Import replenishment of inputs on the basis of standard input-output norms notified for more than 600 export categories
- Post shipment credit upto 180 days at Libor-linked concessional rates, after acceptance of export documents

Income tax exemption on export profits (Section 80HHC): A domestic company can claim permitted levels of income tax exemption until year 2004 on profits arising from exports. Export profits are calculated by multiplying total profits by the ratio of exports to total turnover of the business entity. The deductions apply on a phased basis until 2004 as follows:

i. 2000-01: 50% of export profits of this period are exempt from tax
ii. 2001-02: 30% ” ”
iii. 2002-03: 20% ” ”
iv. 2003-04: 10% ” ”
v. 2004-05: no exemption

Income tax exemption for 100% EOUs and EPZ units (Section 10 A, 10B): Industrial and service units engaged in exports of all their production, software/ Electronic Hardware Export units, and units in Software Technology Parks and Free Trade Zones are fully exempt from income tax on all their business profits until April 2010. For instances, units that commence production in year 2000-01 shall have a ten-year tax holiday, while units that commence production in year 2004-05 shall only have a six-year tax holiday.

Duty Entitlement Pass Book Scheme: Exporters are entitled to a post-shipment replenishment to offset or neutralise customs duties paid on import content of the exported goods. The credit, known as Duty Entitlement Pass Book (DEPB) applies at a specified percentage (ranges between 4% and 22% of FOB value) of export value, and is freely transferable to other entities. DEPB may not exceed 50% of the present market value of the exported product.

Duty drawback: Equivalent remissions in respect of domestically sourced goods are available in the form of ‘duty drawback’. However, drawback is not available to exports in which DEPB credit is claimed.

Supplies from domestic units made to export units are exempt from sales tax and excise duties, but they often involve a long process to obtain refunds.

Besides the above general incentives applying to all categories, product-specific subsidies are available in certain product groups, agriculture for instance. Subsidies include an *ad valorem* freight equalisation rebate for export of perishable commodities by air.

Investment in Infrastructure Projects: Tax holiday of five years for infrastructure facilities such roads, highways, industrial parks etc.

However, India’s export incentives have been interpreted as subsidies under the **Agreement on Subsidies and Countervailing Measures** and have been targeted for countervailing actions by India’s trade partners, principally the EU.

Incentives by State Governments

Where financial incentives in the form of income tax and border measures are the subject of the Union Govt., state governments provide other kinds of investment benefits in the following categories:

- Sales Tax exemptions for a definite period or linked to the capital investment in the State, on goods manufactured in specified (often industrially backward) areas.
- Excise duty exemption for a definite period or linked to investment, on goods manufactured in the state. Exemptions can be significant in consumer luxury goods, which have the highest excise tariffs (up to 40%).
- Power tariff concessions for heavy load consumers, on a negotiated basis. Concessions can be in the form of a phased escalation of tariffs or a flat rebate (ranging up to 25%)

Sales tax differentials among India’s various states can be trade distorting, and can lead to stock transfers and billing entities being located in the most suitable state even if goods are not actually manufactured in the state. In January 2000, the Union Govt. promulgated a uniform Sales Tax regulation applying to all states, to eliminate tax wars and distortions.

5. FOREIGN INVESTMENT REGULATIONS

The foreign investment experience in India has completely changed over twenty-five years, from a nationalist policy in 1977 that compelled multinational companies to dilute their holdings in Indian companies to less than 40% or 74% or leave India- which led to the exodus of several MNCs including Coca Cola, IBM and several pharmaceutical companies- to an open-arms foreign investment policy that allows foreign enterprises to own up to 100% in Indian affiliates in all but a few sensitive sectors.

Over a period of time, there has been phenomenal change in the foreign investment approval process. In June 2000, India revised the foreign investment guidelines substantially, retaining a very small list of areas that require prior approval, while specifying detailed sector wise guidelines to remove any ambiguity or discretion in the system of specific approvals.

The following guidelines govern the foreign investment approval

5.1 Direct investment law

Foreign companies can establish a business presence in India either as foreign legal entities- liaison office/branch office/ project office- or as Indian legal entities- joint ventures/ subsidiaries in the form of private or public companies incorporated under the Indian Companies Act. Branch offices and liaison offices do not come under the purview of foreign direct investment. Approvals for liaison and branch offices are valid for limited time periods (up to three years) and require periodic revalidation, and are limited in the scope of their activities in India.

Direct investment

Establishing an investment presence can involve setting up one or more of the following types of business structures in India, under the Indian Companies Act, 1956:

- Investing in a joint venture company as a foreign investor (minority, equal or majority share-holding)
- Setting up a holding company (investment company) in India with plans for downstream investment in other activities/ Indian companies
- Setting up a wholly owned subsidiary in India, 100% owned by foreign shareholders

The business structure depends, besides specific considerations of the parties involved, on the foreign investment guidelines governing the area/ sector under consideration.

5.2 Registering and approval system

Foreign investment is not permitted in the following (negative list) areas**:**

- Agriculture and plantations
- Print Media
- Broadcasting
- Postal Services
- Retailing (since October 2001)

Specific prior approval is compulsory in a few sectors: banking, Non Banking Financial Companies(NBFCs), civil aviation, telecom services, petroleum exploration, venture capital funds, trading, defence production, atomic energy (specified activities), bulk drugs and intermediates, mining, advertising and films.

Specific approval is required in all proposals: involving items that require industrial licence; foreign investment being more than 24% in the equity of units manufacturing items reserved for small-scale industries; where the foreign applicants have a previous venture/ tie-up in India; involving acquisition of existing shares in an Indian company by a foreign investor; where proposals fall outside the sector policy/caps or under sectors in which foreign investment is not permitted under the automatic route.

Sector specific ceilings exist for foreign equity holdings in some sectors.

Table 5.1 — Sector specific ceilings

Sectoral cap (%)	Sectors
26	Insurance
49	Private sector bank, Telecom (basic, cellular)
74	Telecom (ISPs with gateways)
74-100	Mining
100	Telecom (manufacturing), Petroleum (refining/ new units), Finance, Power, Pharma, Roads & ports, Hotel & tourism

(Annex II contains the detailed text of the sector-wise investment guidelines.)

Foreign investment up to 100% (or as specified under sector ceilings) is allowable under the automatic route, in all other sectors/ activities.

The automatic route, which now covers a major share of industrial activities, requires no prior documentation at all. However, the name of the collaborators, details of allotment, copy of the foreign collaboration agreement, the original foreign inward remittance certificate from the authorised dealer and other specified information is to be filed in a prescribed format (FC GPR) within 30 days of the issue and export of share certificates to the foreign investor/ collaborator. Based on the supporting evidence of inflows and issue

of shares, the Reserve Bank of India issues an acknowledgement of the foreign share-holding, which is a record of the investment qualifying for the future remittance of profit and repatriation of capital.

While according approvals, specific approvals, are considered on overall merits of each case, following transparent, clear-cut guidelines to examine factors such as:

- Inability to find a partner to bridge the equity/ investment gap
- Induction of world-class technologies in India
- Licensing of classified /proprietary technology
- Employment opportunities
- Overall socio-economic benefits for Indian economy
- Any other issues specific to the proposal not governed under investment guidelines

The specific approval process takes less than eight weeks, unless clarifications are sought on the proposal. The Ministry's web-site lists the status of approvals of all applications, and is even equipped to receive on-line applications.

5.3 Select Application Forms

(see appendix XIV)

Declarations under the automatic approval route are to be made in **Form FC (GPR)** (see appendixes) to:

The Reserve Bank of India
Exchange Control Department
Foreign Investment Division
Central Office
Mumbai 400 001

Approvals are normally granted in 30 days.

Applications under the specific approval route are to be made in **Form FC/IL** to:

The Secretariat of Industrial Assistance
Department of Industrial Policy and Promotion.
Ministry of Industry, Udyog Bhavan, New Delhi
Fax: 91 11 301 1770

Approvals are normally granted in 30 days.

The Ministry of Industries now has an automatic tracking system for all SIA applications, which can be accessed through its web site *www.indmin.nic.in* by feeding the application registration number.Even applications can be submitted electronically

Downstream Clearances

Where the initial approvals are impressively smooth, streamlined and quick to obtain, business ventures need to secure several downstream approvals, reflecting the administrative constraints of the investment process. During its initial implementation stages, every normal business enterprise requires liaison with at least 17 regulatory agencies, including several state authorities. Procedures for local approvals can be rather slow, often stretching the implementation period to 12 months or more.

5.4 Liaison and branch offices

Liaison offices

The Indian Government does not encourage foreign companies to set up representative offices for the purposes of internal trading and commercial activities. However, offices are allowed to carry out liaison work for the normal business activities of the parent company, such as developing trade relations, collecting market information, inspection and coordination of purchases for exports to parent company, but without engaging in any direct commercial activity whatsoever.

Regulations

1. A liaison office is not entitled to earn any income, commissions or other remuneration in India
2. The Liaison office shall not carry out any trading, commercial or industrial activity without the prior permission of the Reserve Bank of India (usually not given)
3. All expenses of a Liaison Office need to be met exclusively from overseas remittances through normal banking channels
4. Annual statement of remittances received and annual accounts authenticated by an accountant need to be filed with the Reserve Bank
5. Posting of foreign nationals as the representative or the head of the liaison office is permitted, the application form should contain the relevant details; there is no restriction on employment of Indian staff and other personnel.

Permissions for liaison offices are normally granted for a specific period not exceeding 3 years. Permission is easier for companies in the services industry and more difficult for manufacturing/trading companies with a supply rather than purchase focus.

Foreign companies can also get permissions to set up temporary project/site offices in India to execute specific projects/ contracts approved by the Govt. of India, and are treated similar to liaison offices for approvals. The term of approval is based on the proposed duration of their engagement in the project.

Branch Office

Traditionally, foreign companies engaged in specific service industries like banking, shipping, airlines, insurance etc have been allowed to set up branch operations, usually on a reciprocal basis with the investing country. However, the re-

cent policy provides for manufacturing and trading companies to set up branches for carrying out following activities:

- Represent the parent company or other foreign companies as buying/selling agents
- Conduct research in which the parent company is engaged, provided the results of such research are made available to Indian companies also
- Undertake export/ import trading activities
- Promote technical and financial collaborations between Indian and foreign companies.

In this sense, branch offices are allowed to carry out research and commercial activities for the parent companies and principals. Approvals are easier to get for large trading companies, with the potential to supplement exports from India, or to MNCs and large industrial companies known in India.

Applications for a liaison office or branch offices are considered and approved by the Reserve Bank of India.

5.5 Foreign investment in small scale units

The Government allows upto 24% equity by foreign companies, in products that are exclusively reserved for the Small Scale Industries- defined as industrial undertakings with a maximum investment in plant and machinery of Rs.10 million. There are over 820 products that are presently reserved, including cotton socks, furniture, etc., which may be of interest to foreign investor. Approvals for higher levels of ownership, including 100%, can be obtained on condition of an export obligation of at least 50% of the production from the unit, to be achieved within three years from the date of implementation.

5.6 Investment in existing companies

Foreign companies can take equity in existing Indian companies either under the automatic route or under the specific approval route, in accordance with the same guidelines as applying to fresh investments. However, the following additional conditions apply for consideration under the automatic route:

- Foreign equity must come either for the purpose of funding and expansion or for diversification into a sector in which the automatic route applies.
- In case no expansion plans accompany the proposal, there should be an expansion of the equity capital of the Indian Company as a result of inducting foreign capital

In all other cases, i.e. in cases where the equity capital is not expanding, or if there is a restructuring of equity among existing Indian and foreign shareholders, a specific approval is required.

Foreign investment in existing companies requires board approval of the board and shareholders in certain cases.

5.7 Investment in overseas issues of Indian companies

Indian companies are allowed to raise foreign currency resources through the issue of Foreign Currency Convertible Bonds (FCCBs) and /or issue of ordinary equity shares to foreign investors- whether institutional or individuals including non-resident Indians, through Global Depository Receipts (GDRs) or American Depository Receipts (ADRs).

These securities are freely transferable among non-residents on notifying the overseas Depository bank nominated for the security, and are fully convertible outside India. They may also be transferred to residents in India, provided the sale is made on a stock exchange or in terms of an offer for takeover of the company.

Investment in the overseas issues of an Indian company also comes under the sectoral ceilings for calculation of foreign direct investment.

5.8 Incentives, exemption and subsidies for investment in export oriented ventures

India has special regulations for units set up primarily for the purpose of exports out of India. Such units may be set up as 100% Export Oriented Units (EOUs) within the domestic territory, or in notified Free Trade Zones/ Export Processing Zones (EPZs) which are bonded areas developed by the Govt. to house export units. In 2001, a new policy has been announced on the lines of the Free Zone concept popular in several countries.

100% Export Oriented Units

Export oriented units may be set up for industrial production, assembly, manual/ labour intensive crafts and artisan works, and even service units. Investment opportunities are based on the generation of Net Foreign Exchange and the maintenance of minimum value addition norms over a period of five years of operation. EOUs and Free Zone units are fully exempt from income tax up to April 2010.

The salient features of the investment and trade regulations for such units are:

- Foreign investment up to 100% is allowed with full repatriation on an automatic basis
- Industrial inputs, including capital goods, are fully exempt from customs duty, excise duty and sales tax (under a legal undertaking to pay duties if exports do not materialise as committed)
- Exemption from sales tax and excise duties (VAT) on all domestic purchases of capital goods, raw materials and inputs
- All goods- including those exclusively reserved for small scale industries- may be manufactured
- Subject to the fulfilment of export obligations and value addition, sales in the domestic tariff area is allowed up to

50% of the value of exports, on payment of a concessional import duty
- Export oriented units may be de-bonded after five years, after payment of import duties on the residual value of the goods, provided they have attained the committed foreign exchange and export undertakings.

Minimum value addition norms (defined as the net foreign exchange earnings as a share of exports) are specified for certain sectors. However, units in the Special Economic Zones, as well as EOUs with an investment of more than Rs 50 Mn are required to maintain only positive foreign exchange earnings.

5.9 Foreign investment in trading companies

Foreign equity holding is allowed in the following types of trading activities:

Trading is permitted under automatic route with FDI up to 51% provided it is primarily for export activities, and the undertaking is an export house/trading house/ super trading/ trading house/ star trading house.

However, under the FIPB route, even 100% FDI is permitted in case of trading companies for the following activities:
- Exports;
- Bulk imports with sale from bonded warehouses;
- Cash and carry wholesale trading;
- Other import goods or services provided at least 75% is for procurement and sale of goods and services among the companies of the same group and not for third party use or onward transfer / distribution/sales
- Several specified activities as appearing in the policy

5.10 Institutional and portfolio investments

India's decision in 1991 to permit foreign institutional investors (FIIs) to invest in India was a major step in the globalisation of Indian capital market. FIIs have played a major role in India's secondary markets and have virtually re written the rules of the market especially in technology and media stocks, using international valuation models and even linking NASDAQ trends with Indian market capitalisation values.

The guidelines applicable to FII investments are:
- FIIs including pension funds, mutual funds, investment trusts, endowments, university funds, foundations or charitable trusts, etc. are permitted to invest in all securities i.e. equity shares/debentures/convertible debentures/ rights renunciations/warrants of listed as well as unlisted Indian companies, dated Govt. securities, treasury bills and units of domestic mutual fund schemes in the primary and secondary markets.
- FII investments are subject to a cumulative ceiling of 74% (or a lower level limited by the sector cap for foreign investment) for all FII holdings and 10% for individual FIIs, in the paid up equity capital.
- Companies may raise the ceiling by approval of the Board of Directors through a Board resolution and a Special Resolution at a shareholders meeting
- There is no mandatory lock-in period for FII investments
- There is no minimum or maximum investment level in absolute terms, only the percentage guidelines limit FII holdings in a company

Approval Considerations
- Prior approval is required for setting up and registration of FIIs, granted by the Securities Exchange Board of India (SEBI) and by the Reserve Bank of India (RBI) for foreign exchange remittances of sale and dividend proceeds
- Approvals are given for a period of 5 years initially and can be renewed for a further period of five years on request
- Operations of FIIs must be routed through a designated bank, which shall furnish the RBI a daily statement of holdings, purchases and sales by the FII to monitor the overall ceiling of as well as individual ceilings.

5.11 Remittance and repatriation regulations

The banking system, especially with the entry of private banks with international tie-ups and correspondent arrangements in all the principal business locations in the world, offers efficient remittance facilities. Leading banks offer remittance facilities through SWIFT, CHIPS and Telex Transfer modes, resulting in efficient funds transfers.

While the Indian rupee is fully convertible on the trade account, only the following transfers are allowed on the capital account:
- Foreign direct investment in approved industrial activities in India, duly acknowledged by the Reserve Bank of India/ Secretariat of Industrial Approvals
- Foreign institutional investment flows in secondary market (of approved FIIs)
- Overseas investment by Indian companies incurred in conformance with applicable guidelines
- Flows related to transfer of residence from/to India
- Non resident Indian deposits: Sale/ transfer acquisition/ divestment of shares between resident and non-resident shareholders incurred with prior approval or in conformance with guidelines

Trade Payments

Foreign exchange is easily available for all essential classes of trade payments: import/ export trade, business profits, technology fees, royalties, training, healthcare, education and overseas travel, and provided by authorised dealers present all over India. Remittance facilities and efficiencies have improved significantly in recent years, and in most cases, are handled by authorised dealers and do not require prior approval of the Reserve Bank.

Profit and Capital Repatriation

The capital and profits of foreign investment in approved industrial activities can fully be repatriated after deduction of applicable withholding taxes and other deductions, if any. The following procedures apply in this regard:

Profits

Profit repatriation can be in the form of dividends and bonus shares from enterprises, or from capital gains from the sale of investments in India.

Indian companies must pay a dividend tax of 10.2% on the distributed profits, which are not further taxed in the hands of the beneficiary shareholders, including non-resident shareholders. Dividends to foreign shareholders must be repatriated within 42 days of their being announced, after submitting the necessary documentation to the RBI. The net dividends received from India are tax-free in the overseas recipient country, as provided in India's double tax treaties with several countries.

Capital

Repatriation of investments made in India with the approval of the Government of India/Reserve Bank is permissible (except where investment was permitted on a specific condition that it will not be eligible for repatriation), provided the disinvestment has also been made with the approval of the Reserve Bank.

Application for repatriation of capital invested in India should be made to the Reserve Bank through an authorised dealer, together with following information/documents:

- Whether any undertaking was given at any time to the Government of India/Reserve Bank not to seek repatriation facilities
- Documentary evidence in support of the investment proceeds
- Whether the investor (in case of individual) was ever resident in India; if so, particulars of foreign exchange availed of at the time of leaving India and thereafter
- No Objection certificate/Clearance certificate from the Indian Income Tax Authorities
- A certificate from a chartered accountant or the concerned company's secretary confirming that necessary share transfer forms duly completed have been received by the transferee or his agent and/or lodged with the company for registration in favour of the transfers of bulk holdings.

5.12 Foreign technology agreements

Foreign technology agreements are allowed in all industries (including reserved industries and industries involving compulsory licensing). The policy and procedures for executing foreign technology agreements have been simplified considerably.

Automatic Approvals

Automatic approval is accorded to all industries for foreign technology agreements envisaging lump sum/ know-how payments within the following ceilings:

- Payment of lump sum fee not to exceed US $ 2 million
- Royalties up to 5% on domestic sales and up to 8% on export sales, subject to a total payment ceiling of 8% of total sales over a 10-year period;
- The period for payment of royalty not exceeding 10 years from the date of agreement, or 7 years from the start of commercial production, whichever is earlier.

Additionally, the following forms not involving technology transfer are allowed under the automatic route:

- Royalty up to 2% of export sales and up to 1% of domestic sales on use of trademarks and brand name of collaborator
- Royalty up to 8% on exports and 5% on domestic sales by wholly owned subsidiaries to parent companies, without any limit on the duration of royalty payments

For the purpose of remittances, royalties are calculated on the basis of a standard formula (royalties are calculated on net sales after deductions of imported raw materials, duties and cost of standard bought out components).

In all other cases-for example, higher lump sum fees/royalties etc, specific approval of the SIA is required. Extension/revalidation of existing or earlier technology agreements are not automatic, and require fresh approval on specific merit, based on the satisfactory absorption of earlier know how.

Remittances on lump sum and royalties are made after withholding taxes as set out in the Double Tax avoidance agreements between India and the recipient country (15% on lump sum and 20% on royalties).

Foreign technology agreements in the hotel industry are governed by a different set of guidelines and are covered for automatic approval for:

- Technical and consulting services for architect, design etc: up to 3% of capital costs excluding costs of land and financing;
- Franchising, marketing support: up to 3% on net sales (room sales less credit card charges, travel agent commissions, sales taxes, statutory payments etc); and
- Management fees including incentives: up to 10% of gross operating profit.

5.13 Hiring of foreign technicians

Sometimes, technological exchange is possible without a formal foreign technology agreement, and involves only short-term engagement of services of foreign technical personnel. No prior approval is necessary for engaging foreign technicians on short-term basis, subject to following guidelines:

- The stay of each technician shall not exceed 3 months at a time, (if not, prior clearance by Ministry of home affairs is needed).
- Total duration of engagement shall not exceed 12 man months in a calendar year.

Per diem rates do not exceed US $ 1000, and total annual outflow on this account to any does not exceed US $ 200.000 in a calendar year.

5.14 Regulating/co-ordinating agencies dealing with investment clearances

Pre-incorporation

Secretariat of Industrial Assistance: The Secretariat Of Industrial Assistance (SIA), under the Ministry of Industry, grants approvals for setting up industrial units and foreign collaborations, by Indian as well as foreign investors.

Foreign Investment Promotion Board: Specifically in relation to foreign investment proposals, the SIA deals with the applications for consideration by the Foreign Investment Promotion Board (FIPB). The FIPB was established to negotiate with large international firms and to approve direct foreign investment in selected areas and projects which are considered to be of benefit to the Indian economy and do not qualify for automatic approvals under the New Industrial Policy. The Board will provide a single window clearance for all aspects of project proposals considered by it.

Reserve Bank of India: The RBI issues the official acknowledgement of the actual (repatriable) FDI inflows in ventures under the automatic route as well as those specifically approved by the SIA, as well as foreign institutional investment approvals (through its subsidiary, the Securities and Exchange Bureau of India, SEBI). It also accords approvals for setting up representative offices, branch offices, and technology transfer agreements involving lumpsum and royalty remittances.

Registrar of Companies: Incorporation of an Indian company and related activities require the approval of the Registrar of Companies. Signatures and identity documents of foreign subscribers to the memorandum must be notarised and legalised in the home country.

Ministry of Home Affairs: Employment of foreign nationals exceeding three months requires prior clearance of the Ministry of Home Affairs, and is given on the basis of other Government approvals for technology agreements, deputing foreign technicians, or for representative offices.

Directorate General of Foreign Trade: Every company must receive an Import Export Code (IEC) number from the DGFT within a stipulated period from the date of incorporation.

Income Tax Department: Soon after incorporation, every company must apply for a Permanent Account Number (PAN) and a Tax Deduction at Source (TDS) registration number to meet its direct taxes obligations.

Project Implementation

Administrative Ministries: Depending on the sector, each investment proposal is forwarded to an administrative ministry such as Ministry of Telecommunications, Food processing, Commerce & Industry, Information Technology, etc., which govern issues such as licensing, policy, trade and development initiatives.

State Industrial Development Authority: The nodal agency of the state, usually an Industrial Development Authority reviews applications for industrial land for approved projects, and allots locations suitable, in keeping with zoning regulations, specific infrastructure needs and other specific considerations.

State Electricity Board: The state electricity board reviews and approves the connected electrical load requirements of industrial units, besides the use of captive generation devices, and levies a demand charge (based on the sanctioned load) and a variable energy rate based on consumption. In specific cases, the board may not provide the entire demand from its own supply and may allow units to set up captive generation facilities.

State Water Resources Board: Requirements of water for industrial and potable use are to be approved by the state water resources board, even if the supply is to be from captive deep-tube wells.

State Pollution Control Board: Every state has its own Pollution Control Board which scrutinises the technical and process details of industrial units, for the proposed location, and accords its approval of the proposal based on the effluent treatment and residual discharge norms allowed under its guidelines. Pollution boards approve units under provisions of air -and water- pollution laws.

Departments of Revenue: Every industrial establishment requires registration with at least three departments of the revenue services: Customs and Central Excise, Income Tax Department, and Central/ Local Sales Tax, which regulate all indirect tax collections from manufacturing and trading activities.

Directorate/ Commission of Labour: Industrial units must secure labour licenses from the area's Labour directorate, by paying a fee depending on the number of workmen, and also ensure that all their contractors are registered with the directorate as well.

Directorate/ Commission of Industries: The Directorate of Industries reviews and grants approval/licences under the Factories Act, dealing with safety, lighting, noise and general working conditions in establishments. The Factories Act may require several licences dealing with storage of industrial chemicals, boilers and pressure vessels, furnace oil, etc.

Employees State Insurance Corporation: All eligible industrial establishments must register with the local ESI, and pay the applicable premium toward workmen insurance regulations administered under the respective labour laws.

Regional Provident Fund Commissioner: All industrial establishments with 10 or more employees must create and register their Provident Fund Trust with the local Provident Fund Commissioner, immediately upon becoming eligible to pay provident fund contributions to employees.

Barring the SIA and administrative ministries, frequent (often monthly) interaction is necessary with all other agencies for operational matters, inspections, compliance reports, and periodic renewals/ extensions/ revisions of existing approvals.

Dealing with numerous agencies, each with its own systems, conditions and mechanisms, often involves transaction costs that are unethical and difficult to justify, but must be taken as a necessary element of doing business in India. In several parts of India, gratification and speed money payments are normal preconditions to securing local clearances on time. However, computerization is generally seen to be reducing the discretionary and dilatory influences in government departments dealing extensively with the public.

5.15 Foreign investment protection regulations

Investors always factor the sovereign risks while taking investment decisions in an emerging market. Sovereign protection of overseas investments has been a great determinant of investment flows in developing countries. India became a signatory to Multilateral Investment Guarantee Agency (MIGA) on the 13th April 1992 and provides overseas businessmen additional security against non-commercial risks.

Major areas covered under MIGA are: political risks - war, civil disturbance, breach of contract, expropriation, currency transfer restrictions, etc which shall be insured through a fund, the size of which is determined by the level of investments in the recipient country. India has around 3060 shares in the corpus of MIGA. Besides MIGA, bilateral investment promotion and protection treaties have been signed/initiated with individual countries like Germany, France, the Netherlands, Sweden, and Russia.

6. IMPLEMENTATION AND OPERATIONAL ASPECTS

6.1 Establishing a joint-venture

Besides specific considerations by a foreign investor, the various sector-specific ceilings may require the formation of joint ventures to bring in the residual or mandated equity needs in investments in India:

Based on the provisions of the Companies Act, joint ventures potentially offer five levels of management control as shown in the following structures:

1. Portfolio ventures (less than 25% holding), reflecting purely an investor status
2. Minority ventures (more than 25% and less than 50% holding), giving blocking powers over special resolutions (which require 3:1 majority)
3. Consensus ventures (50% -50% holding), giving blocking powers in all decisions
4. Majority ventures (more than 50% and less than 75% holding), giving powers in all decisions except on matters requiring special resolutions
5. Controlling ventures (more than 75% holding), giving a sweeping hand in all affairs of the company, not different from a wholly owned subsidiary.

While the initial phase of foreign investments saw the creation of several joint ventures with Indian business enterprises, the following investment phases involved several ventures between large Indian and foreign partners, at times with partners falling out acrimoniously. The absence of a clearly defined exit route for the Indian and foreign partner has, perhaps, been the major failing in joint venture preparations in the past.

While the government presently allows up to 100% foreign equity in all but a few sensitive sectors, regulations discourage multiple ventures in the same or allied fields in India: approvals involving prior collaborative and licensing ventures require a **No Objection Clearance** by an existing or a former Indian partner in case a foreign company seeks to establish a new venture/ technical collaboration or even trademark licensing agreement in India. Such clearances are not forthcoming for several business and personal reasons. This does constitute indeed a huge constraint to the creation of joint venture.

Under these conditions, whether to seek joint venture partners or go alone in India is increasingly becoming an issue of investment strategy and management control.

6.2 Formation of an Indian company

Foreign companies may establish companies in the following ways:

- Incorporate a company in collaboration with an Indian partner (without involving public issues).
- Incorporate a company in India with/without an Indian partner, and involving public issues.
- Incorporate a wholly owned company – up to 100% foreign equity, where permissible.

The formation of a company is governed by the Indian Companies Act, which differentiates between public and private companies, and also between companies having limited and unlimited liabilities.

Private and Public Companies

A private company is a company formed by two or more members (but not more than fifty), which has articles:

- Restricting the right to transfer its shares, if any
- Limiting the member strength to fifty- excluding employees, employee-members, after ceasing to be employees
- Prohibiting invitation to the public to subscribe for shares and debentures of the company.

Private companies are exempt from several provisions of the Companies Act widely applicable to public companies, mainly relating to the following:

- Issue of type of share capital, voting rights, shares disproportionate to holdings, etc
- Financial assistance to purchase its own shares
- Remuneration payable to managerial personnel
- Powers of the Board of Directors
- Loans to Directors.

A company that is not a private company is a public company. Under certain circumstances, a private company is deemed to be converted into a public company.

A public company should have a minimum of three, and a private company should have at least two directors. A director need not own any qualifying shares unless specified by the Articles of Association. Public companies are required to retire at least one-third of the directors every year, with their reappointment or replacement at an Annual General Meeting.

Foreign nationals can be appointed non-executive directors without prior Government approval and they are not required to have any share-holding.

Every public company, and private company that is a subsidiary of a public company, with a paid-up capital of Rs.50 million or more, is required to appoint a full-time managing director. In addition, every company with a paid-up share capital of Rs.5 million or more has to appoint a full-time qualified company secretary.

Steps to incorporating a company in India

Foreign investors can proceed with incorporating an Indian company after obtaining the initial approval from the SIA where applicable. In case of investment proposals qualifying under the automatic route, investors can proceed directly to incorporate the Indian implementing entity (a private or a public company).

Incorporating the company and remitting equity capital involves the following steps, which can take between three and four months, normally.

1. Applying to the Registrar of Companies for approval of a name. Selection of names must be in accordance with the guidelines, and three choices are required to be given for clearance
2. Preparation of the Memorandum and Articles of Association giving the main objects, incidental objects, etc and the authorised share capital of the company, and the names and particulars of the subscribers to the memorandum- minimum 2 in case of a private company, and 7 in case of a public company
3. In case a foreign company is a subscriber (as will be for joint ventures and subsidiaries) the following principal documents are needed to be authenticated by the Indian Embassy in the country of origin:
   - Certified/notarised/legalised English translation of parent company's registration, memorandum and articles of association
   - Certified/notarised/legalised English translations of board resolutions required to be passed to subscribe to the capital of the Indian company, appointment of representative directors and signatories
   - Authentication of authorised signatures of the parent company signatories
   - Powers of attorney to Indian authorised signatory if any, on behalf of the parent company.

   The Company Act has a standard set of model articles and objects for various activities and can overrule the prepared articles if they violate the provisions in the Act. Based on the above documents, the Certificate of Incorporation is issued to the Indian Company, which may have subscription to its initial capital by the foreign investor/company.

4. Opening the bank account in India - in the name of the Indian company. In case the account is to be operated by expatriates, two positive identifications of the same with the board resolutions authorising the person's powers to sign and operate the account singly or jointly
5. Applying to the RBI for permission to remit through banking channels, the foreign exchange for the initial subscription capital, as well as for the capital allowed under the investment approval letter
6. Registering a formal collaboration agreement between the Indian entity and the foreign investor/ company, on the basis of the investment approval letter
7. Remitting through official banking channels, the subscription money (on a repatriable basis) and obtaining Foreign Inward Remittance Certificate (FIRC) into the bank account of the Indian company
8. Formally applying to the RBI for allotment of shares to the foreign investor, based on above documents

The above steps are required even in the case of a Wholly owned subsidiary, because the term Company necessarily means an Indian entity under the Companies Act, and a wholly owned subsidiary is an Indian company, 100% of whose shares are held by an overseas body.

6.3 Acquisition of an Indian company

The approval procedures and considerations for foreign investment in existing Indian companies are the same as for new ventures. However, the following additional dimensions enter in such cases:

- Allotment of equity to a foreign collaborator becomes a preferential allotment and requires shareholder approval by a three-fourths majority in case of a public company.
- Buying out more than 15% of the equity of a listed company attracts the provisions of the Take-over Code and requires an open offer to be made to all shareholders for the percentage to be acquired. The company should satisfy the provisions of the Companies Act, Securities Exchange Board of India (SEBI) guidelines and the listing requirements on the Stock exchanges. In case the public shareholding falls below 20%, the company should apply for de-listing and buy out all residual shareholders.
- Buying the equity of a particular group or shareholder privately does not automatically entitle rights as a shareholder unless the shares are lodged in the buyer's name. Boards can refuse to transfer a share in the interests of the company.

6.4 Opening a bank account

For Indian companies, opening bank accounts (current or check in accounts) requires a board resolution, a reference - preferably of another account holder, and copies of the Memorandum and Articles, certified by a Director, and the photographs of the authorised signatories/directors.

The minimum relationship value differs among banks, and most internationally well known banks have branches in all main Indian cities.

Foreign companies - liaison offices, project offices and branch offices, are permitted to open and operate special bank accounts (termed QA22 accounts) with authorised dealers only. The basic restriction to foreign entities is that the accounts are to be operated for activities specifically allowed to them and to avoid foreign exchange transactions with residents, with reimbursements locally into resident accounts.

While opening rupee accounts in the name of foreign entities, the authorised dealers are required to seek declarations on a QA22 form by all signatories. The declarations relate to the source of income/credits received into the account, as well as statements of compliance with the RBI approvals. In some cases like Liaison offices, the accounts are opened with clear instructions not allowing remittance facilities.

Whenever the foreign entity ceases to operate in India, or acquires a different identity, the QA22 account is converted into a Non Resident Ordinary Account (NRO).

6.5 Acquiring land/property in India

Indian nationals, firms and companies generally do not require any prior approval (except income tax and local encumbrance clearances specific to the property to purchase industrial and residential property for bonifying purposes). However, there are restrictions on foreign nationals, non-residents and foreign companies on acquiring immovable property in India.

The broad provisions in this regard are:

1. Foreign banks operating in India (as a special case) are allowed to hold, acquire and sell certain specified immovable properties in accordance with special provisions applicable under the Banking Regulations Act. However, even banks require specific permission to indulge in transactions in non-specified immovable properties, including plantations, and agricultural lands.
2. Foreign companies, except liaison/representative offices are allowed general exemption to acquire or hold immovable property incidental to the business activities specifically allowed to them in India. The details of the properties and the purchase values and other details need to be reported within 90 days of acquisition to the RBI using form IPI 5. This means that branch operations and foreign companies engaged in manufacture/ trading activities would be allowed to acquire/ hold land for business purposes, generally. There are restrictions on the repatriability of proceeds arising from eventual sale of such properties (While the purchase value-determined in Indian Rupees, is repatriable after conversion at the applicable market rates, the capital gains/profits on the sale of acquired properties cannot be repatriated).
3. Foreign nationals and foreign companies (other than banks) are required to take prior permission of the RBI to acquire, hold, transfer or dispose of by sale, mortgage, lease, gift, settlement etc. of any immovable property situated in India. The above regulations do not apply for leases periods not exceeding 5 years.
4. Foreign companies and individuals are allowed to purchase property for residential uses if the payment for the same is effected through foreign remittances in the normal banking channels, and on condition that income from rent/sale of such properties is non repatriable.
5. There are special relaxation for non- resident Indians and foreigners of Indian origin.
6. Special rules apply in case of properties received as inheritances and gifts.

Property purchases attracts stamp duties between 5% and 14%, depending on local state laws, and property taxes of about 2% of the assessable value. There is a huge grey market in private urban properties - sellers and buyers both declare a lower official value in order to escape transfer charges/stamp duties, capital gains taxes and mandatory income tax clearances, all of which complicate matters for foreign buyers.

6.6 Setting up industrial undertakings

Besides the general approvals required by a foreign company to invest in India, the following clearances/permissions are required, for setting up industrial/manufacturing ventures:

1. Industrial Licensing - if the intended products require compulsory licensing, applications are to be made on form IL to the Secretariat of Industrial Approvals (see investment policy section) - applications may be prepared by either the Indian partner or by the foreign company
2. Import Export Code Number: issued by the RBI for carrying out import export transactions of capital goods and raw materials, etc.
3. Local and Central Sales Tax registration number: issued by the local state government, Department of Revenue, required for all sales within the state and for interstate sales
4. Pollution Clearance: It is allocated by the State Pollution Control Board. If the unit is proposed to be located in large projects, the Central Pollution Control Board is also involved in the clearance process. Pollution clearance is a serious stage in the implementation of a project and may also be influenced by environmental activists and NGOs in the vicinity
5. Land allotment for industrial plot: Industrial land is allotted by the State Industrial Development Corporation or Development Authority concerned. Provisional letters are issued in approved industrial areas, subject to final allotment based on sanction of building plans prepared by a qualified architect, pollution clearance and certification from the Inspectorate of Factories for working conditions like safety, hygiene, lighting and other amenity standards
6. Electricity/Power connection: the State Electricity Board gives Approvals for connection and distribution of private power . The allotment process takes from 2 - 6 months depending on the efficiency of the local authorities
7. Attestation of list of imported capital goods: issued by the Director General of Foreign Trade or Collectorate of Customs and Excise, Ministry of Commerce
8. Registration under the Factories Act: issued by the Inspectorate of Factories, which institutes norms for worker safety and general working conditions in factories
9. Product specific clearances in certain industries such as drugs, cosmetics, food products, mining, etc from respective authorities.

6.7 Debt financing

Development finance to industry and trade in the form of rupee and foreign currency term loans, is provided by three national development financial institutions – the IDBI, the IFCI and the ICICI, several state financial corporations and other sector-specific institutions.

Term loans depend on the priority classification of the sector, the track record of the borrower and specific guidelines provided by the prudential norms advised by the Reserve Bank.

Usually, project financing is available to cover fixed asset requirements in green-field industrial ventures, balancing equipment, modernisation, substantial expansion, diversification, covering plant and machinery, building construction and working capital. However, term loans generally do not cover land, bridge funds against equity, market development-related expenditure and technical know-how fees.

Term financing is available as rupee loans as well as foreign currency loans, the latter denominated in a prime currency with the interest applying at a LIBOR- linked rate.

Term loan sanctions can take from four weeks to four months depending on the nature of requirements and the specific issues involved. Depending on the quantum of funds required, term loans are sanctioned at the branch, regional or head office level of the concerned financial institution. Institutions may lend to large outlay projects as a consortium, with one being the lead financier.

The standard terms followed by the principal development finance institutions are:

- **Debt: Equity:** 1.5:1 (higher for applicants with proven track record).
- **Tenor:** 6 years; 1 year moratorium and five year repayment in 20 quarterly instalments .
- **Interest rates:** Prime Lending Rate (PLR) +0.5 to 2.0 depending on project and promoter risk class.
- **Security:** Land mortgage, exclusive or first charge on fixed assets, undertaking and personal / corporate guarantee for interest and principal payment.
- **Prepayment:** May or may not be allowed (with prepayment charges).

While appraising term loans, promoter track record, project intrinsic strength (measured by the economic rate of return), firm marketing arrangements and the key persons implementing the project are given the most importance.

Subsidiaries of foreign companies not having a track record in India are generally required to furnish a bank guarantee/ corporate undertaking from the parent company before the disbursement of the Indian term loan. Given the need for a security from the parent company, several foreign investment ventures have tended to be fully-equity funded in India, with the investors borrowing in the home country to fund the Indian venture.

Besides term loans, lease financing and hire purchase schemes too are available for equipment as well as other fixed asset purchases. Interest on term loans and lease payments are deductible as expenditure in the annual profit and loss account, under Indian accounting and tax rules.

Overseas Debt Financing

Indian companies are allowed to raise external currency borrowings (ECB) subject to the Reserve Bank of India's guidelines concerning the duration and interest as well as the overall limit of such borrowings.

6.8 Making a public issue of shares

Companies are allowed to access capital markets in accordance with the regulatory guidelines issued by the Securities Exchange Board of India, which regulates India's capital markets in order to ensure a fair play in the market and to protect the interest of the small investors.

In order to meet listing requirements on a stock exchange, the minimum issued capital of a company needs to be Rs.30 million. Some exchanges like Bombay have their own cut off listing requirements (Rs.100 million). A company that seeks listing, must have at least 20% of its shares held by the public. If public holding reduces below 20%, the company must either make a fresh public issue or buy out the residual public equity and take steps to delist the company.

Detailed guidelines govern the process of making the issue including appropriate due diligence by a merchant banker. Public issues can cost between 10% and 15% of the issue amount on an average, and underwriting support is usually as expensive in difficult market conditions.

Initial Public Offers

Unlisted companies must fulfil the following requirements to make a public issue of equity shares or any convertible security for the first time:

A track record of distributable profits for at least three out of the immediately preceding five years;

A pre-issue net worth of at least Rs 1 mn during each of the immediately preceding two years as well as in three out of the preceding five years.

Companies fulfilling the above can make an initial public offering (IPO) up to five times their pre-issue net worth.

Promoters must have at least 20% of the post- issue equity, which must be locked-in for a period of three years. Promoters' equity exceeding the minimum 20% may be sold after a lock-in period of one-year.

Unlisted companies that do not meet the above requirements, as well as companies that meet the requirements but plan to raise more than five times their pre-issue net worth, are permitted to make IPOs only through the book building route, and at least 60% of the issue must be subscribed by Qualified Institutional Buyers (QIBs). Issues shall be considered to have failed if the minimum subscription by QIBs is below the 60% threshold.

Companies are free to set their issue price without any regulatory restrictions, and in case of book building, set a price band or a minimum floor price for subscriptions.

Public issue guidelines equally apply to Indian subsidiaries or joint venture companies promoted by foreign entities. It is worthwhile to note that a foreign company whose shareholding is restricted by regulatory guidelines may decide to place the remaining equity with institutional buyers, instead of having a joint venture partner.

6.9 Stock option plans and buyback of securities

Employee stock options and Share buybacks are two new provisions in India's corporate laws, and have been implemented to reflect the changing market realities and recognising the intangible wealth of corporations.

To retain intellectual capital in the enterprise, certain knowledge-based industries such as software, biotechnology and pharmaceuticals, have been allowed to issue Employee Stock Options (ESOPs) at a discount to market rate, to all or a certain group of employees, in keeping with specified guidelines. ESOPs can also be offered out of the overseas issues (GDR/ADRs) of a company's securities. ESOPs are not taxed in the hands of the employee during retention, but will be subject to capital gains taxes at the time of encashment.

In 1999, India promulgated for the first time, rules for buy-back or re- purchase of securities by Indian companies. A company may buy-back some or all its shares outstanding in the market through either of the following:

- Through private offers to existing shareholders on a proportionate basis
- Repurchasing securities issued earlier to employees pursuant to a stock option or sweat equity

Buyback of securities requires a special resolution at a shareholders meeting i.e. a three-fourths majority of those present voting in favour of the resolution. All details are to be filed with the Registrar of Companies along with the draft letter proposed to be sent to shareholders. Share certificates are to be extinguished and physically destroyed in the presence of a statutory person within seven days from the date of acceptance.

6.10 Taking over a company

The guidelines and regulations on mergers/amalgamations and take-overs of companies were initially formulated by the Securities and Exchange Board of India, SEBI in 1994, and amended in 1997. Broadly, the regulations provide a system of transparency in the acquisition and take-over process by stipulating public disclosure of information, on the accusation reaching what are termed trigger points (threshold percentage of shares in the target company).

A few salient features are listed below:

- An acquirer holding more than 5% shares in any company, or on acquiring more than 5% shares in a company, needs to disclose his aggregate holding to the company and to the exchanges where the shares are listed.
- Every person holding more than 15% of a company's shares (but below 75% of its voting stock) needs to make half yearly disclosures to the stock exchanges.
- A public announcement, with a minimum offer price to all shareholders is necessary, before or within 4 days of acquiring shares through negotiations, if the existing holding exceeds 15% or if the post negotiation holding increases the final holding beyond 15% of a company's shares.
- Similar disclosures are needed before acquiring shares on the open market, if the holding patterns are as above, except that the disclosure should precede any open market purchases.
- The offer should be verified by a Merchant Banker and contain essential information as stipulated under the guidelines.
- Minimum offer prices are determined based on negotiated process and the stock price averaged over 6 months prior to the announcement (details set out in the regulations).
- A minimum aggregate of 20% of the total share-holding shall be acquired, and the post acquisition public holding shall not reduce below 20% of the voting stock of the company.
- Provisions for competitive offers, revision of offers and withdrawal of offers exist.
- The take-over bid can be mounted either by an individual, an Indian company, or a foreign company (which has received or expects to receive permissions to invest in India), by itself or through its merchant bankers/ or agents.

For details, please refer to the latest text of the SEBI (Substantial Acquisition of Shares and Take-overs) Regulations, 1997.

7. RUNNING THE BUSINESS

7.1 Choosing the right place

Selecting a suitable industrial location is a major decision in India. Depending on specific needs, location considerations may include: availability and cost of sufficient industrial land, power and water, depending on the business' requirements; availability of suitable labour skills, business and social infrastructure, and state government incentives. The attitude and responsiveness of the state govt. can be a key factor in resolving implementation hurdles.

Areas outside the urban limits of cities lack in development, and benefit from opportunities arising from industrial activity. In some cases, that may necessitate multiplicity of locations for the business enterprise, differentiating between manufacturing and other commercial/ administrative functions. It is common for businesses to be head-quartered in a city, with manufacturing operations within driving distance from the city, often within 100 km.

State Incentives

Identifying industrial locations in a state often requires discussions with the state's Industrial Development Corporation, which earmarks areas for industrial development according to a master plan for the state. Land revenues, sales tax and VAT are matters of the States, and several states offer investment benefits that are location-specific. Often, sales tax and excise duty exemptions/waivers have been the most attractive incentives offered to investors, especially in the highly taxed consumer goods sector. With sales tax ranging from 4% to 12% and excise duties ranging from 16% to 24% on ex-factory prices, the availability of an incentive can have a major impact on a company's decision to locate business in a state.

Some states with abundance of power and water have less land readily available for industrial use. In such cases, unproductive agriculture lands may be acquired and converted into industrial use for approved projects. The process is laborious and involves several legal aspects. Delays in some of India's infrastructure projects are attributed to hurdles in land-acquisition and conversion for industrial use.

While foreign investment regulations apply uniformly all over India, some states consistently attract high FDI inflows. This is due to their superior performance on account of physical infrastructure, quality of governance, labour, and social infrastructure, collectively determining their investment friendliness for foreign investors. Maharashtra, Gujarat, Tamil Nadu, Karnataka and Andhra Pradesh have been the most popular destinations for foreign investments in recent years.

Table 7.1 — Foreign investment in selected Indian states

S. No	*State*	*Amount (Rs. Million)*
1	Maharashtra	417500
2	Gujarat	111790
3	Andhra Pradesh	121010
4	Delhi	322350
5	Tamil Nadu	189410
6	Karnataka	199210
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5	Tamil Nadu	189410
6	Karnataka	199210

Source: Business Survey Dec 2000.

7.2 Availability of human resources

India is considered to have the world's third largest population of trained and industrial manpower with a work force of 14 million industrial workers, 4 million scientific and professionally trained persons. Graduate and Post graduate education is highly competitive in India: courses in the best Indian engineering and management institutions are considered at par with the world's best, while costing one-tenth of equivalent programmes in the US.

Employment Contracts

While collective bargaining normally operates in industrial units and factories, services and commercial positions are non-unionised and usually governed by negotiated employment contracts. For other categories, individual negotiation is the

Table 7.2 — Perception ranking of Indian states

	Maharashtra	Gujarat	Andhra Pradesh	Delhi	Tamil Nadu	Karnataka
Overall rank 2000	1	2	3	4	5	6
Physique infrastructure	1st	2nd	3rd	8th	4th	5th
Physique infrastructure	1	2	4	25	3	17
Power availability and cost	1	2	3	25	4	10
Quality of power	1	2	4	23	3	5
Proximity to ports	1	4	2	6	5	3
Telecom and Infotech infrastructure	1	2	5	19	3	4
Presence of industrial zones/ belts	1	7	5	10	4	2
Extent of ancillarisation	2nd	6th	3rd	4th	5th	1st
Quality of governance	1st	2nd	3rd	8th	4th	5th
Quality of local administration	1	2	4	25	3	17
State Govt support	1	2	3	25	4	10
Law and order	1	2	4	23	3	5
Policy Implementation	1	4	2	6	5	3
Flexibility of State Govt policies	1	2	5	19	3	4
Political stability	1	7	5	10	4	2
SEB Privatisation	2	6	3	4	5	1
Quality of governance						
Quality of local administration	3rd	2nd	1st	8th	4th	5th
State Govt support	3	2	1	20	4	5
Law and order	2	1	3	11	5	4
Policy Implementation	3	2	1	8	4	5
Flexibility of State Govt policies	3	2	1	20	4	5
Political stability	4	2	1	9	3	5
SEB Privatisation	2	5	1	22	8	4
Presence of EPZs	27th	5th	23rd	5th	25th	25th
Labour	1	2	4	8	3	5
Work culture of State	3	1	2	12	4	5
Labour relations	1	3	4	9	2	5
Labour availability	1	5	3	6	2	4
Management availability and cost of labour	27th	3rd	1st	25th	2nd	7th
Social infrastructure						
Social infrastructure	1	4	5	6	2	3
Proximity to markets	1	2	5	8	3	4
Availability of raw materials	1	2	3	13	5	4
Degree of urbanisation	1	5	4	6	3	2

Source: Business Survey Dec 2000.

prevalent means of appointment, and the employment rules and conditions are set by the management along the lines of its own Human Resource Development)(HRD) policy.

Employment contracts are normally terminable with one-to-three months notice, and carry the usual clauses for protection of the company's proprietary information, restrict unionism, insurgent activity and insubordination. Disputes between the employee and employer concerning misdemeanour, malfeasance, theft and piracy of official secrets, intellectual property and restricting basic rights through coercion, harassment or prejudice, are settled in the Civil Courts, while non-payment of wages and dues are addressed by the Labour Courts.

Management

Of late, India has become a hunting ground for managerial talent to staff global headquarters of MNCs, which find Indian managers well equipped to handle responsibilities in other emerging markets. The induction of several Indians from Indian operations to positions in the global headquarters of companies like Unilever, PepsiCo and Reebok attests to the global recognition of India's managerial talent.

On the other hand, staffing needs are being redefined in India, based on business critical process analyses. Payroll, public relations and advertising, even finance are increasingly being out-sourced in large companies. With major changes expected in the Contract Labour Act, outsourcing will only increase in the future, making steady and permanent jobs a distant memory from the past. Therefore, new entrants may find it easier to out-source several operations right at the beginning and rationalise on their recruitment needs.

Expatriates

Foreign entrants often need to decide whether to appoint an expatriate (from the parent group) or an Indian as head of the Indian operations. While the considerations are highly specific, the following general facts must be borne in mind:

- Indian experience is considered good for the CV of executives in large, highly organised, companies with global operations, but may not be relevant for family-owned businesses
- Indian living conditions often involve 'hardship' allowances and perks, besides agreements on a maximum tenure (generally three years)
- First-time expatriates experience a personal learning curve in India, and must acclimatise fast to business, social and cultural realities while delivering business results for their companies

- India's high income tax levels and laws that prohibit concealment of income abroad for service in India, result in a high gross salary bill

While there is a considerable supply within the Indian market for home-grown CEOs, an increasing demand for multicultural people is emerging for staffing the CEO position in Indian operations of multinational companies. Indians living and working in the parent company have been popular choices in several cases, though the business cultural gap is often the same as for an expatriate.

Expatriate as Managing or Whole time Director

Special conditions govern the appointment of a foreign national as the Managing Director or whole time Director of a company. Company Law Board approval is necessary in case of a public limited company or a private company which is a subsidiary of a public company, in the following cases:

- Where the remuneration exceeds Rs. 87,500 per month, which would often be the case for expatriates;
- Where a person who has not resided in India for a period of twelve months preceding the appointment as a managing or whole time Director

Because of these regulations, expatriates are often designated as CEO or Country Manager, rather than Director, at least for the first year, to qualify for residential criterion. However, remuneration restrictions do not apply to independent private limited companies.

The new Corporate Governance guidelines also require all publicly traded companies to have at least half the strength of the Board of Directors comprised by non-executive directors and independent directors, and the constitution of an Audit Committee of Directors to report on the correctness of the financial statements of the company.

Managerial Remuneration Ceilings

The remuneration of managerial personnel is linked to the authorised capital of a company as well as its profits. Managerial remuneration (compensation paid to the Managing and full time Directors of a company) is restricted to 10% of net profit, collectively, and 5% in case of a sole beneficiary. Higher remuneration requires approval of the Company Law Board (and is normally given for a limited duration). Start up operations, especially when they involve expatriates, do not earn sufficient profits to meet the requirement and therefore must invariably refers the employment terms of the Director for the Company Law Board's approval.

Living in India: visa issues

Visitors in India need visa to enter the country unless they are Indian citizen. Non resident Indians that hold citizenship of another country are also required to obtain visas before arriving in India. Visa should be obtained from the Indian embassy or consulate in the applicant's home country. Special permits are required for visiting the Andaman and Nicobar islands, Bhutan, Lakshadweep, remote northern states and Sikkim.

Foreign nationals who does not reside permanently in India, but who are regularly employed with Indian firms or companies on a monthly salary, are permitted to make recurring remittance of their salaries to their home countries for family maintenance. Authorized dealers are instructed to allow foreign nationals to make this remittance, up to 75% of the net salary (after deduction of a contribution to a retirement benefit plan and tax payable) after verifying that the foreigners hold valid employment visas. However, for foreign nationals holding valid employment visas, remittances in excess of 75% may be made, provided the foreign national has received perquisites in India, such as free housing, conveyance and medical care, and provided his or her family (spouse and children) is resident outside India.

Tourist visa are valid for only six months, usually beginning on the date the visa was issued and not on the date of entry into India. Tourist visas are usually multiple-entry visas: however this option should be specifically requested at the time of application.

Multiple entry business visa for short-term are issued to those visiting India on business for periods of no longer than six months.

Multiple-entry business visas for long-term periods are issued to individuals visiting India for business matters on extended periods. They allow foreign nationals to travel in and out of the country without having to reapply for visas every six months.

Employment visas are issued to individuals entering India for the purpose of employment. They are valid from 2 to 5 year and allows the remittance of salaries earned locally.

An employment visa may be obtained in the home country more rapidly than in India, where the visa application process may take longer than two months.

Separate work permits are required for employment.

Foreign nationals need residence permits to reside in India for longer than six months. Residence permits are valid for one to two years and are renewable. Renewed permits are valid for one to two years.

To obtain these permits, all foreign nationals are required to register with the local police authorities within two weeks after their date of arrival if they intend to stay for more than six months, as mentioned in the Registration of Foreigners rule of 1939. they need to present as well the following documents in quadruplicate:

- Application form FRRO
- Application for residential permit.
- Notarized documentation submitted to the President of India by a guarantor willing to reimburse the cost to the government in the event the individual continues to reside in India, or if he or she is being supported by the government.
- Five recent passport-size photos.
- Photocopies of the ^passport.

The original of the passport is also required at the time of filling for verification by the authorities.

Entry visa are issued to accompanying family members or individual visiting India on business or for employment.

Spouses or dependents of working expatriates must obtain separate work permits to be employed in India. Family members intending to reside with a working expatriate need separate residence permits. Student visas are also needed to attend schools in India.

7.3 Marketing and distributing the products

The most flaunted promise of India has been its large population. While this holds appeal for subsistence goods, income and usage demographics indicate an actual consuming class of only 150 million people, and an aspiring class of 300 million people for all categories of consumer products and durables. Several foreign entrants have been constrained to scale down their sales projections, after finding that the huge middle class did not really exist for their goods.

Distribution structure

India has a well-established distribution network in most parts of the country, especially for non-perishable products. The network consists of C & F agents, stockist/ warehouses, regional distributors, wholesalers, and retail sellers. It is common to find many companies in unrelated/non conflicting product lines sharing the network in a territory.

The national trade distribution network is estimated to have 3.5 million outlets all over India. The traditional distribution model in cosmetics has followed a four-or more-tiered structure consisting of regional distributors, and C&F agents, super stockists, stockists and retail outlets, depending on the size of the market in consideration. Typically, the larger cities and metros have up to four levels in the distribution network till the final point of sale. Of late, new distribution models, especially multilevel marketing and direct selling, have begun in India, and operate in several personal care segments. Food products and personal care products have the largest distribution network, extending to more than 1.5 million outlets for national level players, However, premium cosmetics and premium skin care products have a nation-wide reach of less than 100,000 outlets, essentially in the large urban cities only.

Companies adopt trade models and trade channel policies depending on their competitive position, product range and the level of market coverage considered necessary to derive the target results in their business lines. However, the traditional trade channel model in personal care remains a four-or-five tier structure consisting of the brand's branches, C&F agents; distributors; super stockists and stockists; and retail outlets.

Distributor profile

Distributors are the principal link between retail outlets and the brand within the city level. On an average, a distributor in personal care products services 400 to 450 retailers, and certainly less than 2000. Distributors often work for more than one brand, but rarely in the same or competing product lines.

Retailer profile

The average size of retail outlets even in cities is 40 sq m, staffed by 6 persons. Generally, retailers receive supplies from distributors appointed by companies. However as a means of direct contact with the outlets, companies also depute their own sales persons to book orders from retail outlets, which are then supplied by distributors.

Commercial terms

The average margin is reported to be uniformly between 12-14% for all products. Payment terms vary among companies/suppliers considerably, depending on the brand strength and market standing of the products. However, most commonly, the supplier collects payment at the time of next supply, which reveals an average 1-2 week's credit. The most popular promotional schemes are in the form of cash discounts/incentives linked with sales quantity, attractiveness of display, shelf space etc.

Increasingly, companies are adopting different distribution networks for rural and urban areas given the stark difference in logistic needs and the off take levels. Rural distribution sees coverage through rural super distributors or super stockiest in charge of several stockiest, including mobile stockiest that carry products in vans to all villages in their territories, and leverage a large product range (including several brands) over the circuit costs.

Organised retail

India has a highly fragmented retail industry: the highest density of retail outlets in the world (5.55 per 1000) but the lowest per capita retail space in the world (2 sqft/1000). Organised retail accounts for less than 0.5 million square metres retailing space all over India. However, more than 7 million square metres are under construction in the top metro cities.

The driving factors behind the emergence of retail as a new social phenomenon are: growing incomes, the changing role of the woman in the house, a demand for 'shoppertainment', and the availability of a wider range of domestic and imported products with liberalised competitive environment. By 2010, organised retailing is expected to be a Rs1000 bn ($20 bn) market with an investment of Rs 100 bn. Groceries ($2 bn) and apparel ($500 million) will be the largest categories.

International companies eyeing retail include: Auchan, Carrefour, Marks & Spencers, and other chains from Asia. However, investment regulations presently do not allow foreign ownership of real estate except for industrial purposes. Retailing is considered a non-industrial commercial activity and hence is not eligible for foreign direct investment. However, recently, foreign investment has been allowed in cash and carry wholesale activities, as a prelude to the eventual opening up of the retail industry as well.

Direct marketing initiatives

Direct Marketing has become big business in India, touching Rs 10 bn in less than four years of its existence, and has grown by more than 40% annually and employing more

than 1 million people, mostly women… Led by companies like Amway, Oriflame, Avon and Tupperware, the industry offers hope of meaningful self-employment to millions of young Indians, and has brought more respectability to the door-salesman through discipline, code of conduct and training.

Two types of direct marketing systems operate in India at present: direct selling by company appointed independent representatives, and multilevel marketing, which creates a pyramidal structure of consumer-distributors. While Amway and Avon operate on the MM model, Oriflame and Tupperware operate on the DS model. The hottest categories in the portfolio of most direct selling companies are: dietary supplements, home care and personal care products, all selling on account of the increasing demand for personalised and tailored products.

Advertising promotions

India offers multimedia - print, TV and outdoor advertising coverage of promotional and news information, at costs considered lower than many countries offering the same potential. India's national TV network has a geographical reach of over 88%, with prime time viewer ship touching 400 million people. Besides the national network, Satellite and Cable TV provide a 24-hour service, covering at least 10 popular satellite channels including all-English channels. Star TV, the market leader, has a present reach of 30 million people, with targets of 200 million people by year 2000. All leading international advertising agencies and leading market research companies have joint ventures or subsidiaries in India.

Advertising and market spends

At the all-India level, the total advertising and marketing spends by India's 200 largest spenders stood at Rs. 80 bn. Advertising and marketing spends accounted for 4% of their sales. Toiletries and cosmetics; home appliances and automobile products are the most aggressively advertised categories.

Electronic media

Television, including cable and satellite media, takes up a substantial share of the personal care industry's advertising budgets, though it provides instant reach to more than 88% of India's population, including almost all of rural India. Satellite television, though only six years old in India and essentially an urban phenomenon, already reaches more than 40 million homes-close to 200 million viewers-through local cable networks. A national level brand campaign can entail budgets of Rs 100 to 150 million for a premium personal care range.

Table 7.3 — Media costs

Advertising rates, newspapers:	Rs 1000-2000 per col. cm
National TV prime time rates:	Rs 40.000 per second
Satellite TV prime time rates:	Rs. 5-40.000 per second

7.4 Business safeguards

A few important issues that affect foreign investors and foreign nationals working in joint ventures are: statutory compliance, management control and dispute resolution. Special attention must be paid to all these matters right at the beginning, i.e. at the stage of signing the initial agreements, despite the possibilities of some unpleasant tensions in the negotiation stages.

A few salient aspects, culled from real incidents in joint ventures- subjects of text book cases- are explained below:

Statutory Compliance

Income Tax, Sales Tax, Filing of Returns, Tax deductions at source, Provident Fund and other Employee Welfare schemes, which attract severe penalties for evasion or non compliance, and imprisonment of Directors in some cases. Directors of the company (including nominee Directors of the foreign partner) are individually and severally responsible for ensuring strict compliance of the company with these provisions. Therefore, it is important for joint venture companies to have complete understanding of the statutory legal requirements, and failure by the Indian partner to adequately handle these aspects does not absolve a non-resident Director of his responsibilities.

Management Control

The most important feature of joint ventures is that the Indian corporate laws over ride any private contractual terms between the partners, unless such terms are addressed and reflected in the Articles of Association of the company. Some important issues arise in the actual issue of management control in a joint venture as explained below:

Articles of Association

The joint venture entity itself is not a party to the joint venture agreement until it has executed a mirror agreement with the foreign partner; and in the absence of a formal collaboration agreement between the implementing company and the foreign partner, the rights of foreign parties shall only be addressed by the Articles of Association and not by the agreements signed by the Indian partner prior to incorporating the entity. Therefore, all the major points of the joint venture agreement should be built into the articles of the joint venture company as well.

Indian companies are generally owner-managed or closely controlled through nominee Directors, except in widely public-held companies. Therefore the nomination rights of Indian and foreign shareholders are important in exercising control. Foreign partners must take care to negotiate nomination rights based on actual share-holding ratios and not to a blanker right irrespective of actual holdings of the partner

Articles of Association often tend to restrict sale of shares for a minimum specified period (usually ten years), which

may be beneficial to some partners but not always to others. In case of foreign partners, such conditions can be restrictive especially when Govt. regulations have changed that prejudicially affect foreign partner's rights and benefits. Also, the right to exit from a venture by selling to the remaining partners may be negotiated and provided in the Articles of even a private company.

The Companies Act allows for appointment of alternate directors for every director, and the articles of the company must contain the necessary clauses to enable a shareholder or a nominee director to appoint an alternate director under the provisions of the Act.

Joint venture agreements are private contracts and any rights and disputes between the founders must be addressed through the provisions of the agreements themselves. Given the slow process of legal settlements in India, arbitration is emerging as a viable alternative for partner disputes, which come under the purview of International Commercial Disputes. The Indian Arbitration and Conciliation Act, 1996 allows for parties to select specific substantive laws for individual subjects as well as procedural laws to govern disputes, irrespective of the place of arbitration.

Non-resident shareholders and Directors must take special care to see that the Articles provide for sending notices of meetings outside India (Indian Company law only requires notice to be sent within India), as also for the appointment of Alternate Directors, who may be residents of India. Such rights do not exist automatically and must be provided specifically in the Articles of the Company

Articles of companies may provide for special quorum in form of affirmative votes of specified Directors in some decisions, to safeguard interests of each partner

A Director can file complaints against oppression and mismanagement to the Company Law Board, or by any shareholder having more than 10% share holding.

Allotment of shares

Allotment means and implies a division of the share capital into definite shares of particular value of different classes and assignment of shares to different persons. Therefore, mere subscription to the shares in a company does not make the subscriber a shareholder. Similarly, becoming a shareholder alone does not confer voting rights until the shareholder becomes a member i.e. until his name appears in the official register of members of the company. Several private companies do not follow the allotment process expeditiously and subscriptions remain for a long time as application money, without shares actually being allotted to even foreign collaborators. Such a situation can be potentially exploitative.

In particular, the foreign partner must ensure that:

- The proposed allotment of shares is with the permission of the Govt, and that the approval letter is still valid.
- There is a valid resolution of the Board of Directors of the Indian Company (and a Shareholders special resolution where applicable) inviting subscription by the foreign partner, with the details and terms of payments.
- The application for remittance specifically states the purpose, such as ' toward subscription of equity shares of ABC India on repatriable basis amounting to % of the equity'. In absence of clear application of funds, the remittance cannot be proved to be share application money in some cases.
- The Board allots the shares and exports the share certificates within a specified period not exceeding 90 days. Share certificates are to be signed at least by two directors, of which one should be the Managing Director if any, and by any other person authorised by the board for this purpose.
- The Board of Directors issues a declaration that the allotment has been made in compliance with all the statutory and legal requirements and that the allotment is in the interest of the company.
- The company files a Return of Allotment (giving the latest share-holding of all parties) with the concerned Registrar of Companies, and relevant details and forms with the regional office of the Reserve Bank Of India. Ask for copies of the various documents filed with Govt. bodies, for the record.
- That the shareholder's name has been entered in the Register of Members

Nominee and alternate directors

Joint venture companies provide partners due representation in the management of the company, through a right to nominate a certain number of Directors to the Board. Invariably the articles of JV companies provide for the number and the procedure of the nominee directors to be appointed by each partner. The Articles must also contain provisions for the termination, withdrawal and replacement of nominee directors, besides automatic retirement of nominee Directors when respective share-holding falls below a specified qualifying threshold.

The Articles of a company may provide for Directors to appoint Alternate Directors for a period not less than three months. Articles of some companies may such rights selectively i.e. to some Directors only. Joint venture partners must ensure that at least non-resident directors have the power to appoint alternates.

Special rights

Boards decide matters by simple majority of those present and capable of voting on any resolution on an agenda item. However, certain shareholders having nomination rights in the board may seek additional control in specific matters before the board. Such control is possible through explicit provisions in the Articles that call for a 'qualifying majority', i.e. the presence of affirmative vote of specific nominee directors among the majority in favour of the resolution. Such items are called block items, and can be provided in the Articles of all companies, whether public or private, although they are more popular in closely held companies.

It is always advisable to put in the joint venture agreement and the articles of the joint venture company a list of special matters that require the affirmative vote of least one-nomi-

nee director representing the foreign partner to qualify for a majority.

Right to sell, divest and terminate agreement

In private and deemed public companies, restrictions in the articles of the company may prevent the free sale or divestment of share-holdings. Restrictive clauses may also exist in the joint venture agreement that restrain sale by the joint venture partners for a certain period following incorporation. It is advisable to have appropriate exit clauses in the Articles for the conditional sale of holdings of specific parties, especially the foreign collaborator, even if there are general restrictions on the sale and transfer of share-holdings.

In a public company, normally, shareholders have the basic right to sell their shares without any general restrictions, subject to the provisions of the Take-over Code. However, when a company seeks listing for the first time through a public issue, the Securities and Exchange Board of India specifies a mandatory lock-in period for the shares of promoters, including foreign collaborators, if any.

It is important to note that the right to transfer remains with the Board of Directors, which may consider various statutory aspects and also the best interests of the company while doing so. The Company Law Board is empowered to prevent any change in the Board of directors of the company as a result of change in the ownership its shares, which would be prejudicial its interest and with a view to prevent control of well known companies from passing into the hands of unscrupulous and ambitious raiders. Such an order can be passed only on the complaint made by any director, manager or managing director of the company.

Oppression and mismanagement

Any member or members having one-tenth the voting rights in a company, is entitled to complain to the Company Law Board if the affairs of the company are being conducted in a manner prejudicial to the public interest or in a manner oppressive to any member or members. Such member(s) may apply for an order to wind up the company or an alternative relief.

Some illustrations of oppression are:

- A resolution prejudicing the interest of the company or its shareholders
- A series of acts (but not an isolated act) in contravention of law, to cause or commit oppression of some persons.
- Failure to declare dividends and accumulating the reserves whilst continuing to pay remuneration to the directors who are also majority shareholders of the company.
- A deadlock or friction in the management where the affairs of the company cannot be carried because of in fight between the groups both sides being equally strong.

7.5 Dispute resolution

Businesspersons must take note of the lengthy mainstream adjudication process in India and endeavour to use alternative dispute settlement mechanisms as their principal recourse in commercial disputes/ disagreements concerning their business interests in India.

However, under Indian law, the following types of differences cannot be settled by arbitration, and therefore must be settled only through civil suits**:**

- Matters of public rights
- Proceedings under the Foreign Exchange Regulation Act (FERA) which are quasi-criminal in nature
- Validity of intellectual property rights granted by statutory authorities
- Taxation matters beyond the will of the parties
- Winding up under the Companies Act
- Disputes involving insolvency proceedings
- Disputes relating to persons who are not party to the agreement, or affect the public at large or bring a change in status of individuals or impose fine or imprisonment
- Disputes founded on an agreement void on account of its consideration or objects being unlawful

Arbitration

India's Arbitration and Conciliation Act, 1999 provides for domestic as well as international disputes to be settled by arbitration, provided there is an explicit arbitration clause or a separate agreement between parties to refer their differences to arbitration. Disputes that have been agreed to be resolved by arbitration are not admissible in a court of law, unless the validity of arbitration agreement or the arbitrability of the subject itself is in dispute.

India has accepted the the United Nations Commission for International Trade Law (UNCITRAL) model law on International Commercial Arbitration, to bring greater uniformity between its law and needs of international arbitration. A few important features of the Indian Arbitration & Conciliation Act are:

- Domestic as well as international commercial arbitration are included in its scope
- Arbitrators can be of any nationality, unless otherwise agreed by the parties
- The arbitration process is not bound by the Indian Evidence Act (witnesses)
- Arbitration awards are final and binding on parties, subject to set time limits for responsive action such as application correction/interpretation, setting aside the award.
- Foreign awards can be enforced in India - against proof/evidence of such awards

This enables arbitration to emerge as a complete dispute resolution mechanism supplementing the mainstream court system.

Box 3 — Legal disputes: implications for foreign entities

For foreign nationals and foreign business entities, the following aspects are noteworthy:

- India's legal system distinguishes between civil and criminal charges, the latter attracting provisions of non-billability. Disputes that are of a criminal nature are not covered under the scope of Arbitration and Conciliation, and must be decided through proper courts of law.
- Commercial disputes with Indian entities sometimes get foreign nationals (representatives of business entities) personally entangled into criminal proceedings, caused by filing of (at times frivolous) criminal suits in a lower court. The threat of legal action in some cases results in foreign entities making unfair compromises to Indian entities, including venture partners
- Criminal charges include cheating, theft and fraud and may be framed even against persons of any nationality residing or doing business in India. Only diplomatic persons enjoy immunity from Indian law.
- Summons may even be issued outside India to foreign nationals who are Directors in Indian companies or having commercial connections with Indian business enterprises.
- Judges have discretionary powers to insist upon a foreign national's personal appearance, even to file an application for bail.
- In case of rejection of a bail application on a criminal charge, foreign nationals may also be detained under police custody pending further proceedings.
- Foreign lawyers are not yet allowed to practice in India, although there are indications that India would allow legal professionals under mode 4 services

Businesspersons dealing with India may take preemptive steps against frivolous litigation (criminal charges) by including suitable arbitration clauses in their business agreements. The agreements should preferably include an exhaustive list of performance standards in their agreements – technology, quality, yield, buyback prices, etc.- to be governed solely by arbitration, in order to deter other parties from taking normal commercial disputes to a court, passing them off as acts of fraud, cheating, and criminal conduct.

7.6 Checklist of considerations and regulations

Regulatory aspects

- Check FDI ceilings and conditions applicable for the sector/ product including reservation, licensing and environmental legislation
- Check advantages and concessions offered to 100% export oriented units and the possibilities of sourcing – offered by various states while deciding location
- Check import restrictions on capital goods (especially second hand goods)
- Understand post-approval clearance procedures in detail, as very little documentation exists on local/ state regulations

Partnership aspects

- Consider carefully the 'need' for a local partner.
- Find out alternative equity holdings such as FIIs, public issues - which together can form as much as 44% to 49% of the equity of your Indian company, obviating the need for a JV partner.
- Choose the business entity (private limited or public limited company) based on turnover expectations, and future plans for accessing public equity.
- carry out a due diligence review, and also check the memorandum and articles of association of the proposed joint venture company thoroughly
- Incorporate all the important clauses of the JV agreement (including exit and termination clauses) into the Articles of the implementing company
- Include a clear, exhaustive arbitration agreement as a part of initial negotiations
- Involve independent advisors having expertise in handling joint ventures, at least for second opinions.

Contractual safeguards

- MoUs by themselves are not legal agreements and are not binding until converted in the form of a joint venture agreement ratified by the Government as a foreign collaboration agreement.
- Signatures have little weight and most agreements are renegotiable. Be prepared to receive requests for re-negotiations on several clauses- an irritating aspect of Indian business culture.
- Financial commitment and putting funds on the table is the only confirmation of implementing the JVs.
- Understand the full implications of taxation on lumpsum, royalties, etc and also term like 'net' and 'gross' payments.
- Involve detailed 'force-majeure' clauses and arbitration conditions in agreements, besides clear exit clauses upon the occurrence of specific conditions in the venture.
- Enforce all oral understandings in writing; do not leave anything uncovered- even in confidential agreements.
- Be prepared for severe negotiations on price and other term of equipment/technology including last minute discounts before a purchase order or L/C.
- Always insist on irrevocable confirmed letter of credit terms for supplies to India, although confirmation costs are usually borne by seller and buyer equally.

Land purchase aspects

- Understand the zoning and environmental aspects applying to the location, as well as the allowable use of land in the area.

- Check out property titles, and preferably buy land directly from the Government.
- Ensure that property titles are transferable to the joint venture and do not remain in private names or under power of attorney.
- When land and buildings are offered in lieu of equity, obtain independent valuations and legal opinions as to whether the assets are freely saleable or are for actual user purposes only, and nature of encumbrances and objections to potential sale/ transfer.
- Private transactions may involve understating purchase values for tax reasons, and may involve substantial payments in cash. These undervalue the asset in the books of the acquirer, even though they are fully paid for
- Compare various regional locations for tax and other incentives, availability of resources, logistics, and transportation, law and order situations, social amenities and living conditions before finalising your business address and factory location.

Management/personnel

- Plan organisation structure, allow for lower productivity than ASEAN countries.
- Determine the actual need and advantage for posting expatriates at various levels, especially as a Director.
- Understand all local employment terms, income levels and social costs, before finalising an HR policy.
- Out-source as much work as possible.

Market Aspects

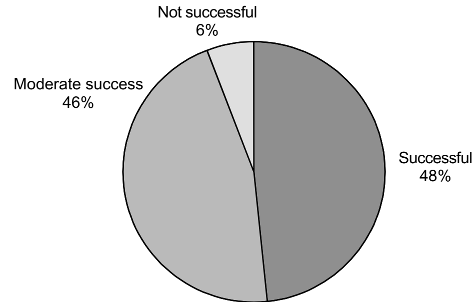
- Do not overestimate the market size and the consumer population, based on published data.
- Indian markets are very price- sensitive, conservative, and operate under peer group psychology. Drastic changes in consumers' spending patterns take time.
- Adopt regional focus while having a national agenda.
- 'High profile' is not always the best strategy.
- Discount local market prices by a factor equivalent to the effect of import duties, sales tax, excise tax etc while estimating pricing competitiveness.
- Benefit from the experiences and advice of EU companies already operating in India.

APPENDICES

APPENDIX I

EUROPEAN EXPERIENCE

Overall perception of success
Q/ compared with initial expectations, how would you qualify the overall performance of your Indian investment / operation?



Source: IndiaFDI Survey.

Overall perception of EU investors

India has a complex image within European investors and companies. The country has somewhat poorly marketed itself, and traditional images still abound of some sort of backwardness in economic or potential terms. However, a closer look at what companies having invested in India say about their experience is very different from this images, and very much worth the analysis. A detailed survey conducted in September 2001 with European-based investors in India allows to highlight a couple of key points.

The first and dominant item that emerged from the survey is that most of the "daring" investors were rewarded for their investment: 48% of the surveyed companies say that they have been successful when their achievements are confronted with their expectations, of which 32% say they have been *very successful*. Conversely, only 6% are telling that their operations have been either *unsuccessful* or a *failure*.

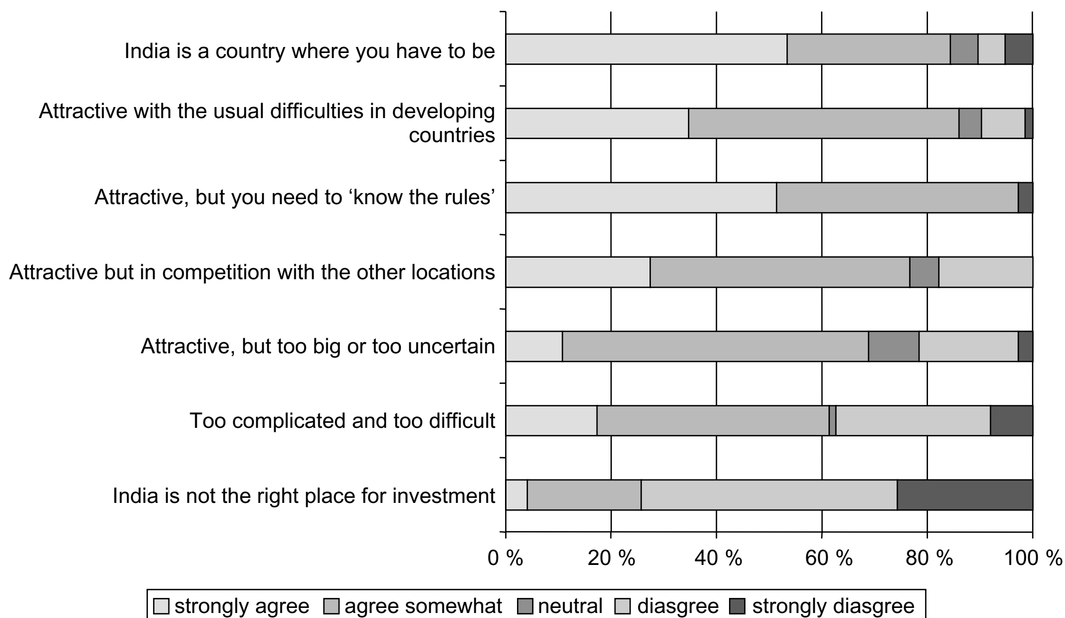
This « subjective » perception of success is confirmed by other sources. In particular, the Reserve Bank of India is making regular financial surveys with foreign invested companies. The latest one, providing results for 1998/99 and 1999/00 fiscal years, shows that foreign invested companies have had a 13.2% after-tax return on equity in 1999/2000 (after 12.5% in 1998/99), with after-tax profits increasing by 17.3% over the past year on sales up by 9.9%.

A second appreciation of the overall perception of EU investors is made through a more "qualitative" questions where companies were asked whether they agree or not with a "statement" on India as a place to invest.

These statements were:

1. India is not the right place for investment
2. Too complicated and too difficult
3. Attractive, but too big or too uncertain

Overall image of India



Source: IndiaFDI Survey.

4. Attractive but in competition with other locations
5. Attractive, but you need to ‘know the rules’
6. Attractive with the usual difficulties in developing countries
7. India is a country where you have to be

The answers are very revealing: a very large share of European companies disagree with the first statement, and, correspondingly, a dominant majority agree with the last one. However, a majority of respondents also agree on statements 2 and 3; added to the overwhelming majority saying that India is in competition with other potential location of investment, it shows that the overall administrative and operational difficulties are a very significant deterrent for FDI. Against this background, it is reassuring that an equally overwhelming majority of companies report that they find India difficult, but not so different from other developing countries and requiring mostly to “know the rules”.

A second set of questions was designed to identify the different aspects in their operation that proved to be competitive strengths or conversely competitive hindrances. A key element for future recommendations is to try to address the points that are considered as competitive hindrances or drawbacks, while communicating on the positive elements.

The results are very straightforward:

- ➢ Labour costs and productivity, both for skilled and unskilled workforce, as well as the cost of locally sourced inputs, are the most important factors enhancing the companies’ competitiveness in their Indian operations;
- ➢ Conversely, infrastructure deficiencies (particularly in energy and transport), as well as the high costs of imported inputs, are the major hindrances and competitiveness problems.

Another key set of questions pertains to the future investment plans and decision criteria. Here again, it is clear that addressing the factors identified as the *key issues* or *important issues* for future decisions, would have the most efficient impact on the overall FDI decision process by European investors.

Overall, a little less than 50% of EU invested companies intend to increase their investment in the short-term (one to two years), with a small 10% declaring that their intention is to reduce it. Over a longer horizon, close to two thirds of the surveyed companies intend to increase their investment (three to five years), while almost none is intending to reduce it on this time frame.

European investors’ experience in India

The detailed survey conducted in September 2001 with European-based investors in India also allows to identify the key aspects of foreign companies’ dealings with India partners, notably the administration, and the degree of operational constraints induced by the Indian regulations.

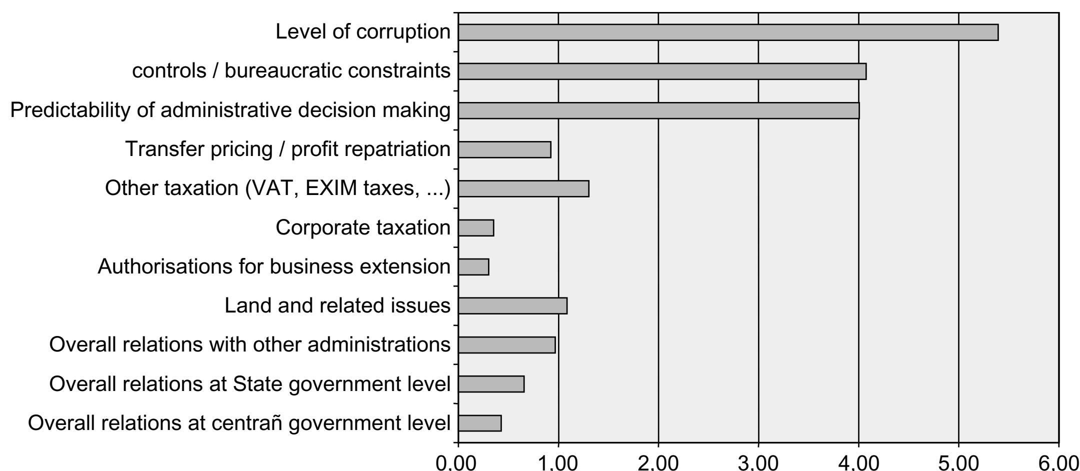
The first point is a recognition of the overall difficulty related to a complex and burdensome regulatory environment, which applies however both for domestic and foreign invested companies:

	Very difficult	Difficult	Average	Easy	Very easy
Overall regulatory environment	19.5	41.6	32.5	6.5	0.0
Overall attitude towards foreign companies	8.0	24.0	45.3	21.3	1.3

Source: Indiafdi survey, Sept. 2001.

Otherwise, the relations with the Indian administration are often difficult, more at local / State levels than with the central authorities. The level of “hassle costs”, and the predictability of decisions are considered as the most difficult points in the overall relationship with administrative bodies.

Index of difficulty* in European companies relations with the Indian administration

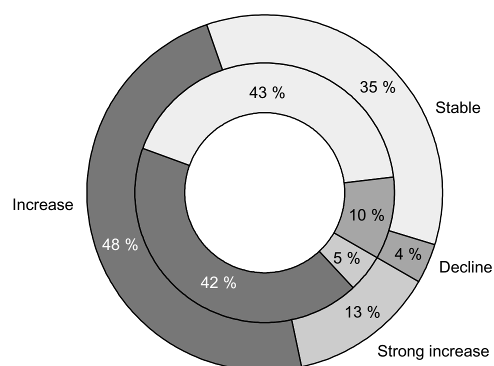


* the index is computed as: % of answers saying relations are difficult, minus % saying they are easy, divided by % saying they are neutral. The highest the figure, the more difficult the issue is considered by European investors

Source: Indiafdi Survey, Sept. 2001.

Conversely, most European companies operating in India consider that the "playing-level field" is fair, be it with Indian State Owned companies or the Indian private sector, indicating that the difficulties in relationship with the administration are more confined to day-to-day operation than to significant obstacles in terms of competition.

Future investment plans
(1-2 years: inner circle and 3-5 years: outer circle)



Source: IndiaFDI Survey.

1. Level playing field for competition	Fair	Unfair	Improving	Deteriorating
With Indian State controlled enterprises	56.4	43.6	81.2	18.8
With the Indian private sector	72.3	27.7	61.2	38.8
With other foreign invested companies	86.9	13.1	83.3	16.7
With imported products	73.1	26.9	69.2	30.8

APPENDIX II

INDUSTRIAL LICENSING GUIDELINES

All industrial undertakings are exempt from obtaining an industrial license to manufacture, except for industries reserved for the Public Sector, industries retained under compulsory licensing, items of manufacture reserved for the small scale sector and if the proposal attracts location restriction.

List of industries reserved for the Public Sector:

- Arm and ammunition and allied items of defence equipment, defence aircraft and warships. (Process has been initiated to de reserve this entry)
- Atomic energy
- Railway transport

List of industries for which industrial licensing is compulsory:

- Distillation and brewing of alcoholic drinks
- Cigars and cigarettes of tobacco and manufactured tobacco substitutes
- Electronic Aerospace and defence equipment: all types
- Industrial explosives including detonating fuses, safety fuses, gunpowder, nitrocellulose and matches.
- Drugs and Pharmaceuticals (according to modified Drug Policy issued in September, 1994 and subsequently amended in February, 1999)

Note: The compulsory licensing provisions would not apply in respect of the small scale units taking up the manufacture of any of the above items reserved for exclusive manufacture in small-scale sector.

APPENDIX III

SECTOR WISE GUIDELINES FOR FDI

1. Banking

Non Resident Indian (NRI) holding may be up to 49%, inclusive of equity participation by other investors. Foreign banking companies or finance companies including multilateral financial institutions permit foreign investment of up to 20%. Multilateral institutions are allowed to invest within the overall foreign direct investment cap of 40% in case of shortfall in foreign direct investment contribution by NRIs.

Non Banking Financial Companies (NBFC)

FDI by NRI and Overseas Corporate Bodies (OCB) investments allowed in the following 19 NBFC activities shall be as per levels indicated below:

(i) Merchant banking;
(ii) Underwriting
(iii) Portfolio Management Services
(iv) Investment advisory services
(v) Financial Consultant
(vi) Stock Broking
(vii) Asset Management
(viii) Venture Capital
(ix) Custodial Services
(x) Factoring
(xi) Credit Reference agencies
(xii) Credit Rating Agencies
(xiii) Leasing and Finance
(xiv) Housing Finance
(xv) Forex Broking
(xvi) Credit card business
(xvii) Money changing Business.
(xviii) Micro credit
(xix) Rural credit

The minimum capitalization norms are:

- For permitted non-fund based activities: US$ 0.5 million, to be brought up front.
- For fund-based NBFCs
  - — For FDI up to 51% - US$ 0.5 million to be brought up front
  - — For FDI above 51% and up to 75% - US$ 5 million to be brought up front
  - — For FDI above 75% and up to 100% - US$ 50 million out of which US$ 7.5 million is to be brought up front and the balance within 24 months.

In case of 100% foreign holding, the entity is to act only as holding company and specific activities to be undertaken by step down subsidiaries with minimum 25% domestic equity. 10% domestic equity is to be brought up front and balance over 24 months

2. Civil aviation

(i) FDI up to 40% permitted in domestic airlines; however, no direct or indirect equity participation by foreign airlines is allowed.
(ii) Up to 100% investment by NRIs /OCBs is allowed in domestic airlines.
(iii) Up to 100% investment, beyond 74% requires Government approval for airports.

3. Telecommunications

(i) In basic, cellular, paging and Value Added Services, and Global Mobile Personal Communications by Satellite, FDI is limited to 49% subject to grant of license from Department of Telecommunications, besides lock-in period for transfer and addition of equity and other license provisions.
(ii) No equity cap is applicable to manufacturing activities.
(iii) ISPs with gateways, radio-paging and end-to-end bandwidth, FDI is permitted upto 74% with FDI, beyond 49% requiring Government approval. These services would be subject to licensing and security reasons.
(iv) FDI upto 100% is allowed for the following activities in the telecom sector:
  - ISPs not providing gateways (both for submarine and satellite cables)
  - Infrastructure providers providing dark fiber
  - Electronic mail;
  - Voice mail

The above would be subject to the following conditions:

- FDI up to 100% is allowed subject to the condition that such companies would divest 26% of their equity in favor of Indian public in 5 years, if these companies were listed in other parts of the world.
- The above services would be subject to licensing and security requirements, wherever required.
- Proposals for FDI beyond 49% shall be considered by FIPB on case-to-case basis.

4. Petroleum (other than refining)

(a) Under the exploration policy FDI up to 100% is allowed for small fields through competitive bidding; up to 60%

for non-incorporated JV and up to 51% for incorporated JV with No Objection Certificate for medium size fields.

(b) For refining, FDI is permitted up to 26% (PSU holding of 26% and balance 48% public). In case of private Indian company, FDI is permitted up to 100%

(c) For petroleum products and pipeline sector, FDI is permitted up to 51%.

(d) FDI is permitted up to 74% in infrastructure related to marketing and marketing of petroleum products.

(e) 100% wholly owned subsidiary (WOS) is permitted for the purpose of market study and formulation of business plans.

(f) 100% wholly owned subsidiary is permitted for investment/financing.

(g) For actual trading and marketing, minimum 26% Indian equity is required to be brought in over 5 years.

All approvals are under the Specific Approval Route only.

5. Housing and real estate

No foreign direct investment is permitted in this sector except for development of integrated townships and settlements where FDI upto 100% is permitted with prior Government approval. NRI/OCBs are allowed to invest in the following activities:

a. Development of serviced plots and construction of built up residential premises.
b. Investment in real estate covering construction of residential and commercial premises including business centres and offices.
c. Development of townships.
d. City and regional level urban infrastructure facilities, including both roads and bridges.
e. Investment in manufacture of building materials
f. Investment in participatory ventures in (a) to (e) above
g. Investment in housing finance institutions.

6. Coal and lignite

i) Private Indian companies setting up or operating power projects as well as coal or lignite mines for captive consumption are allowed FDI upto 100%.

ii) 100% FDI is allowed for setting up coal processing plants subject to the condition that the company shall not do coal mining and shall not sell washed coal or sized coal from its coal processing plants in the open market and shall supply the washed or sized coal to those parties who are supplying raw coal to coal processing plants for washing or sizing.

iii) FDI up to 74% is allowed for exploration or mining of coal or lignite for captive consumption.

iv) In all the above cases, FDI is allowed up to 50% under the automatic route subject to the condition that such investment shall not exceed 49% of the equity of a PSU

7. Venture capital fund (VCF) and venture capital company (VCC)

An offshore venture capital company may contribute up to 100% of the capital of a domestic venture capital fund and may also set up a domestic asset management company to manage the fund. VCF and VCC are permitted up to 40% of the paid up corpus of the domestic unlisted companies. This ceiling would be subject to relevant equity investment limit in force in relation to industries reserved for the small-scale sector. A domestic VCF /VCC may not invest in excess of 5% of its paid up corpus, in any single venture.

8. Trading

Trading is permitted under automatic route with FDI up to 51% provided it is primarily for export activities, and the undertaking is a recognised export house/trading house/ super trading house, star trading house. However, under the FIPB route:

i) 100% FDI is permitted in case of trading companies for the following activities:
- Exports;
- Bulk imports will export /expanded warehouses sales;
- Cash and carry wholesale trading;
- Other import goods or services provided at least 75% is for procurement and sale of goods and services among the companies of the same group and not for third party use or onward transfer / distribution/sales.

ii) The following kinds of trading are also permitted, subject to provisions of EXIM policy.
- Companies for providing after sales services (that is not trading per se)
- Domestic trading of products of JVs is permitted at the wholesale level for such trading companies who wish to market manufactured products on behalf of their joint ventures in which they have equity participation in India.
- Trading of hi-tech items /items requiring specialised after sale service
- Trading of items for social sectors.
- Trading of hi-tech, medical and diagnostic items.
- Trading of items sourced from the small-scale sector under which, based on technology provided and laid down quality specifications, a company can market that item under its brand name.
- Domestic sourcing of products for exports.
- Test marketing of such items for which a company has approval for manufacture provided such test marketing facility will be for a period of two years, and investment in setting up manufacturing facilities commences simultaneously with test marketing.
- FDI up to 100% permitted for E-Commerce activities subject to the condition that such companies would divest 26% of their equity in favour of the Indian public in 5 years, if these companies were listed in other parts of the world. Such companies would engage only in business to business (B2B) e- commerce and not in retail trading.

9. Investing companies in infrastructure/service sector

In respect of companies in the infrastructure/service sector, where there is a prescribed cap for foreign investment, only the direct investment will be considered for the prescribed cap and foreign investment in an investing company will not be set off against this cap provided the foreign direct investment in such investing company does not exceed 49% and the management of the investing company is with the Indian owners.

10. Atomic energy

The following three activities are permitted to receive FDI/NRI/OCB investment through FIPB:

a. Mining and mineral separation.

b. Value addition per se to the products of (a) above.

c. Integrated activities (comprising of both (a) and (b) above.

The following FDI participation is permitted:

i. Up to 74% in both pure value addition and integrated projects.

ii. For pure value addition projects as well as integrated projects with value addition up to any intermediate stage, FDI is permitted up to 74% through joint venture companies with Central / State PSUs which equity holding of at least one PSU is not less than 26%

iii. In exceptional cases, FDI beyond 74% will be permitted subject to clearance of the Atomic Energy Commission before FIPB approval.

11. Defence and strategic industries

Foreign direct investment, including NRI/OCB investment, is permitted up to 26% with prior Government approval subject to licensing and security requirements and guidelines issued by the Ministry of Defence.

12. Agriculture (including plantation)

No FDI/NRI/OCB investment is permitted

13. Print media

No FDI/ NRI/OCB investment is permitted

14. Broadcasting

i. FDI up to 49% in up linking hub for leasing or hiring out facilities to broadcasters to up-link their TV channels subject to licensing and security requirements and conformity with broadcasting codes, Government approval required.

ii. FDI up to 20% in DTH broadcasting for distribution of multi channel TV programmes in KU-band by using satellite system for providing TV signals direct to subscribers subject to licensing and security requirements and conformity with broadcasting codes, Government approval required.

15. Power

Up to 100% FDI is allowed in respect of projects relating to electricity generation, transmission and distribution, other than atomic reactor power plants. There is no limit on the project cost and quantum of foreign direct investment.

16. Drugs & pharmaceuticals

i. FDI up to 100% is permitted on the automatic route for manufacture of drugs and pharmaceutical provided the activity does not attract compulsory licensing or involve use of recombinant DNA technology, and specific cell/tissue targeted formulations.

ii. FDI proposals for the manufacture o licensable drugs and pharmaceuticals and bulk drugs produced by recombinant DNA technology, and specific cell/ tissue targeted formulation will require prior Government approval.

17. Roads and highways, ports and harbours

FDI up to 100% under automatic route is permitted in projects for construction and maintenance of roads, highways, vehicular bridges, toll roads, vehicular tunnels, ports and harbours.

18. Hotels and tourism

100% FDI is permissible in the sector.

The term hotels include restaurants, beach, resorts and other tourist complexes providing accommodation and/or catering and food facilities to tourists. Tourism related industry includes travel agencies, tour operating agencies and tourist transport agencies, units providing facilities for cultural, adventure and wild life experience to tourists, surface, air and water transport facilities to tourists, leisure, entertainment, amusement, sports, and health units for tourists and convention / Seminar units and organisations.

Automatic route is available up to 51% subject to the following parameters.

For foreign technology agreements, automatic approval is granted if

i. Up to 3% of the capital cost of the project is proposed to be paid for technical and consultant services including fees for architects, design, supervision etc.

ii. Up to 3% of the net turnover is payable for franchising and marketing/publicity support fee, and

iii. Up to 10% of gross operating profit is payable for management fee, including incentive fee.

19. Mining

i. For exploration and mining of diamonds and precious stones FDI is allowed up to 74% under automatic route.
ii. For exploration and mining of gold and silver and minerals other than diamonds and precious stones, metallurgy and processing FDI is allowed up to 100% under automatic route.

20. Postal services

FDI up to 100% is permitted in courier services with prior Government approval excluding distribution of letters, which is reserved exclusively for the State.

21. Pollution control and management

FDI up to 100% in manufacture of pollution control equipment and consultancy for integration of pollution control systems is permitted under automatic route

22. Advertising and films

Automatic approval is available for the following:

i. Up to 74% FDI in advertising sector.
ii. Up to 100% FDI in film industry (i.e., film, financing, production, distribution, exhibition, marketing and associated activities relating to film industry), subject to the following:
iii. Companies with an established track record in films, TV, music, finance and insurance would be permitted.
iv. The company should have a minimum paid up capital of US$ 10 million if it is the single largest equity shareholder and at least US$ 5 million in the other cases.
v. Minimum level of foreign equity investment would be US$ 2.5 million for the single largest equity shareholder and US$ 1 million in other cases.
vi. Debt equity ratio of not more than 1:1, i.e., domestic borrowings shall not exceed equity

Provisions of dividend balancing would apply.

23. Mass radio metro transit system

FDI up to 100% is permitted on the automatic route in mass rapid transport system in all metros including associated real estate development.

24. Township development

FDI up to 100% is permitted for development of integrated townships, including housing, commercial premises, hotels resorts, city and regional level urban infrastructure facilities such as roads and bridges, mass rapid transit systems; and manufacture of building materials. Development of land and providing allied infrastructure will form an integral part of township's development, for which necessary guideline/ norms relating to minimum capitalisation, the Government will notify minimum land area, etc. separately. FDI in this sector would be permissible with prior Government approval.

In all other sectors/ activities, there is no upper limit on the foreign equity percentage or the requirement of specific approvals, in general. However, all proposals that do not qualify under the automatic route guidelines for reasons other than sector ceilings shall continue to be covered by the specific approval process.

Guidelines are subject to change, and readers are advised to check the latest applicable guidelines by contacting the SIA or checking its website before taking investment decisions or filing an application

APPENDIX IV

SELECTIVE LIST OF FORMS DEALING WITH FOREIGN INVESTMENT

Form	Description
FNC 4	Application for permission by non-residents/foreign companies for Establishing a branch office.
EOU	Application Form for setting up units/private bonded warehouses in EPZ/EOU zone scheme.
FC/IL	Application for approval for collaboration / technology transfer.
FC (GPR)	Application for approval of foreign investment/technology transfer agreements.
QA-22	Form of undertaking to be completed by foreign companies / nationals for opening of a bank account in India.
TS	Application form for issue of any security by Indian companies to non-residents.

These are the first forms for various investment/capital transactions, and are most useful to new entrants.

APPENDIX 25.I

FNC 1
[See Regulation 5]

A. General Instructions to Applicants

The applications form only should be completed and sub...tted to the Chief General Manager Exchange Central Department (Foreign Investment Divition). Reserve Bank of India. General Office, Mambai-400 001.

B. Documentation

(i) English version of the certificate of incorporation registration or Memorandum & Articles of Association attested by Indian Embassy/Notary Public in the country of registration.

(ii) Latest Audited Balance Sheet of the applicant company firm.

(iii) In case of Project Office documentary evidence that the Project is funded by bilaterale or multilateral International Financing Agencies OR the project has been cleared by the concerned regulatory authority OR the Indian company has been granted terms loan for the concerned Project by a Financial Institution or a Bank In India.

---

1. (i) Full name and address of the applicant company/firm [State whether the applicant is a proprietary concern or partnership firm or limited company or public sector undermaking or any other organisation] (Please specify).
   (ii) Date and Place of incorporation/registration.

---

2. Details of capital:
   (i) Paid-up-capital .... divided into .... shares of .... each
   (ii) Free Reserves as per last audited Balance Sheet.

---

3. Brief description of the activities of the applicant.

For liaison/branch office

4. (i) Value of goods imported from and/or exported to India by the applicant during each oof the last three years:
   (a) Imports form India.
   (b) Exports to India.
   (ii) Particulars of existing arrangement if any, for representing the company in India.
   (iii) Particular of the proposed Branch/Liaison Office:
   (a) Details of the activities/services proposed to be under.....ered by the office.
   (b) Place where the office will be located.

For project office

5. If the offioce is to be opered on a temporary basis in connection with any specific project or contract to be executed in India by the applicant:
   (i) Brief description of the proyect/contract, including terms of payment duration, etc.
   (ii) Place where the office will be located.
   (iii) Whether the project office is funded entirely by ....wand remittances or by any other source specified as .....

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6. Any other information which the applicant company wishes to furnish in support of this application.

We hereby declare that:

(i) The particulars given above are true and correct to the best of our knowledge and be....
(ii) Our activities in India would be confined to the fields indicated in column 4 (iii) (a) or 5 (i) above.
(iii) If we shift the office to another place, we shall intimee the Reserve Bank of India; and
(iv) We will ..... by the terms and conditions that may be singulated by Reserve Bank of India if approval is given.

(Signature of authorised official
of the Applicant Company)

Place: . . . .
Date: . . . .

Name: . . . .
Designation: . . . .

APPENDIX 16

APPLICATION FOR SETTING UP UNITS IN EXPORT PROCESSING ZONE/FREE TRADE ZONE UNDER EOU SCHEME

Note: 1. *Please see Paragrah 9.2 of this Handbook.*
2. *Please read the general instructions given at Appendice 1 before filling this application and also sotie important guidelines given at the end of this application.*

INDICATE WHETHER FOR

AUTOMATIC APPROVAL ☐ BOARD OF APPROVAL ☐

The Application should be submitted to the Development Commissioner of the concerned Export Processing Zone (for setting up units in EPZ/FTZ or Export Oriental Units) in 10 copies alongwith a crossed Demand Draft of Rs. 1,000/ - (Rupees 2,500/ - in case of items falling under Shedule I & II of the new Industrial Policy) drawn in favour of the Pay & Accounts Officer, Department of Industrial Development, Ministry of Industry, payable at the State Bank of India, Nirman Bhavan, New Delhi.

FOR OFFICIAL USE ONLY

Application No. . . . .

Date . . . .

Date . . . . .Month . . . . .Year . . . .

Details of Bank Draft

Amount Rs. . . . .

Draft No. . . . .

Draft Date . . . .

Drawn on . . . .

(Name of the Bank)
Payable at . . . .

I. **NAME AND ADDRESS OF THE PROMOTOR/INDUSTRIAL UNDERTAKING IN FULL (Block Letters)**

Name of the Undertaking/ Applicant . . . .

Full Address . . . .

(Regd. office in case . . . .
of limited companies . . . .
& Head Office for others . . . .

Pin Code . . . .
Tel. No. . . . .
fax. No. . . . .
E-mail No. . . . .

II **Nature of The Applicant Firm**
(Please tick (✓) the appropriate box).

1. Government Undertaking
2. Public Limited Company
3. Private Limited Company
4. Proprietor ship
5. Partnership
6. Others (please specify)

III. **Indicate Whether This Proposal is for**
(Please tick (✓) the appropriate box).

1. Establishment of a New Undertaking
2. Effecting Substantial Expansion
3. Manufacture of New Product
4. Conversion of (i) existing DTA unit into EOU/EPZ
   (ii) existing STP/EHTP to EOU/EPZ

(In case of conversion, please attach fact sheet as per Annexure)

(1) Location of the proposed undertaking

Full Address . . . .
Pin Code . . . .

IV. (2) **Only for Project under EOU Scheme:**

Please indicate if the proposed location is in a Centrally Notified Backwar Area.

(Please tick (✓) the appropriate box).

No . . . . Yes . . . . If yes, indicate category

(a) Indicate whether it is within 25 kms from the periphery of the standard urban area limit of a city having population above one million according to 1991 census.

Yes . . . . .No . . . .

(b) Is it located in an Industrial Area/Estate designated/set up prior to issuance of Notification No. 477 (E) dated 25th July, 1991.

Yes . . . . .No . . . .

(c) If not, does it come under the category of non-polluting industries as notifies by the Govt.

Yes . . . . .No . . . .

V. **Item(s) of Manufacture:** (Including By-Product/Co-products)

(If necessary, additional sheets may be attached).

Item(s) Description	Capacity (Unit =	Item Code (ITC HS Code No.)
. . . .	. . . .	☐☐☐☐☐
. . . .	. . . .	
. . . .	. . . .	☐☐☐☐☐
. . . .	. . . .	
. . . .	. . . .	☐☐☐☐☐
. . . .	. . . .	

VI. **Production:** (In case of more than one item, supplementary sheets may be used.)

	Quantily (Unit . . . .)	(Value in Rs.)
1st Year	. . . .	. . . .
2nd Year	. . . .	. . . .
3rd Year	. . . .	. . . .
4tn Year	. . . .	. . . .
5tn Year	. . . .	. . . .

VII. **FOB Value of Exports**

(1 $ = Rs.)

	Rupess (Lakhs)	US$ (Thousand)
1st year		
2nd year		
3rd year		
4th year		
5th year		
Total		

VIII. **Investment**

	(Rupees in Lakhs)
(a) Land	. . . .
(b) Building	. . . .
(c) Plant & Machinery	. . . .
(i) Indigneous	. . . .
	(US$ Thousand)
(ii) Import C.I.F. Value	. . . .
(iii) Total (i) + (ii)	. . . .

IX. **Whether Foreign Technology Agreement is Envisaged**

(Please tick (...) the appropriate box).

Yes .... No ....

(i) Name and Address of Foreign Collaborator ....

(Rupess Lakhs)

(ii) Terms of Collaboration

	Gross of Taxes
(a) Lumpsum Payment	....
(b) Design & Drawing Fee	....
(c) Payment to Foreign Technician	....
(d) Royalty (on exports)	.... %
(e) Royalty (on DTA Sales if envisaged)	....
(f) Duration of Agreement	.... (No. of Years)

X. **Equity Including Foreign Investment**

(i)	(US $ Thousand)	(Rs. Lakhs)
(a) Authorised	....	....
(b) Subscrited	....	....
(c) Paid-up Capital	....	....

Note: If it is an existing company, Please give the break up of the existing and proposed capital structure.

(ii) Pattern of share holding in the Paid-up Capital (Amount in Rupess).

	(Rs. Lakhs)	(US $ Thousand)
(a) Foreign holding	....	....
(b) Non Resident Indian Company/Individual holding		
(i) Repatriable	....	....
(ii) Non-Repatriable	....	....
(c) Resident holding	....	....
(d) Total [a+b(i+ii)+c] Equity	....	....
(e) (iii) External Commercial Borrowing	....	....

Foreign Exchange Balance sheet

		1st Year	2nd Year	3rd Year	4th Year	5th Year	Total (5 Yrs)	$
XI.	**FOB value of exports in first five years**							
XII.	**Foreign Exchange Outgo on** (i) Import of machinery							
	(ii) Import of raw materials and components							
	(iii) Import of spares and consumables							
	(iv) Repatriation of dividends and profits to foreign collaboratos							
	(v) Royalty							
	(vi) Lump sum know-how							
	(vii) Design and drawing fee							
	(viii) Payment of foreign technicians							
	(ix) Payment on training of Indian technicians abroad							
	(x) Commission on Export etc.							
	(xi) Foreign Travel							
	(xii) Amount of interest to be paid on external commercial borrowing/deferred payment credit (specify details)							
	(xiii) Any other payments (specify details)							
	Total (i) to (xiii)							
Net Foreign Exchange earnings in five years								

XIII. **Rejects**

Generation of Rejects/Sub- . . . .
Standard Goods of the Finished . . . .

(Percentage of 5 Years production)

(Quantity (Unit =))

Goods (In case rejects are more than 5 %
estimated percentage with justification . . . .
may be given) .. . .

Value (Rs. Laes)

XIV. **Sub-Contracting**

(a) Whether any of the required components are proposed to be sub-contracted to small scalte and ancillary units . . . .

Yes No

(b) Name of the component . . . .

(c) Percentage of this component in relation to the total expected value of production . . . .

XV. **Employment**

(All Figures in number)

Existing Proposed

(a) Supervisory . . . .

(b) Non-Supervisory . . . .

XVI. **Net Foreign Exchange Earning as A percentage of Exports**

Percentage

Aversage NFEP on FOB Value of Exports in 5 years . . . .
in terms of Paragraph 9.29 of the Policy . . . .

XVII. **Marketing**

(a) Whether marketing tie-up/Buy-back envisaged/finalised? . . . .
(Attach documents, if any)

Yes No

G.C.A. R.P.A.

(b) Destination of exports (in Percentage) . . . .

XVIII. **Other Information**

(i) Any special feature of the project proposal which you want to highlight (Please attach the Project Report, for new units) . . . .

(ii) (a) Whether the applicant has been issued any industrial License or LOI/LOP under EOU/FTZ/EPZ scheme if so, please give full particulars especially reference number, date of issue, items of manufacture and progress of implementation of each project . . . .

APPENDIX V

LIST OF COUNTRIES HAVING DOUBLE TAXATION AVOIDANCE AGREEMENTS WITH INDIA

Afghanistan
Australia
Austria
Bangladesh
Belarus
Belgium
Brazil
Bulgaria
Canada
China
Cyprus
Czech Republic
Denmark
Ethiopia
Finland
France
Germany
Greece
Hungary
Indonesia
Iran
Israel
Italy
Japan
Jordan
Kazakhstan
Kenya
Korea
Kuwait
Lebanon
Libya
Malaysia
Malta
Mauritius
Mongolia
Morocco
Namibia
Nepal
Netherlands
New Zealand
Norway
Oman
Pakistan
Philippines
Poland
Portugal
Qatar
Romania
Russian Federation
Saudi Arabia
Singapore
South Africa
Spain
Sri Lanka
Sweden
Swiss Confederation
Syrian Arab Republic
Tanzania
Thailand
Trinidad and Tobago
Turkey
Turkmenistan
United Arab Emirates
United Arab Republic
United Kingdom
United States of America
Yemen Arab Republic
People Democratic Republic of Yemen
Uzbekistan
Vietnam
Zambia

APPENDIX VI

LIST OF USEFUL ADDRESSES AND WEBSITES

1. European business information centre (EBIC)

65, Golf Links, New Delhi - 110 003
Tel: 4629237-38
Fax: 4629206
E-mail: eudelind@giasdl01.vsnl.net.in
Website: http://www.eudelindia.org

2. Co-ordinates of EU Member States embassies / trade desks

Delegation of the European Commission in India
65, Golf Links, New Delhi 110 003
Tel: 91 11 462 9237/ 38
Fax: 91 11 462 9206

Embassy of Austria - Austria Trade Commission
12 A, Amrita Shergill Marg, New Delhi 110 003
Tel: 011 4618395 / 4618397
Fax: 011 4618742
E-mail: ahstnd@vsnl.com
Website: http://www.austriantrade-india.com/

Royal Danish Embassy
11, Aurangzeb Road, New Delhi 110011
Tel: 011 3010900 / 3010002
Fax: 011 3010961
Website: http://www.denmarkindia.com/

Embassy of France
2/50 E, Shantipath, Chanakyapuri, New Delhi 110021
Tel: 011 6118790
Fax: 011 6872306
Website: http://www.france-in-india.org/

Embassy of Greece
16, Sunder Nagar, New Delhi 110003
Tel: 011 4617800 / 4617854
Fax: 011 46013663
http://www.greeceinindia.com/

Embassy of Italy
50/E, Chandragupta Marg, Chanakyapuri, New Delhi 110 021
Tel: 011 6114355
Fax: 011 6873889
http://www.italembdelhi.com/

Embassy of Portugal
13, Sunder Nagar, New Delhi 110 003
Tel: 011 4601262
Fax: 011 4601252
Website: http://www.embportindia.com/

Embassy of Sweden
Nyaya Marg, Chanakyapuri, New Delhi 110021
Tel: 011 6110735 / 6875760
Fax: 011 6885401
Website: http://www.swedishtrade.se/

Royal Embassy of Belgium
50-N Shantipath, Chanakyapuri, New Delhi 110021
Tel: 011 608295 / 6889851
Fax: 011 6885821

Embassy of Finland
E - 3 Nyaya Marg, Chanakyapuri, New Delhi 110 021
Tel: 011 6115258 / 6874032
Fax: 011 6886713
Website: http://www.finembindia.com/

Embassy of the Federal Republic of Germany
No.6, Block 50-G
Shantipath, Chanakyapuri, New Delhi 110021
Tel: 011 6871831
Fax: 011 6873117

Embassy of Ireland
13, Jor Bagh, New Delhi 110 003
Tel: 011 4617435
Fax: 011 4697053
http://www.irlgov.ie/iveagh

Royal Netherlands Embassy
6/50 F, Shantipath, Chanakyapuri, New Delhi 110021
Tel: 011 6884951
Fax: 6884956
Website: http://www.holland-in-india.org/

Commercial Office of the Embassy of Spain
A-16/2, Vasant Vihar, New Delhi 11 057
Tel: 011 6145205 / 6145206

British High Commission
Chanakyapuri, New Delhi 110 021
Tel: 011 6872161
Fax: 011 6872882
Website: http://www.ukinindia.org/

3. Missions of EU Member States in India

Austria — Consulates

In Mumbai:
Austrian Consulate-General
26 Maker Chambers VI, Nariman Point, Mumbai, Maharashtra 400021
Telephone: (91-22) 2874758, 2874759
Fax: (91-22) 2870502

In Kolkata:
Austrian Consulate, Industry House
12th Floor, 10, Camac Street, Kolkata 700 017
Telephone: (91-33) 2822476, 2822477, 2822478
Fax: (91-33) 2403040, 28 9370

In Chennai:
Austrian Consulate, c/o Khotari Buildings
115 Mahatma Gandhi Salai, Chennai 600034
Telephone: (91-44) 8276036, 8278739
Fax: (91-44) 8272263

In Goa:
Austrian Consulate, Kamat Centre, 2nd Floor
D. B. Bandodkar Road, Campal, Panaji, Goa 403001
Telephone: (91-832) 232011, 232012
Fax: (91-832) 232013

Belgium — Regional trade agencies & Consulates

Regional trade agency
Flanders Export Promotion Agency
Telephone: (91-11) 6117239;
Walloon Export Promotion Agency
Telephone: (91-11) 6889851

In Mumbai:
The Belgian Consulate General
11 M.L. Dahanukar Marg, Carmichael Road, Mumbai 400 026
Telephone: (91-22): 497.43.02
Fax: (91-22): 495.04.20
E-mail: cnsubel@vsnl.com

Denmark — Consulates & Trade Commission

Trade Commission of Denmark:
16/1 Grant Road Cross, Vittal Mallya Road, Bangalore 560 001
Telephone: (91-80) 2277174, 2277175
Fax: (91-80) 2277176
E-mail: dtcblg@vsnl.com

In Mumbai:
Royal Danish Consulate General, L&T House, Ballard Estate
P.O. Box 278, Mumbai 400001
Telephone: (91-22) 2614462, 2618181
Fax: (91-22) 2620223
E-mail: aif-trvl@lth.ltindia.com

In Kolkata:
Royal Danish Consulate, McLeod House
3 Netaji Suhas Road, 3rd floor, Kolkata 700 001
Telephone: (91-33) 2487476, 2487477
Fax: (91-33) 2471620

In Chennai:
Royal Danish Consulate
Cathedral Road, Chennai 600086
Telephone: (91-44) 8277332, 8273333
Fax: (91-44) 826 4116, 8269359
E-mail: sbp@sanmargroup.com

Finland — Trade office and consulates

Trade Office
Finland Trade Centre
Nyaya Marg, Chanakyapuri, New Delhi –110 021
Telephone: (91-11) 6115258
Fax:(91-11) 6885380
E-mail: newdelhi@finpro.fi

In Mumbai:
Ground Floor, 40A, Pedder Road, Mumbai - 400 026
Telephone: (91-22) 2654202, 386 3372, 386 3371
Fax: (91-22) 3873680
E-mail: ram.tarneja@jollyboard.com

In Kolkata:
Mahadev Paper Corporation
7A, A.J.C. Bose Road (2nd Floor), Kolkata - 700 017
Telephone: (91-33) 2474328, 2471950
Fax: (91-33) 2474329
E-mail: mpc@cal.vsnl.net.in

In Chennai:
742 Anna Salai, Chennai - 600 002
Telephone: (91-44) 8523622, 8524141
Fax: (91-44) 8521253

France — Consulates

Consulate General of France in Mumbai (Bombay)
Datta Prasad Building, 2nd Floor
10 Nowroji Gamadia Cross Road Mumbai (Bombay) 400 026
Tel: 022 - 495 09 18 / 495 18 70
Fax: 022 - 495 03 12
Website: www.consulfrance-bombay.org
E-mail: consufra@bom3.vsnl.net.in

Consulate General of France in Pondicherry and Chennai (Madras)
2 rue de la Marine Pondicherry 605 001
Tel: 0413 - 334 174 / 334 058
Fax: 0413 - 335 594
E-mail: cgfpondy@satyam.net.in

Germany — Consulates

In Mumbai:
"Hoechst House", 10th Floor, Nariman Point
193, Backbay Reclamation, Mumbai, Maharashtra 400021
Telephone: (91-22) 2832422, 2831517, 2832661
Fax: (91-22) 2025493
E-mail: germanconsulmumbai@vsnl.com

In Kolkata:
1 Hastings Park Road, Alipore, Kolkata 700 021
Telephone: (91-33) 4791141, 4791142
Fax: (91-33) 4793028
E-mail: gerconsu@vsnl.com

In Chennai:
49 Ethiraj Road, MICO Building, Chennai 600008
Telephone: (91-44) 8271747, 8273593, 8277637
Fax: (91-44) 8273542
E-mail: gercons@md3.vsnl.net.in

In Goa:
C/o Cosme Matias Menezes Ltd., Rua de Ourem Panaji, Goa 403001
Telephone: (91-832) 235526, 223261, 223263, 223264
Fax: (91-832) 223441
E-mail: menezes@goa1.dot.net.in

Greece

Office of the Defence Attaché:
EP-32 Dr. S. Radhakrishnan Marg, Chanakyapuri New Delhi 110021
Telephone/ Fax: (91-11) 6880801, 6880802

Office of Economic and Commercial Affairs:
EP-32 Dr. S. Radhakrishnan Marg, Chanakyapuri, New Delhi 110021
Telephone: (91-11) 6880434
Fax: (91-11) 68880436

Consulates

In Mumbai:
Sarosh Villa Annexe, Rallis India Ltd. Compound, Suren Road, Eastern Highway, Kurla, Andheri Road, Andheri East
Mumbai, Maharashtra 400093
Telephone /Fax: (91-22) 8257036

In Kolkata:
Bells Control Road
Bells House, 21 Camac Street, Kolkata, West Bengal 700016
Telephone: (91-33) 62470346, 2471620
Fax: (91-33) 2471620

In Chennai:
Vice-Chairman
Samnar Group, 8 Cathedral Road, Chennai, Tamil Nadu 600086
Telephone: (91-44) 8273399
Fax: (91-44) 8277411

Italy — Consulates

In Mumbai:
Consulate-General of Italy
"Kanchanjunga" –1st floor, 72 G. Deshmikh Road, Mumbai, Maharashtra 400026
Telephone: (91-22) 3804071
Fax: (91-22) 3874074

In Kolkata:
Consulate-General of Italy
3 Raja santosh Road, Alipore, Kolkata 700027
Telephone: (91-33) 4792414, 4792426
Fax: (91-33) 4793892
E-mail: italy@cal2.vsnl.net.in

Ireland — Consulates

In Mumbai:
Honorary Consul General of Ireland
Royal Bombay Yacht Club Chambers, Apollo Bunder, Mumbai 400 039
Tel: (91-22) 2872045
Fax: (91-22) 2871087
E-mail: con.gen.ire.mumbai@vsnl.net

In Bangalore:
Honorary Consul of Ireland
Biocon, 20th K.M. Hosur Road, Electronic City P.O., Bangalore 561 229
Tel: (91-8110) 32625
Fax: (918110 32623
E-mail: kiran.mazumdar@biconindia.com

Portugal — Consulates

In Goa:
Consul-General, "Jeewan Niswas" – LIC Building, 2nd Floor
EDC Complex, Patto, Panjim-Goa 403001
Telephone: (91-832) 224004
Fax: (91-832) 224007

Spain — Consulates

In Mumbai:
"Ador house", 6K Dubash Marg, Mumbai - 400001
Telephone: (91-22) 2874797, 2835232, 2834943, 2871089
Fax: (91-22) 2043625

In Kolkata:
"Tractors India",, 1 Taratolla Road, Kolkata - 700024
Telephone: (91-33) 4695954, 469332-36
Fax: (91-33) 294820, 491143

In Chennai:
"Lawdale", 8, Nimmo Road Santnome, Chennai - 600004
Tel: (91-44) 4942008

The Netherlands — Consulates

In Mumbai:
Consulate-General of The Netherlands, Forbes Building, 1st Floor
Charajit Rai Marg, Mumbai- 400 001
Telephone: (91-22) 2016750
Fax: (91-22) 2069436
E-mail: nlconsul@vsnl.com

In Kolkata:
Consulate-General of The Netherlands
502 Mangalam A, 24 Hemanta Basu Sarani,
Kolkota 700001
Telephone: (91-33) 2424979, 2204273
Fax: (91-33) 2425200

In Chennai:
Honorary Consulate-General of The Netherlands,
GA & GB, "Riviera Park"
11 Fourth Main Road Extn. Kotturpuram, Chennai 600 085
Telephone: (91-44) 4473309, 4473310
Fax: (91-44) 4473311
E-mail: riviera@eth.net

Sweden - Consulates

In Mumbai:
Consulate General of Sweden
Bhupesh Gupta Bhavan, 1st Floor
85 Sayani Road, Prabhadevi, Mumbai 400 025
Telephone: (91-22) 4212681, 4360493
Fax: (91-22) 4212681
E-mail: conswede@vsnl.com

In Kolkata:
Consulate of Sweden c/o ABB Ltd.
9, Lala Lajpat Rai Sarani (Elgin Road), Calcutta 700 020
Telephone: (91-33) 2807136, 2807139
Fax: (91-33) 2807139, 2472427
E-mail: swcon_aloke.mookherjea@inabb.mail.abb.com

In Chennai:
Consulate of Sweden, 6 Cathedral Road, Chennai 600 086
Telephone: (91-44) 8112232
Fax: (91-44) 8110294
E-mail: svensk@vsnl.com

United Kingdom — Consulates

In Mumbai:
Makers Chambers IV, 2nd Floor
222 Jamna Lal Bajaj Road
PO Box 11714, Nariman Point, Mumbai 400021
Telephone: (91-22) 2830517, 2832330, 2833602
Fax: (91-22) 2027940

In Kolkata:
British Deputy High Commission
1 Ho Chi Minh Sarani, Kolkata 700071
Telephone: (91-33) 2825171-5
Fax: (91-33) 2823435

In Chennai:
British Deputy High Commission
24 Anderson Road Chennai 600006
Telephone: (91-44) 8259712, 8270658, 8233926

Luxembourg

Honorary Consulate of the Grand Dutch of Luxembourg
210, Din Dayal Upadhya Marg, New Delhi - 110002
Telephone: 3232453, 3236495, 3231130
Fax: 91 11 3235520
E-mail: dssi@del2.vsnl.net.in

4. Indian- European Chambers of Commerce

Indo Italian Chambers of Commerce and Industry
502, Bengal Chemical Compound
Veer Savarkar Marg, Mumbai 400 025
Tel: 91 22 436 8186-90
Fax: 91 22 436 8191
Website: www.indiaitaly.com/inditalia

Indo French Chamber of Commerce and Industry
B 5, Prescott Road
Mumbai 400 001
Tel: 91 22 207 2256
Fax: 91 22 206 4619
E-mail: ifcci@lwbbs.net

Indo German Chamber of Commerce
German House
2, Nyaya Marg, Chanakyapuri
New Delhi 110 021
Tel: 91 11 687 8721
Fax: 91 11 611 8664
E-mail: igcc@giasdl01.vsnl.net.in

5. Useful Indian websites

Government Ministries/Departments

Directory of official websites of Government of India
http://goidirectory.nic.in/

Ministry of Commerce & Industry
http://commin.nic.in/

Ministry of Surface Transport
http://www.allindia.com/gov/ministry/surftan

Ministry of External Affairs
www.indiagov.org

Ministry of Finance
www.nic.in/finmin

Ministry of Agriculture
www.nic.in/agricoop

Ministry of Environment and Forests
www.nic.in/envfor

Ministry of Food Processing
www.allindia.com/gov/ministry/fpi

Ministry of Non Conventional Energy
http:// mnes.nic.in/

Ministry of Petroleum
http://petroleum.nic.in/

Ministry of Information Technology
http://www.mit.gov.in/

Central Board of Excise and Customs
www.ncst.ernet.in/customs

Reserve Bank of India
www.rbi.org.in/

Securities and Exchange Board of India
www.sebi.com/

Insurance Regulatory Development Authority
www.irdaindia.org/index-ver1.htm

Ministry of Health and Family Welfare
http://mohfw.nic.in/

Ministry of Civil Aviation
http://www.123india.com/government/ministries/civil_avi-ation

Department of Company Affairs
www.allindia.com/gov/ministry/finance/dca

Ministry of Law and Justice
www.nic.in/lawmin/LEGIS.HTM

Central Electricity Regulatory Commission
http://www.cercind.org

Telecom Regulatory Authority of India
http://www.trai.gov.in

National Highway Authority of India
http://www.nhai.org

Industry and Sector Associations

Confederation of Indian Industry
http://www.indianindustry.com

Federation of Indian Chambers of Commerce and Industry (FICCI)
http://www.ficci.com

Associated Chambers of Commerce And Industry (ASSOCHAM)
http://www.assocham.org

Confederation of Indian Food Technology Industries (CIFTI)
www.cifti.com

Federation of Indian Export Organizations (FIEO)
http://www.fieo.com/

National Association of Software Service Companies (NASSCOM)
www.nasscom.org

Electronic and Computer Software Export Promotion Council
http://www.indiansources.com

Manufacturers Association of Information Technology (MAIT)
http://www.mait.com

Indian Electrical & Electronics Manufacturers Association (IEEMA)
http://www.ieema.org

Automobile Manufacturers Association of India (AMAI)
http://www.indianauto.com

Automotive Component Manufacturers Association of India (ACMA)
http://www.indianauto.com

Indian Machine Tools Manufacturers Association (IMTMA)
http://www.imtma.org

Engineering Export Promotional Council (EEPC)
http://www.eepc.gov.in

Electronic Components Industries Association
http://www.elcina.com

Telecom Manufacturer's Association (TEMA)
http://www.india-times.com/tema/

The Cellular Operator's Association of India (COAI)
http://coai.com/

Association of Basic Telecom Operators
http://www.abto.org/

APPENDIX VII

IMPORTANT INFORMATION TECHNOLOGY PARKS/ PRIVATE INFOTECH CAMPUSES IN INDIA

Software Technology Parks of India

Head Office:

Electronics Niketan
6, CGO Complex, Lodi Road
New Delhi 110 003
Tel: 91 11 436 4041
Fax: 91 11 436 3134
Website: www.stpn.soft.net

Locations:

North India
Block 4, Ganga Shopping Complex
Sector 29, NOIDA
Uttar Pradesh
Tel: 91 11 854 2483
Fax: 91 11 853 6615, 853 6616
e-mail: marketing@stpn.soft.net

Reii 2, Kanakpura Industrial Area
Sirsi Road, Jaipur, Rajasthan 312 012
Tel: 91 141 351926
Fax: 91 141 351981

East India
II Floor, Priyadarshini Market
CRP Square, Nayapalli
Bhubaneshwar, Orissa 751 012
Tel: 91 674 407260; 440160
Fax: 91 674 407261

West India
A /78/7, Flatted factory Shed
Electronics Estate, GIDC
Gandhinagar
Gujarat 382 044
Tel: 91 2712 31571
Fax: 9102712 27207

1st Floor, Kubera Complex
Dr. Rajendra Prasad Road
Shibaji Nagar, Pune
Maharashtra 411 005
Tel: 91 20 329834
Fax: 91 20 329833

South India
407, Maitri Vanam Complex
Sanjeeva Reddy Nagar Post
Hyderabad
Andhra Pradesh 509 038
Tel: 91 40 291477;290817
Fax: 91 40 290 652

Block 3, Multi Storey Complex
Keonics Electronics City
Hosur Road, Bangalore
Karnataka 561 229
Tel: 91 80 852 0633
Fax: 91 80 852 0958

Private and State Government Parks

International Tech Park Limited
Whitefield Road, Bangalore
Tel: 91-80-841 0627
Fax: 91-80-841 0636
website: itpl.com

TIDEL Park Ltd
4, Canal Bank Road, Tharamani
Chennai, Tamil Nadu 600 113
Tel: 9144235 5670
Fax:9144235 5744
www.itparkchennai.com

HITEC City
Off Hyderabad Airport
Andhra Pradesh
www.ltinfocity.com

Technopark

Technopark Campus
Thiruvananthapuram
Kerala 695 581
Tel: 91-471-41727
Fax; 91-471-417 971
E-mail: techpark@vsnl.com

International Infotech Park
CIDCO Belapur Navi Mumbai 400 614
Tel: 91-22-757 1177
Fax: 91-22-757 1066
website: www.cdcoindia.com

APPENDIX VIII

LIST OF PRINCIPAL VENTURE CAPITAL FUNDS IN INDIA

Chrysalis Capital
106, X Floor
Mittal Chambers
Nariman Point
Mumbai 400 021
Tel: 91 22 230 6600
e-mail: info@chrysaliscapital.com

Alliance Venture Capital Advisors
607 Raheja Chambers
Free Press Journal Road
Mumbai 400 021
Tel: 91 22 283 4016, 287 2265
e-mail: avcaltd@bom3.vsnl.net.in

Draper International (India)
1301 Arcadia building
NCPA Marg
Mumbai 400 021
Tel: 91 22 204 7544, 204 7548
e-mail: mail@draperintl.com

ICICI Venture Funds Management Company
IV Floor, Raheja Plaza
17 Commissariat Road
D'Souza Circle
Bangalore 560 025
Tel: 91 80558 3681
e-mail: info@iciciventure.com

Walden Nikko Securities
India Liaison Office
1, Silverstone
294 Linking Road, Khar (West)
Mumbai 400 052
Tel: 91 22 648 5194

Indocean Chase Capital Advisors
XV Floor, Nirmal Building
Nariman Point
Mumbai 400 021
Tel: 91 22 283 8040
e-mail: mail@indocean.com

International Equity Partners
India Direct Fund
1007 Raheja Chambers
Free Press Journal Road
Mumbai 400 021
Tel: 91 22 204 1140
e-mail: info@iep-global.com

APPENDIX IX

IMPORTANT MULTILATERAL INSTITUTIONS IN INDIA

World Bank
70, Lodhi Estate, Lodhi Road, New Delhi – 110 003
Tel: 91-11-461 0210/11/12
www.worldbank.com

Asian Development Bank
37 Golf Links, New Delhi- 110 003
Tel: 91 –11-469 2578
www.adbinrm.org

International Finance Corporation
No 1, Panchsheel Marg, Chanakyapuri,
New Delhi – 110 021
Tel: 91 –11- 611 1306
www.ifc.org

International Monetary Fund (IMF)
Suite 121, Taj Palace Hotel, Sardar Patel Marg,
New Delhi – 110 021
Tel: 91-11-302 3646/47/48/49
www.imf.org

APENDIX X

MAJOR FOREIGN BANKS IN INDIA

ABN Amro Bank
DLF Centre, Sansad Marg, New Delhi 110001
Tel : 0113755130, 3755407
Fax : 0113755401
sanjeev.anand@ap.abnamro.com

ABN-AMRO ASIA CORPORATE FINANCE LTD
8/F, Gopal Das Bhavan, 28, Barakhamba Road, Connaught Place New Delhi 110 001
Tel: 335 97 27 (ext. 102 / 335 99 58 (direct)
Fax:373 61 64
frank.hancock@ap.abnamro.com

ABN-AMRO ASIA EQUITIES (INDIA) LTD.
Gopal Das Bhavan, 8th Floor, 28, Barakhamba Road, Connaught Place, New Delhi 110 001
Tel:335 97 27 / 335 97 57
Fax:373 61 64

ABN AMRO Bank N.V.
302, Dalamal House, 3rd Floor, Nariman Point, Mumbai - 400 021
Tel : 022 - 285 5098/99
Fax : 022 - 202 2612
Website: www.abnamroindia.com

BNP Paribas
5th Floor, Hansalaya Building, 15, Barakhamba Road, New Delhi 110001
Tel : 0113357734, 3314848
Fax : 0113710344
eric.cohu@asia.bnpparibas.com

BNP PARIBAS
French Bank Building, 62, Homji Street, Fort, Mumbai - 400 001
Tel : 022 - 266 0822
Fax : 022 - 267 9709
E-mail : jonathan.lyon@bnpgroup.com
Website: www.bnpparibas.com
Credit Agricole Indosuez

DCM Building, 2nd Floor, 16, Barakhamba Road, New Delhi 110001
Tel : 0113716924, 3716925
Fax : 0113713070
seshadri.subrahmanyan@in.ca-indosuez.com

Credit Agricole Indosuez
12th Floor, Hoescht House, Nariman Point, Mumbai – 400021
Tel : 022 - 204 6272/14/5274/5104
Fax : 022 - 204 9108/202 1384
E-mail : bsepoy@indicarrsec.com

Credit Lyonnais
603-609, 6th Floor, Mercantile House, 15, K.G. Marg, New Delhi 110001
Tel : 0113755213, 3755214
Fax : 0113755231
atul.sodhi@creditlyonnais.fr

Credit Lyonnais
Scindia House, 1st Floor, Narottam Morarjee Marg, Ballard Estate, Mumbai - 400 038
Tel: 022 - 261 2313
Fax : 022 - 261 2603
E-mail : clindia@vsnl.com

Deutsche Bank AG
Hazarimal Somani Marg, Next to Sterling Theatre, Fort, Mumbai - 400 001
Tel : 022 - 207 4720-24/1050-53
Fax : 022 - 207 5047
E-mail : javed.shirazi@db.com
Website: www.deuba.com

Deutsche Bank AG
Tolstoy house, 15-17, Tolstoy Marg, New Delhi 110001
Tel : 0113736557, 3721150
Fax : 0113316215
susheel.kak@db.com

Jardine Fleming India Securities Ltd.
21A, Janpath, New Delhi 110001
Tel : 3737810, 11, 12
Fax : 3737813
r.srinivasan@jfleming.com

Lazard Creditcapital Ltd
62 Basant Lok, Vasant Vihar, New Delhi 110057
Tel : 6141901 (D), 6145369
Fax : 6144855 (D), 6147482

The Hongkong and Shanghai Banking Corporation Ltd.
9th Floor, Mercentile House, 15, Kasturba Gandhi Marg, New Delhi 110001
Tel : 0113314920, 3706000
Fax : 0113713901
hsbcdel@nda.vsnl.net.in

The Hongkong & Shanghai Banking Corporation Ltd.
52/60, Mahatma Gandhi Road, Fort, Mumbai - 400 001
Tel: 022 - 267 4921
Fax : 022 - 265 8309
E-mail : hsbcindia@vsnl.com
Website: www.hsbc.com

HSBC Security & Capital Markets Pvt. Ltd.
3rd Floor, Ashoka Estate, 24, Barakhamba Road,
New Delhi 110001
Tel : 0113731234
Fax : 0113737691
raman.sidhu@hsbcam.com

Thomas Cook (India) Ltd.
C-33, Connaught Place, New Delhi 110001
Tel : 3356575
Fax : 3730241
vikram.dhawan@tcookin.com

Generale Bank Representative Office
13, Maker Chambers VI, Nariman Point, Mumbai 400 021
Tel: 022/287 25 10
Fax: 022/204 53 44

Banca Commerciale Italiana
143 Maker Chambers VI, Nariman Point, Mumbai 400021
0091-22-2871400
2020333

Banca Nazionale Del Lavoro
67 Maker Chambers VI, Nariman Point, Mumbai 400021
0091-22-2871494; 2047763
2023482

Credito Italiano
103 Maker Chamber VI, Nariman Point, Mumbai 400021
0091-22-2810350
0091-22-2851190

RABO INDIA FINANCE PVT. LTD.
Forbes Building, 2nd Floor, Charanjit Rai Marg,
Mumbai 400 001
tel: 022 - 203 45 67 / 203 66 22
fax: 022 - 203 55 44
rabobank@bom3.vsnl.net.in

Barclays Bank plc
21/23 Maker Chambers VI, Nariman Point,
Mumbai 400021
Tel : 022 - 204 3238, 2842888
Fax : 2043238, 2886495
E-mail : kamal.kalkat@barcap.com
Website: www.barcqpint.com

BHF - Bank
107, Maker Chambers – III, 223, Nariman Point,
Mumbai - 400 021
Tel : 022 - 283 2814/3161/285 0080
Fax : 022 - 287 1423
E-mail : bhfmum@giasbm01.vsnl.net.in

DG Bank - India Representative Office
124, Maker Chambers VI, Nariman Point,
Mumbai - 400 021
Tel : 022 - 281 1317
Fax : 022 - 281 1377
E-mail : dgbankmumbai@vsnl.com
Website: www.dgbank.com

STANDARD CHARTERED GRINDLAYS BANK
LIMITED
90, Mahatma Gandhi Road, 3rd Floor, Mumbai - 400 001
Tel : 022 - 267 0162/1332
Fax : 022 - 262 4924
E-mail : tonysingh@anz.com
Website: www.anz.com

COMMERZBANK AG
12-B, Free Press House, Free Press Journal Road, 7th
Floor, Nariman Point, Mumbai - 400 021
Tel : 022 - 288 5510/12-15
Fax : 022 - 288 5524
E-mail : g.shekhar@in.commerzbank.com

Dresdner Bank AG
Hoechst House, 1st Floor, 193, Backbay Reclamation,
Nariman Point, Mumbai - 400 021
Tel : 022 - 285 0004/05
Fax : 022 - 287 0997
E-mail : suraj.mehta@dresdner-bank.com

ING Bank N.V. (ING Barings)
Hoechst House, 7th Floor, Nariman Point,
Mumbai - 400 021
Tel : 022 - 282 6566/2029876
Fax : 022 - 204 6134/287 0934
E-mail : pradeep.saxena@ingbank.com
Website: www.ING-BARINGS.com

KBC Bank N.V.
India & South Asia, Mumbai Branch, Hoechst House,
4th Floor , Nariman Point,Mumbai - 400 021
Tel : 022 - 281 2299/282 83 85
Fax : 022 - 282 8333/285 0089
E-mail : Bart.Pattyn@kb.be

Societe Generale
Maker Chambers IV, 13th Floor, Nariman Point,
Mumbai - 400 021
Tel : 022 - 287 0907-08
Fax : 022 - 204 5459
E-mail : robert.kerneis@socgen.com
Website:www.socgen.com

APPENDIX XI

INDIAN FINANCIAL INSTITUTIONS

Industrial Credit and Investment Corporation of India (ICICI)
C 23, G Block, Bandra Kurla Complex, Bandra (East), Mumbai – 400 051
Tel: 91-22-653 1414
Fax: 91-22-653 1122
www.icici.com

Industrial Development Bank of India (IDBI)
IDBI Towers, WTO Complex, Cuffe Parade, Colaba, Mumbai – 400 005
Tel: 91-22-218 9111, 218 9117
Fax: 91-22- 218 1294
www.idbi.com

Industrial Finance Corporation of India (IFCI)
Bank of Baroda Building 16, Sansad Marg, New Delhi – 110 001
Tel: 91-11-332 2052
Fax: 91-11-332 0425

National Bank for Agriculture Research and Development (NABARD)
Plot No C-24, 'G' Block, Bandra Kurla Complex, PB No 8121, Bandra (East)
Mumbai- 400 051
www.nabard.org

Infrastructure Leasing & Financial Service Ltd.
Mahindra Towers, 4th Floor, Pandurang Budhkamkar Marg, Worli, Mumbai - 400 018
Tel : 022 - 287 5257/58
Fax : 022 - 204 9676/493 0080

BOI Mutual Fund
East India Cotton Association Building, Mezanine Floor, 175 Kalbadevi Road, Mumbai - 400 002
Tel : 022-240 0192/0516
Fax : 022-242 0998
E-mail : boiamc@bol.net.in

L I C Housing Finance Ltd.
Bombay Life Building, 2nd Floor
45-47, Veer Nariman Road
Mumbai - 400 001
Gen : 022 - 204 9799/9919
Fax : 022 - 204 9839
E-mail : ksinha@lichfl.com/lichfl@bom2vsnl net.in

PNB Capital Services Limited
Jeevan Bharati, Tower II, Level - 3, Connaught Circus, New Delhi - 110 001
Tel : 011 - 331 5644/5646/371 9066
Fax : 011 - 371 9067

SBI Capital Markets Ltd.
Maker Tower, `E', 20th Floor, Cuffe Parade, Mumbai - 400 005
Tel : 022 - 218 9166-69/9266/67
Fax : 022 - 218 6367(D)/218 8332
E-mail : mailto:sbicapco@bom2.vsnl.net.in
Website: www.sbicaps.com

Unit Trust of India
13, Sir Vithaldas Thackersey Marg, Mumbai - 400 020
Tel : 022 - 206 8468
Fax : 022 - 206 8283/208 2960

APPENDIX XII

LEADING PUBLIC SECTOR BANKS OF INDIA

Bank of Baroda
Central Office, P.O. Box 10046
3, Walchand Hirachand Marg, Ballard Pier,
Mumbai - 400 001
Tel : 022 - 261 0341
Fax : 022 - 261 1259
E-mail : secbob@bol.net.in
Website: www.bankofbaroda.com

Bank of India
Express Towers, 14th Floor, Nariman Point,
Mumbai - 400 021
Tel : 022 - 202 3020
Fax : 022 - 202 3167
E-mail : cmdboi@bom5.vsnl.net.in
Website: www.boiind.com

Canara Bank
112, Jayacharamarajendra Road, Bangalore - 560 002
Tel : 080 - 222 1581
Fax : 080 - 222 3168(D)/222 2704
E-mail : canbank@blr.vsnl.net.in
Website: www.canbankindia.com

Central Bank of India
Chander Mukhi, Nariman Point, Mumbai - 400 021
Tel : 022 - 202 6428
Fax : 022 - 202 8122(D)/204 4336
E-mail : cbicpp@bol.net.in
Website: www.centralbankofindia.co.in

Corporation Bank
Mangaladevi Temple Road, Pandeshwar,
Mangalore - 575 001
Gen : 0824 - 42 6416 - 20
Fax : 0824 - 44 1208(D)/42 5213
E-mail : cmd@corpbank.com
Website: www.corpbank.com

Oriental Bank of Commerce
Harsha Bhavan, E Block, Connaught Place,
New Delhi - 110 001
Tel : 011-332 1121/1691/1821/3244/5508
Fax : 011 - 332 1514/371 3237
E-mail : dscmd@obcindia.com / obc@obcindia.com
Website: www.obcindia.com

Punjab National Bank
7, Bhikhaiji Cama Place, Africa Avenue,
New Delhi - 110 066
Tel : 011 - 610 2303
Fax : 011 - 617 3603/619 6514

E-mail : pnbmasd@vsnl.com
Website: www.punjabnationalbank.org/www.pnbindia.com

State Bank of India
State Bank Bhavan, Madame Cama Road,
Mumbai - 400 021
Tel : 022 - 202 2426
Fax : 022 - 285 2708
E-mail : sbicsd@vsnl.com /
chairman@mumbai.cobom.sbi.co.in /
dgmcsd@mumbai.cobom.sbi.co.in
Website: www.statebankofindia.com / www.sbi.co.in

APPENDIX XIII

LEADING PRIVATE SECTOR BANKS OF INDIA

Global Trust Bank Limited
303-48-3, Sardar Patel Road, Secunderabad - 500 003
Tel: 040 - 781 9333
Fax : 040 - 781 5892
E-mail : ask@globaltrustbank.com
Website: www.globaltrustbank.com

ICICI Bank Limited
ICICI Towers,4th Floor, South Tower, Bandra Kurla Complex, Bandra(E), Mumbai - 400 051
Tel : 022 - 6531414
Fax : 022 - 6531166
E-mail : sinorhn@icicibank.com
Website: www.icicibank.com

IDBI Bank Ltd.
Nariman Bhavan, 12th Floor, V K Shah Marg, Nariman Point, Mumbai - 400 021
Tel : 022 - 284 4473
Fax : 022 - 284 4465
E-mail : d_mukerjee @ idbibank.com
Website: www.idbibank.com

IndusInd Bank Limited
IndusInd House, 425, Dadasaheb Bhadkamkar Marg, Mumbai - 400 004
Tel : 022 - 385 7474/9901-99
Fax : 022 - 380 9931
Website: www.indusind.com

SBI Commercial and International Bank Ltd.
Maker Chambers III. Nariman Point, Mumbai - 400 021
Tel : 022 - 284 1091
Fax : 022 - 281 9060/204 2280
E-mail : mumsbici@bom3.vsnl.net.in
Website: www.sbici.com

The HDFC Bank Ltd.
Sandoz House, Dr. Annie Besant Road, Worli, Mumbai - 400 018
Tel : 022 - 495 1771
Fax : 022 - 496 0737(D)/0696
E-mail : aditya.puri@hdfcbank.com
Website: www.hdfcbank.com

The Vysya Bank Ltd.
72, St. Mark's Road, Bangalore - 560 001
Tel : 080 - 227 2021
Fax : 080 - 227 2220/224 0571
E-mail : krr.moorthy@gnblr.global.net.ems.vsnl.net.in
Website: www.vysbank.com

UTI Bank Ltd.

Maker Towers F, 13th Floor, Cuffe Parade, Mumbai - 400 005
Tel : 022 - 218 9106/09
Fax : 022 - 218 6944/1429
E-mail : co@utibank.co.in
Website: www.utibank.com

APPENDIX XIV

LIST OF IMPORTANT INFORMATION SOURCES

Publications and studies

- **World Investment Report 2000-01**
  An annual report published by United Nations Conference on Trade and Development (UNCTAD), UNCTAD is the focal point within the United Nations Secretariat for all matters related to foreign direct investment and transnational corporations. For further information, please refer the website www.unctad.org/wir/index.htm

- **World Competitiveness Yearbook 2000**

- **Statistical Outline of India 2000-01**
  The statistical outline of India, better known as S.O. offers meaningful insights into the changing economic profile of India. The report presents statistical data, which is meticulously processed from numerous official publications and reports. For further information, please refer the website www.tata.com/soi

- **Economic Survey of India, 2000-01**
  The Economic Survey of India is a yearly survey published by the Economic Division, Ministry of Finance, Government of India. The survey throws light on the major sectors of the Indian economy, namely Public Finance, Monetary & Banking developments, Capital & Money markets, Prices & distribution, External sector, Industrial policy & development, Agriculture, Infrastructure and Social sectors.

- **Manorama Yearbook 2000**
  The Manorama Yearbook is an in depth source of general update on India covering information on science & technology, Indian demographics, sports, current events, people, etc. For further information, please refer the website www. Malayalamanorama.com

- **Custom Tariffs Handbook 2000-01**
  The tariff handbook for the year 2000-01 is the 19th budgeted edition and has incorporated the basic rates of duties in the 2001 Finance Bill of the Government of India.

- **IRIS Book 2001**
  Information Research and Information Services Limited (IRIS), is the investor's guide to Indian corporates. The book incorporates the latest half yearly results and gives a snapshot of the Indian economy – a macro perspective and the various industries, their performances and the outstanding companies in the respective industries

- **Import-Export Statistics**
  This is a publication by Indian Economic Data Research Centre. The handbook on imports and exports mention in detail the recent trade trends, trade country wise and commodity wise.

- **Monthly Import-Export Statistics on Commodities – Country-wise**
  Published by Directorate General for Commercial Intelligence and Statistics, Kolkata (Ministry of Commerce)

  Export Statistics for Agro & Food Products – India 2000-01
  Published by APEDA (Agricultural and Processed Food Products Export Development Authority). www.apeda.com

Annual reports

- **Annual Report of Department of Animal Husbandry and Dairy 2000-01**

- **Annual Report Ministry of Commerce and Industry 2000-01**

- **Annual Report Ministry of Food Processing 2000-01**

- **Annual Report Ministry of Information Technology 2000-01**

- **Annual Report Ministry of Communications - Department of Telecommunications 2000-01**

- **Annual Report – VSNL, Department of Telecom 2000-01**

- **Annual Report – Ministry of Heavy industries and public enterprises 2000-01**

- **Voice and Data**
  This is a fortnightly magazine on communications. For further information please refer the website www. Voicendata.com

- **Dataquest**
  A fortnightly magazine on Information technology, Dataquest gives useful insights into the IT industry, key players, performances of major segments, etc. for further information please refer the website www.dqindia.com

- **Business World**
  Business world is a fortnightly business magazine covering various issues under one source, like, corporate, marketing, strategy, economy and Infotech. For further information, please refer the website http://www.businessworldindia.com/

- **Business India**
  Business India is India's largest selling magazine in the business segment. The magazine focuses on issues related to management, strategic thinking and analysis of business events. For further insight, please refer the website www.india-today.com/btoday

- **Business Today**
  This is a fortnightly Indian business magazine.

- **ACMA Handbook**
  ACMA is the abbreviation of Automotive Component Manufacturer's Association of India. ACMA publishes its handbook every year covering all the auto segments and predictions for the forthcoming years. www.acmainfo.com

- **National Council for Applied Economic Research (NCAER)**
  NCAER is an independent non-profit organization that is committed to assist government, civil society and the private sector to make informed policy changes. The council encourages research on Indian themes using Indian data. NCAER is committed to establish linkages with research institutions, which are interested in the areas of Industry, infrastructure development and macroeconomic analysis. For further information, please refer the website www.Ncaer.org

- **Indiainfoline.com**
  www.indiainfoline.com is a website providing in depth information about companies, sector studies, economy, money markets, etc. It is an excellent source of information for corporate and economic India.

- **NASSCOM**
  National association of software and services companies is an online information source for the Infotech industry in India and covers aspects like, the IT industry, business in India, company details, events, etc.
  www.nasscom.org

- **CIOL**
  Cyber India Online Limited is a web based information source about the Indian Infotech industry. www.ciol.com

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SECTOR PROFILES

I - FOOD PROCESSING

1. Overview

1.1 Size and growth trends

Food processing is a key industrial sector for India. It accounts for a gross output of Rs.1.12 trillion (US$23 billion), representing 6.3% of GDP, and accounts for 6% of total industrial investment, 13% of exports, and employs 18% of India's industrial labour force.

Yet, the bulk of the sector consists of primary products such as milled grains and pulses, raw milk, meat and fruits and vegeTables, which are consumed with little or no further processing. As a result, less than 15% value addition takes place in the organised food processing industry.

Food accounts for 53% of final consumption expenditure in Indian households. In 1999, domestic expenditure on food was estimated to be Rs.6 trillion, representing a per capita expenditure of Rs. 6,000 per year. Cereals, fruit, vegeTables and milk together account for more than one-third of total household consumption expenditure. Packaged processed food, estimated to be Rs 300 billion in market size, represents just 5% of final consumption.

Table FP 1 — Gross output and value addition in agriculture and food processing, RS billion

	1998-99	1994-95	Growth (%)
Gross value of output	5,073	3,126	62.3
— Agriculture	3,842	2,366	62.3
— Livestock	1,231	760	61.9
Cost of Agriculture inputs	961	694	38.4
Value added in agriculture	4,112	2,432	69.1
Output of food processing	1,127	696	62.0
Value added in processing	165	104	58.6

Source: Statistical Outline of India, 2001.

Table FP 2 — Private food consumption expenditure, RS Billion

	1998-99	1993-94	Growth rate %
Cereals and pulses	1,456	922	7.6
Sugar	326	201	8.2
Oils and oilseeds	438	232	11.6
Fruit and vegeTables	1,433	687	13.7
Milk and milk products	873	466	11.4
Beverages, etc	457	182	18.0
Meat, egg and fish	471	217	14.0
All	5,982	3,152	11.6

Source: Statistical Outline of India.

Table FP 3 — India's organised processed food market

Description	Product	Category	Segment	Sector	Total
Total market					Rs 1130 bn
Exports				Rs 220 bn	
Home market				Rs 910 bn	
— Packaged products			Rs 300 bn		
- Primary products		Rs 45 bn			
- Packaged cereals and pulses	Rs 30 bn				
- Edible oils	Rs 15 bn				
- Dairy Products		Rs 22 bn			
- Market milk	Rs 12 bn				
- Butter and cheese	Rs 3.5 bn				
- Cheese	Rs 1.2 bn				
- Ice cream	Rs 7.0 bn				
- Bakery & Culinary Products		Rs 70 bn			
- Bakery Products	Rs. 65 bn				
- Pasta products	Rs. 3.5 bn				
- Packaged Soups	Rs. 0.3 bn				
- Ketchups	Rs. 1.0 bn				
- Beverages & Alcoholic Drinks		Rs 123bn			
- Aerated Drinks	Rs. 35 bn				
- Bottled water	Rs. 11 bn				
- Fruit based drinks	Rs. 14 bn				
- Alcoholic Spirits (branded)	Rs. 30 bn				
- Coffee and tea	Rs. 33 bn				
- Impulse foods		Rs 40 bn			
- Packed snack foods (RTE)	Rs.14 bn				
- Chocolate and Confectionery	Rs 13 bn				
- Other impulse products	Rs 13 bn				

• Exports

Food and agriculture exports for the year 1999-00 were US$ 5.5 billion, representing 14.6% of India's total exports. India's major export products are rice, processed marine products, tea & coffee, cashew kernels, and spices.

Table FP 4 — Principal commodity exports, US$ millions and % of share

Commodity	1996-97	1997-98	1998-99	1999-00
Marine products	1,129	1,207	1,038	1,180
Cereals	1,104	910	1,495	718
Cashew kernels	362	377	387	566
Tea	292	505	538	407
Coffee	402	456	41 1	315
Spices	339	379	388	393
De-oiled cake and meal	985	924	461	370
Fruits and vegeTables	208	204	183	202
Misc. processed foods incl. processed fruits and juices	274	142	130	175
Meat and meat preparations	200	217	187	180
Total	6,828	6,594	6,014	5,475
Share of exports (%)	20.4	18.8	18.1	14.6

Source: Economic Survey, 2000-01.

Table FP 5 — Major destinations for India's food products exports, 2000-01

Product	**Three major export destinations**
Marine products	Japan, USA, European Union
Floriculture	Netherlands, USA, Japan
Fruits & VegeTables Seeds	USA, Japan, Bangladesh
Fresh Onions	Malaysia, Sri Lanka, UAE
Other Fresh VegeTables	USA, Sri Lanka, UAE
Walnuts	Spain, Germany, France
Fresh Mangoes	Bangladesh, UAE, Saudi Arabia
Fresh Grapes	UK, UAE, Netherlands
Other fresh fruits	Bangladesh, UAE, Saudi Arabia
Dried & preserved vegeTables	Egypt, Sri Lanka, USA
Mango pulp	Saudi Arabia, UAE, Netherlands
Pickles & chutneys	UK, USA, Belgium
Other processed fruits & vegeTables	Indonesia, USA, Netherlands
Buffalo meat	Malaysia, Egypt, Philippines
Sheep/Goat meat	UAE, Saudi Arabia, Oman
Poultry products	UAE, Oman, Japan
Dairy products	Bangladesh, UAE, Germany
Animal casings	Portugal, Spain, Germany
Groundnuts	Indonesia, Malaysia, UK
Guar Gum	USA, Germany, Netherlands
Jaggery & confectionery	Pakistan, Bangladesh, Sri Lanka
Cocoa products	Germany, Bangladesh, Nepal
Cereal preparations	UK, USA, UAE
Alcoholic beverages	UAE, Sweden, Netherlands
Milled products	Yemen, Bangladesh, Philippines
Basmati rice	Saudi Arabia, UK, Kuwait
Non Basmati rice	Bangladesh, Saudi Arabia, UAE
Wheat	Bangladesh, Korea, UAE
Spices	USA, UK, ASEAN countries
Tea	Russia, CIS countries, USA, Poland
Coffee	Russia, Germany, Spain
Cashew	USA, Netherlands, Japan

Source: Agricultural and Processed Food Products Export Development Authority (APEDA); Export Statistics for 2000-01; Other assorted sources.

Imports

Table FP 6 — India's food products imports, 2000-01 - major countries of origin

1. Edible oils	
- Soya bean oil	Argentina, Brazil, South Africa, USA
- Groundnut oil	Malaysia, UK, Sweden
- Olive oil	Italy, Spain, UAE
- Palm oil	Indonesia, Malaysia, Thailand
- Sunflower oil	Argentina, Ukraine, UAE, South Africa
- Coconut oil	Indonesia, Nepal, Philippines
2. Cereals	
- Wheat	Australia
- Maize	USA, Argentina, China
- Rice	USA, Australia
- Other cereals	Nepal, Singapore
3. Pulses	
- Lentils	Nepal, Canada, Australia
- Gram	Myanmar, Pakistan, Canada
- Moong	Pakistan, Myanmar, Australia
- Tur	Myanmar, Singapore, Iran
- Urad	Singapore, Myanmar, Singapore
- Others	Myanmar, Pakistan, USA
4. Sugar	Pakistan, China, Brazil, South Africa
Cashew Nuts, raw	Guinea Bisu, Tanzania, Ivory Coast

Agriculture products account for a small share of India's total imports, and ranged from 4 to 7% of imports during 1996 –97 and 1999-00. Imports during 1999-00 were US$2.6 billion, 5.6% of total imports for the year. Edible oil, which accounts for more than 50% of agricultural imports, is the largest import item, followed by raw cashew nuts (primarily for processing and re-exports). Pulses, milk powder and some cereals are other items in the import basket.

Table FP 7 — Principal imports, US$ million and % of share

Commodity	1996-97	1997-98	1998-99	1999-00
Edible oils	825.0	744.0	1,804.0	1,842.5
Cereals	137.2	291.5	287.7	133.6
Pulses	250.8	321.4	168.5	63.2
Sugar	0.9	126.5	264.1	255.2
Raw cashew nuts	193.7	206.4	230.3	220.0
Others	-	-	-	-
Total	1,428.0	1,846.7	2918.8	2624.1
Share of imports (%)	3.7	4.5	6.9	5.6

Source: Economic Survey, 2000-01.

1.2 Principal sub-sectors

The principal sub-sectors of India's processed foods industry are: grain processing, fruit and vegeTables, milk and milk products, meat and poultry, fisheries, beverages and other miscellaneous products like confectionery, chocolates and cocoa products.

In all, there are nearly 9,000 organised units in the country, more than 5,000 of which are in the fruits and vegeTables processing sector. Small players (processing less than 0.5 tonne per day) dominate the industry, and account for 75% of its output and 50%of its value. However, mass based foods - milk, cereals and pulses in packaged form, together with poultry - have seen investment by large, including international, players.

Grain processing

India has more than 35,000 modern rice mills processing 24 million tonnes of rice, and more than 800 wheat roller mills processing 10 million tonnes of wheat products, for domestic as well as export requirements. The grain-milling sector is fully decontrolled for domestic markets, while exports attract a quantitative ceiling depending on domestic production levels. Indian rice is a major export item accounting for US$ 780 million in 2000-01, the main buyers being UK, Kuwait, Bangladesh, Saudi Arabia, UAE , and the Netherlands.

Table FP 8 — Important crops of India — Top three leading producing States, 1999-2000

Crops	States	Production (Million Tonnes)	% of All India production
1. Food grains			
Rice	West Bengal	13.95	15.6
	Uttar Pradesh	12.91	14.4
	Andhra Pradesh	10.49	11.7
Wheat	Uttar Pradesh	25.98	34.4
	Punjab	15.91	21.05
	Haryana	9.64	12.76
Maize	Karnataka	1.69	14.7
	Bihar	1.61	14.04
	Andhra Pradesh	1.4	12.21
Coarse cereals	Maharashtra	6.45	21.2
	Karnataka	5.25	17.2
	Uttar Pradesh	3.75	12.3
Pulses	Madhya Pradesh	3.8	28.46
	Uttar Pradesh	2.6	19.48
	Maharashtra	2.19	16.4
Total food grains	Uttar Pradesh	45.24	21.66
	Punjab	25.2	12.06
	Madhya Pradesh	21.02	10.06
2. Oilseeds			
Groundnut	Tamil Nadu	1.38	26.0
	Andhra Pradesh	1.12	21.1
	Karnataka	0.79	14.9
Rapeseed & Mustard	Rajasthan	2.65	44.5
	Uttar Pradesh	1.09	18.3
	Madhya Pradesh	0.67	11.2
Soyabean	Madhya Pradesh	4.45	65.5
	Maharashtra	1.62	23.9
	Rajasthan	0.6	8.8
Sunflower	Andhra Pradesh	0.23	28.8
	Karnataka	0.21	26.3
	Maharashtra	0.21	26.3
Total Oilseeds	Madhya Pradesh	5.59	26.8
	Rajasthan	3.58	17.2
	Maharashtra	2.64	12.7
3. Other Cash Crops			
Sugarcane	Uttar Pradesh	115.42	38.6
	Maharashtra	53.14	17.8
	Karnataka	36.51	12.2
Cotton @	Maharashtra	3.1	26.6
	Gujarat	2.09	17.9
	Andhra Pradesh	1.6	13.7
Jute & Mesta $	West Bengal	7.68	72.9
	Bihar	1.28	12.2
	Assam	0.68	6.5
Potato	Uttar Pradesh	10.46	41.8
	West Bengal	7.48	29.9
	Bihar	1.72	6.9
Onion	Maharashtra	1.39	28.4
	Karnataka	0.59	12.1
	Andhra Pradesh	0.52	10.7

@: Production in million bales of 170 kgs. each.
$: Production in million bales of 180 kgs. each.

Fruit and vegeTable processing

5,200 units are licensed under the Fruit Products Order (FPO) produce processed fruit and vegeTable products including frozen dehydrated products, jams, squash, ketchup, juice and nectars. The 1999 output was close to 1 million tonnes, against a licensed capacity of 2.1 million tonnes. Exports of fruits are mostly going to the USA, Japan, Bangladesh, UK UAE, and Saudi Arabia while vegeTables are mainly exported to Egypt, Sri Lanka, the USA and UAE (see Table 4.2).

Milk and milk products

India is the world's largest producer of milk, with an output of 78 million tonnes, and a market value of Rs 550 billion. However, most of the production is consumed fresh or in short life products. Market milk, with a market value of Rs 120 bn, is the most important product. Less than 0.3 million tonnes of milk solid products were manufactured in 1999, of which infant milk powder and malted weaning foods are the most important products, followed by butter and cheese. Dairy product exports are oriented mostly toward Bangladesh, UAE, and Germany.

Meat and poultry products

India's meat and poultry production is close to 4.5 million tonnes. India ranks fifth in the world with annual egg production of 31.3 billion nos. Meat exports, Rs 9.5 billion in 2000-01, have doubled in five years, the Arabian Gulf markets emerging as the major destinations. Buffalo and goat meat are major export earners for India, especially being popular in the Gulf countries.

Table FP 9 — Meat and fish-production trends, thousand tonnes

	1994	1995	1996	1997	1998
Mutton and goat meat	637	647	669	670	675
Pork meat	366	420	420	420	420
Poultry meat	442	578	480	580	600
Cattle meat	1,290	1,292	1,292	1,292	1,295
Buffalo meat	1,200	1,204	1,204	1,205	1,210
Fishery products	-	-	5,350	5,390	5,260

Source: Ministry of Food Processing.

Further processing is a small segment in meat processing: only 200,000 tonnes (less than 5%) of meat is produced by modern technologies. There are 171 meat products processing plants in the country. . The main products of these plants are sausages, ham, bacon, salami, frankfurters and canned meat products like chicken curries, mutton curries, mutton chunks etc.

Social factors affect meat consumption considerably. India has a low consumption of meat products, partly as a result of a

30% of its population being strictly vegetarian. Beef is prohibited in all but two states (Kerala and West Bengal), due to the religious sensitivities of Hindus, which account for approximately 80 per cent of India's population. Incidentally, India is the only country where the McDonald's sells its burgers without any beef content and even offers purely vegetarian burgers.

Fish products

India has been an important player in marine product exports, especially in shrimp exports. National fish output from marine and inland sources has been stagnating at around 5.3 million tonnes of which marine resources accounted for 55% in 1999. Exports have been a major thrust, accounting for almost 95% of marine processing. Marine exports have grown steadily, recording Rs. 5.87 billion for 2000-01 from Rs.3.5 billion in 1995-96. In 1999 and 2000, India was adversely affected by sanctions imposed by the US on environmental reasons (Turtle Excluder Device) and HACCP regulations on marine frozen products in the EU market, which led to rejections of several export consignments. Japan, the USA, European Union are the main importers of Indian marine products.

Edible Oils

India is the fourth largest edible oil producer in the world, with a production of 22 million tonnes of oilseed and 7 million tonnes of edible oils. Groundnut, rapeseed, soya bean, cottonseed, sesame seed, castor seed and sunflower are the major edible oils used in India. Yet, India depends substantially on imports (more than 40% of requirements) to meet its national consumption of edible oils. Edible oils (principally RBD palm oil used in a variety of processed foods) are the biggest items of agriculture imports, with 1999-00 imports at US$1.84 billion.

Plantation products

India's most important edible plantation crops are tea (export of US$ 400 million), coffee (US$ 314 million), spices (market value of Rs.35 billion), cashews (imported) and sugar (Rs 150 billion). India is the largest exporter of tea, spices and cashew kernels world-wide.

Spices: India produces a range of spices- black pepper, red chilly powder, cardamom, etc.- having a market value of Rs. 35 billion, of which more than one-third is exported.

Tea and coffee: India is the largest producer and exporter of black tea. India produces close to 800,000 tonnes of tea, of which nearly 650,000 tonnes is consumed in the domestic market. Tea exports brought in US$ 400 million revenues in 1999-00.

Coffee: India's coffee production is concentrated in the south, and is principally in two varieties - arabica and robusta. Home consumption is less than one-fifth of annual production - 0.29 million tonnes in 2000, the rest being exported. In 2000, coffee exports brought in US$ 314 million in revenues.

Sugar: India is the largest producer and consumer of sugar in the world, with an industry consisting of 450 sugar factories, a production of 17 million tonnes and sales turnover of Rs150bn.

Cashew: India is the world's largest producer (43% of world production) and exporter of cashew in the world. However, domestic cultivation of cashew, about 0.5 million tonnes, is insufficient to meet the industry's requirements, and has resulted in substantial import of raw cashew nuts. Cashew is sent mostly to the USA, Netherlands, and Japan.

Packaged consumer foods

The packaged foods sector, consisting of semi-processed / ready to eat food products, has a market size of Rs. 40 billion, targeted at middle class consumers, and has grown more than 20% in the past three years. Bakery products, culinary ingredients, sauces and spreads, traditional foods, and confectionery are the major segments of this sector.

1.3 Production factors

The resource base

Farming, spread over 160 million hectares, involving 65% of India's population, is the foundation of the food-processing sector. Therefore, the structure of India's agriculture system to large extent shapes the development of the processing industry.

Crops: India produces nearly 200 million tonnes of food grains, 85 million tonnes of vegeTables, and 30 million tonnes of fruit, besides several commercial crops like sugarcane, pepper, oilseeds, cotton, rubber and tobacco. Rice (87 million tonnes) and Wheat (69 million tonnes) are the principal food grains, while Potatoes (23 million tonnes) form the principal vegeTable crop. India is among the top five producers in the world of rice, wheat, groundnuts, coffee, tobacco, spices, sugar, tea, jute, cotton, oilseeds, fruits and vegeTables.

Livestock: Food farming is supplemented by a considerable livestock sector, consisting of more than 470 million heads, which produce 78 million tonnes of milk, 31 billion eggs, 46 million kg of wool, 4.5 million tonnes of meat and 5.3 million tonnes of fish products annually. India ranks first in cattle and buffalo, second in goats, third in sheep and seventh in poultry in livestock terms, worldwide.

Table FP 10 — Food grains production, million tonnes, 1995-2000

Crop	1995-96	1996-97	1997-98	1998-99	1999-2000
Rice	77.0	81.7	82.5	86.0	87.5
Wheat	62.1	69.4	66.3	70.8	68.7
Coarse cereals	29.0	34.1	30.4	31.5	29.2
Pulses	12.3	14.2	13.0	14.8	13.5
Food grains	180.4	199.4	192.3	203.0	199.1

Source: Economic Survey-1999-2000.

Table FP 11 — Livestock products production trends

Crop	1995-96	1996-97	1997-98	1998-99	1999-2000
Milk million tonnes	66.2	69.1	70.8	74.4	78.1
Eggs billion nos.	27.2	27.5	28.6	30.1	31.3
Wool million kg	41.4	43.5	44.5	45.5	46.1
Meat million tonnes	3.9	4.1	4.2	4.2	-
Fish million tonnes	-	-	5.4	5.3	-

Source: Departments of Animal Husbandry and Dairying.

Despite being a dominant producer of several agricultural commodities, Indian agriculture operates far below its full potential. Agriculture productivity lags world averages by some margin. Growth has resulted more from increases in acreages farmed than from higher productivity.

India's dependence on monsoons - 47% of India's farm holdings are non-irrigated - has caused wide fluctuations in the agricultural growth in the past six years.

Marginal and small farms (less than 0.2 ha) make up 80% of India's 105 million farm holdings, while accounting for 33% of the area farmed. The absence of adequate post harvest management programmes results in enormous primary wastage (nearly 23%) of horticultural produce. As a result, average agricultural growth has been below 2.6%, barely coping with the population growth.

Agriculture Policies and farm productivity

The social complexities have made agriculture a politically important subject in post independence India. Govt. intervention in agriculture is considerably higher than other sectors of the economy, considering that most of India's farmers do subsistence farming and not commercial farming unlike in several developed nations. The following aspects of Govt. intervention in primary agriculture – which is the input to the processing industry- are noteworthy:

Land Ceiling Act

After independence, India enacted a Land Ceiling Act to bring about an equiTable distribution of agricultural land and provide land for subsistence farming to land-less labourers. The Act restricted individual ownership of land to below 12 ha in irrigated areas and to below 22 ha in dry land areas. (individual states differ in the ceiling limits). However, the act applies only to subsistence farming i.e., food grains alone, and does not include plantation / cash crops such as sugarcane, tea, cotton, etc. While the distribution of farmlands has been founded on a socially just cause, it has perpetuated an inefficient production-structure, incapable of taking advantage of economies of scale and the influence of modern farm technology.

Minimum Support Prices

The Government intervenes in farm prices through a Minimum Support Price scheme announced at the beginning of each season. The MSP ensures a fair price to farmers of cereals, pulses and principal oilseeds and are paid out of the Central subsidy schemes, as the MSP is higher than economic costs in some products. MSP assists in preventing exploitation by traders in rural produce markets. For several other crops, the states have a recommended pricing policy of State Advised Prices, that are adhered to by Govt.- owned or co-operative units such as sugar mills, cotton mills etc.

Each year, the government provides seasonal credit (based on their holdings) to individual farmers on concessional and even subsidised terms, to procure seeds and fertilisers. However, for various reasons, loan recovery has been less than 60%. The main reason for this is the political nature of agriculture credit. Because agriculture credit is mandatory to farmers, commercial credit is not available for organized trade in agriculture, and primary agriculture is not included in the scope of industrial credit. This has limited the entry of organised private sector in the collection and distribution of primary produce and marketing. As a result, middlemen groups, doubling up as financiers to farmers, control trade of primary produce.

Middlemen have little interest in the conservation of fresh produce, as they have absolute control over purchases and are able to pass on perishability losses to the producers. This has been the major reason behind the lack of development of post harvesting facilities and rural storage of seasonal produce. The harvest glut in several commercially important products is the result of over-production to compensate perishability risks, which eventually results in more wastage. The wastage that causes concern is, in some ways, an 'unproductive surplus' caused by a structural defect in farm credit. The strictly financial orientation of middlemen has also been a key factor in the proliferation of usurious interest rates, perennial debt and lien on future harvests, despite state credit and the presence of a state controlled agriculture marketing board.

Corporate and foreign participation is not allowed in primary agriculture and plantations. However, some states have enacted legislation to allow collective farming schemes, under contract-farming schemes and the lease of state-owned holdings for integrated food processing industries being set up in the private sector. PepsiCo, Unilever, Seagram (Tropicana), ConAgra and McDonald's have successfully established contract procurement systems for fruits, vegeTables and oil seeds even though long gestation periods were involved in their endeavours.

Foreign collaboration is not encouraged in the primary agriculture sector except in the areas of genetic engineering tissue culture and biotechnology. Foreign investment is not ordinarily allowed in the plantation sector (tea, coffee, tobacco, rice, etc.) although processing activities are all allowed with at least 51% ownership structures for foreign investors(. Farming by the corporate sector also faces major procedural hurdles in importing foreign plant materials, due to India's complex phytosanitary regulations and post entry quarantine procedures.

Until 2000, agriculture insurance did not apply comprehensively to the sector, and covered only a few crops, and only some types of holdings, which left a large part of the sector outside its coverage. In 2000, a comprehensive scheme for agriculture insurance, based on actual past data, was introduced. The new National Agriculture Insurance Scheme is available to all farmers and envisages coverage of all crops against crops losses resulting from natural calamities -

drought, floods, hailstorms, cyclones, fires, pests and diseases. Premiums range from 2.5 to 3.5% of the sum insured, and a 50% subsidy is allowed to small and marginal farmers, with a trend toward exceeding claims.

In 2000, 6 million farmers were covered for a sum of Rs 48 billion under the scheme. Insurance is also available for livestock, covering up to 100% of market value. Nearly 10 million livestock are presently covered under the scheme.

Experience with agriculture insurance has been unsatisfactory. Claims have tended to exceed premium collections, and require a review of the commercial viability of insurance covering a large share of India's GDP, but operating on a subsidised premium structure.

Despite a recognised need for the induction of superior, disease resistant and high yielding varieties of seeds, seed development efforts are weakened by a lack of adequate protection to patent and intellectual property rights on genetic materials, which hinders international players in taking advantage of an otherwise attractive market for seeds. The absence of comprehensive intellectual property rights (IPR) legislation is perceived to be the biggest dampener in the development of hybrid technology through collaborative route in India.

An era of famine and food shortages in the 1960s has determined farming policies that are founded on the principle of supporting subsistence rather than planned surplus. More than 65% of India's farmers farm for subsistence purposes (mostly food grains, oilseeds and a few principal horticulture crops) and consume their harvested produce themselves, selling any marginal surpluses under government-assisted procurement programmes.

1.4 Policy And Regulatory Environment

Food processing attracts several legal aspects such as manufacturing standards, food safety and consumer protection, besides national food security concerns. India's food processing regulations, other than trade regulations, may be grouped into two classes: mandatory requirements and voluntary standards.

1.4.1 Mandatory Requirements

Prevention of Food Adulteration Act, 1954

The Prevention of Food Adulteration Act (PFA) was introduced to protect consumers against the supply of adulterated food by specifying quality standards. It tends to be overly prescriptive, to the point of not recognising or contradicting internationally tried and tested safety standards for similar products. The PFA currently faces problems of equivalence, and is not adequately updated and harmonised with the Codex Alimentaris, the agreed international standard on food safety. This has resulted in several product formulations that are internationally proven and accepted under Codex standards being held violating of the PFA. The PFA did not recognise internationally accepted ingredients -artificial sweeteners such as Aspartame and Aceflume K, and food acids such as malic acid, citric acid, tartaric acid and lactic acid- until recently. Updating PFA product prescriptions has tended to be a drawn out process, taking several years despite the wide spread acceptability of the Codex standards. While the Ministry of Food Processing is the administrative authority for the sector, the PFA is an Act under the Ministry of Health. Of late, there have been representations to bring the PFA within the fold of the Food Processing Ministry and integrated with other food processing regulations.

Essential Commodities Act, 1954

A number of licensing control orders have been formulated under the provisions of this Act, whose main objectives are to regulate the manufacture, trade and distribution of essential commodities. It includes:

a. The Fruit Products Order, 1955

This order regulates the manufacture and distribution of fruit and vegeTable products, sweetened aerated waters and vinegar and synthetic syrups. The manufacture or re-labelling of these products can be carried out only after a valid license has been obtained from the Ministry of Food Processing. The license is issued only after the licensing officer is satisfied about the quality of the product, sanitation, personal, and machinery and work area standards, and needs to be renewed periodically.

b. The Meat Products Control Order, 1973

The Order regulates the manufacture, quality and sale of all meat products and is operated by the Directorate of Marketing and Inspection. A license is required under this Order to set up a factory for producing/processing meat products. License pre-conditions include a no objection certificate (NOC) from the District administration for the slaughter of cattle, buffaloes etc (slaughter of cows is banned in all states except Kerala and West Bengal), and permissions from the civic bodies/State Government (Department of Animal Husbandry) before setting up a meat-processing unit integrated with a slaughterhouse.

The Order also governs export certification of meat products. Export of meat is subjected to pre-shipment inspection and a certificate from the State Animal Husbandry Department / Directorate of Marketing and Inspection that the meat was obtained from healthy animals, slaughtered in a licensed slaughterhouse, is fit for human consumption and tested to be free from specific micro-organisms like E. coli and salmonella.

c. Milk and Milk Products Order, 1992

The MMPO regulates milk and milk products production in the country. Dairy processing units with installed milk handling capacity over 75,000 litres per day, or milk solids in excess of 3,750 tonnes per year, are required to obtain registration under this Order from the Department of Animal Husbandry. Dairy processing units exceeding the specified limits are allotted milk zones, which become their primary source of raw milk. The location of large plants is therefore constrained by the availability/ suitability of milk sheds in various parts of India.Exports of some milk based products

- milk powder, cheese, ghee and butter - are freely allowed in consumer packs, subject to compulsory inspection requirements by the agencies concerned: the National Dairy Development Board, Export Inspection Council, etc.

Standards of Weights and Measures (Packaged Commodities) Rules

These Rules lay down certain obligatory conditions for all commodities that are in packed form, with respect to declarations on quantities contained. The Directorate of Weights and Measures, under the Ministry of Food and Civil Supplies, administers these rules.

Export (Quality Control and Inspection) Act

The Export Inspection Council under the Ministry of Commerce is the statutory certification and inspection agency for all exports responsible for implementation of this Act under which a large number of exporTable commodities have been notified for compulsory pre-shipment inspection. A large number of exporTable commodities have been notified for compulsory pre-shipment inspection. Recently, the government has exempted fruit products, fish and fishery products from compulsory pre-shipment inspection on account of a firm letter from the overseas buyer stating that the overseas buyer does not want pre-shipment inspection from any official Indian Inspection Agencies.

1.4.2 Voluntary Standards

Two organisations deal with voluntary standardisation and certification systems in India's food sector. The Bureau of Indian Standards looks after standardisation of Import / Export regulations for processed foods while the Directorate of Marketing and Inspection (DMI) governs the grading of raw agricultural produce.

Bureau of Indian Standards (BIS)

The BIS is the principal body for the formulation of Indian Standards in the processed food sector and the implementation of standards through voluntary and third party certification systems. All products complying with BIS standards can exhibit the "ISI" mark on product packages. Compulsory certification is required for specified items like food colours/additives, vanaspati, milk powder and condensed milk.

Directorate of Marketing and Inspection (DMI)

The DMI administers the Agricultural Produce (Grading and Marketing) Act, 1937, under which grade standards - known as "Agmark" standards- are prescribed for agricultural and allied commodities. Grading is voluntary, and manufacturers complying with the respective standards are allowed to use "Agmark" labels on their products.

The DMI is also the registration authority for all cold storage units in India under the Cold Storage Order, which regulates the setting up and annual licensing of cold storages in primary produce areas.

1.4.3 Investment Regulations

Investment ceilings exist in specified products and activities of the food-processing sector. A specified list of food products is exclusively reserved for 'small-scale industries', i.e., units having an investment below Rs.10 million (0.2 million US$) in plant and machinery. The list of reserved products includes hard-boiled confectionery, pickles and chutneys. Until 1999, even ice cream and biscuits were on the reserved list. Other industrial undertakings as well as foreign entities are not allowed to hold more than 24% equity in small-scale units. Large units may be set up to manufacture reserved items under a licence, subject to undertakings to export at least 50% of their production.

Foreign investment regulations

All food-processing industries (other than milk food, malted foods and flour, and a few items reserved for the small-scale sector) qualify for 100% foreign direct investment on the automatic approval route. Foreign investment proposals which are not under the category of automatic approvals, are also considered on merit

Foreign investment is prohibited in primary agriculture (plantations) and livestock breeding (except in the production of hybrid and high yielding variety seeds). Foreign investment is prohibited in retail trading (with effect from October 2001) except in bulk cash-and-carry operations, for which specific approval is necessary.

Agri Export Zone scheme

Recently, the Ministry of Commerce announced the 'Agri Export Zones (AEZ) Scheme', which seeks to provide 'end-to-end' development for the export of products from a geographically contiguous area. The emphasis of the AEZ scheme is on market orientation, and to provide proper remunerative returns to farmers on a sustained basis by improved access to exports. It starts with the identification of products having good export potential, devising strategies for market penetration and niche marketing, and then taking the necessary steps to exploit the market potential.

1.5 Trade Policy

1.5.1 Export Regulations

Quantitative ceilings exist on the export of some essential commodities like rice, cereals, milk powder and other specified products, on which the government fixes export quotas, or exports are_canalised through government bodies alone.

Table FP 12 — Export regulations on food products

Product	Export Restrictions
Rice	Allowed, subject to registration of contracts with Agricultural and Processed Food Products Export Development Authority.
Paddy	Export permitted under license
Pulses	Export in bulk permitted only under a license, export in consumer packs up to 5 kg is free
Wheat and wheat products	Export of wheat permitted within notified ceilings (now 1mn tonnes); export of wheat products is freely allowed
Onion	Canalised to state agencies, subject to quantitative restrictions

Source: Ministry of Commerce.

1.5.2 Import Regulations

April 2001 marked the end of the quantitative restrictions for all imports into India, with the termination of India's phase-out schedule committed to the WTO and all trade partners. However, imports of food products continue to be subject to tariffs, preferential tariff agreements, and regulations in respect of health, phytosanitary and technical standards.

Following the removal of quantitative restrictions (QRs), the government has prepared a 'Watch' list of 300 sensitive items - several of which are processed food products - in which import surges shall be closely monitored and countervailed through tariff measures within the bound rates. Import liberalisation does not automatically lead to import surge in India's case, given the wide leeway in the form of tariff ceilings: Import tariffs were raised from 25% to 75% on essential items like edible oil, responding to a surge in imports from Nepal with which India has a preferential treaty.

The prospects of removal of QRs in April 2001 had caused great expectations for trade in foreign alcoholic spirits and wine, besides other food products. However, new regulations were introduced by India that brought in further restrictions such as : prohibitive tariffs - up to 700% on alcoholic products (which were not subject to binding rates); and compulsory registration regulations for imported products.

In November 2000, the government introduced two rules applying to pre- packaged products imported in retail packaging formats, which have trade significance. These rules relate to mandatory technical standards for quality, and to labelling and marking information of imported goods.

Compulsory registration (technical standards for quality of imports)

The government has notified 131 imported items to be subject to mandatory compliance with Indian Quality Standards, on the grounds that similar goods manufactured in India attract the same treatment. The list of 131 items includes 43 food ingredients. Foreign manufacturers and exporters of these items must register and qualify under the Bureau of Indian Standards (BIS), to be eligible to supply their products in India.

While the BIS issues national standards on a wide range of goods, it is excessively dependent on the stipulations of the Ministry of Health to enact standards relating to food products. Given that India's food laws already face a problem of equivalence with international standards, the endorsement of Indian standards is impossible for several products that conform to international specifications, but do not meet with the Indian requirements under the PFA.

Procedural rules of the BIS, which include a mandatory plant inspection, are impractical to implement for goods manufactured in other countries. This results in a situation where the process of certification itself remains incomplete, considering the huge mass of foreign brands that shall require registration under BIS.

Labelling and marking rules for imports

In November 2000, the government introduced new rules stipulating that all imported pre-packaged commodities in retail sales packing should indicate the Maximum Retail Price (MRP), generic name of the product, month and year of entry into the trade channel, quantity in standard units, and Indian importer's name and address, to be carried prominently in the 'Principal Display Panel' of the product.

Considering that imported products are from large batches in the place of production, it is impractical for foreign goods to carry India specific packaging information. Presently the official agent/importer physically sticks the mandatory labels on each pack after the products arrive into the customs area. With increasing volumes, such tasks would not be feasible.

Mandatory Inspection at Point of Entry

Since the opening up of food products for imports, India has introduced a system of mandatory inspections for each consignment entering into the country. While such a step is justifiable under national laws, the actual process is tedious: customs authorities do not have required testing facilities and send samples to other approved laboratories, meanwhile the consignment incurs demurrage costs at the port. Even well known international brands must go through these mandatory tests, which have led to criticism of this new regulation.

Tariff Levels

The Indian market is still very small for several categories of imported products, especially life style products. Branded imported goods often have high FOB values in comparison with similar products made in India, and have a demand originating only from the rich upper class households, or the premium institutional markets (hotels and tourism industry).

Table FP 13 — Import tariffs, % rates

	Basic duty	Bound rate
Wheat	50	100
Polished rice	70	100
Millets	50	100
Pulses	0	100
Dairy products	35	40/150
Fruits and vegeTables	25-50	150
Crude edible oils	25-55	85
Refined edible oils	50-72	300
Meat products	35	150
Spices	58.5	100
Sugar	60	150
Alcoholic products	468- 706	150

Source: EXIM tariffs.

With import tariffs in the range of 50%-110% after all duties are considered, the final market prices of nearly all imported food products tend to be several times higher than Indian products. Worse, the applied tariffs are still below the bound rates as India only offered its Border tariffs (Basic Duty) for the purposes of bound rates.

Certain specified commodities also attract export duties, cess and minimum export prices, and/or mandatory export inspection certification by notified agencies.

Indian import duties in specialised packaging materials and food processing machinery, are in excess of 50%, and are the highest in the world for similar imports. India is the only country that charges excise duties on food processing machinery. This results in higher costs of manufacturing for several basic processed products, which to an extent impairs the penetration of packaged and processed foods at a national level and renders exports non-competitive in low-value added products.

Regulations on Alcoholic Products

Foreign companies consider alcoholic spirits an important segment for trade and foreign direct investment. Since 1991, several proposals have been approved in the segment, covering beer, whisky and other spirits. Bacardi Martini, Allied Domecq, Seagram, Pernod Ricard and Heineken are some EU names that have set up investments in India.

Despite a policy that on the face of it allows foreign investment in the segment, ground level conditions are highly complex and have resulted in limited prospects for introducing the best international products in India, as well as restricted promotions of responsible drinking as a way of life.

Policy: Centre and State regulations

- Alcohol is on the 'concurrent list', i.e. it comes under the purview of state as well as central government legislation.
- Quantitative restrictions exist even at the state level: alcohol trade requires manufacturers to obtain state-wise licences. Because alcohol is a high revenue item, states enact rules that compel companies to set up bottling facilities within the state. Consequently, many national brands are bottled in several states for local consumption within the state.
- Imported alcoholic products are subject to border tariffs based on their CIF value, and thereafter to local excise duties and sales tax in the state of sale based on their retail price.
- Given that each state determines its own excise duty and sales tax, there is enormous variation – up to 100% in some cases- in retail prices of the same product, from state to state.
- While the central government has taken steps toward a uniform sales tax and excise duty for all states, until such a step is physically implemented, marketing policy must continue to be on a state-to-state basis.

Central policy: Regulations distinguish among three types of product:

- Bottled in origin (imported in final packed form),
- Bottled in India (imported in bulk, and packed in India in licensed manufacturing facilities), and
- Indian made foreign liquor (produced and bottled within India).

This distinction has at times resulted in differential treatment of imported products.

Bottled in origin: Bottled in origin products attract a prohibitive import tariff of 448% to 706% depending on their CIF price. Stiff import duties only serve as a further incentive to the thriving grey market. Premium products have less than 1% volume share of India's 70-million case whisky market, which does not justify such prohibitive tariff on the basis of market access concerns of domestic competitors.

Bottled in India: Products imported in bulk for bottling in India attract import duties of 222.4% besides local excise duties on par with Indian made products. However, trade balancing conditions apply to bulk imports, which means that imports are to be foreign exchange neutral, i.e., balanced by exports of manufactured goods or by-products. Trade balancing is among India's TRIMS measures that must be dismantled before 2003 (the deadline for all ANNEXE VII members).

Some states (Maharashtra) have introduced mandatory labelling registration by importers/ distributors rather than by brand-owners, which requires importers/ distributors to register individual brands and labels with authorities. This multiplies the registration volumes depending on the number of official importers/distributors appointed by a company.

Table FP 14 — Tariffs on imported wines and spirits

	Border duties	Additional Custom Duty	Total	Bound rate
Whisky, rum, vodka, liqueurs…	222.40%	• 75% of landed value for CIF price greater than US$ 40 per case • 100% of landed value for CIF prices US$ 20-40 per case • 150% of landed value for CIF prices less than US$ 20 per case	468% 544.8% 706%	150%
Wine, vermouth	108%	• Rs 9 per litre		150%

Source: EXIM Tariffs.

Each registration involves fees besides other costs, and many consider this to be a further cost and a barrier to the trade of imported alcoholic products.

In the absence of a uniform sales tax policy, state departments discriminate among categories to impose different duties. For instance, the state of Tamil Nadu applies a 50% sales tax on Indian made liquor, and 70% on imported liquors. Recently, the state imposed (with retrospective effect) a 70% duty on even bottled- in - India products, which in no way differ from wholly Indian products in terms of bottling operations and attracted a 50% sales tax before the recent ruling.

Table FP 15 — Can Imported Whisky compete? (Figures in Rupees)

	BIO	BII	IMFL (?)
CIF value per case/ bulk litre	1000	1000	
Basic Duty	2100	2100	
Special Additional duty	124	124	
Landed price	3224	3224	1000
Labelling packing		60	60
Transport/Spl fee, 15.5/bulk litre	-	140	140
Vend fee, Rs 2 per litre	18	18	18
Countervailing duty 70% BIO, Excise Rs.77 per litre BII/ IMFL	2256.8	693	693
Octroi, 7%	439.9	240.9	85.2
Trade Permit, Rs 100 per case	100	100	100
Distributor price	6038.7	4475.9	1402.3
Margin 10%	603.9	447.6	140.2
Retail Price	6642.6	4923.5	1542.6
Sales tax 20%	1328.5	984.7	308.6
Consumer Price per case 9 litre	7971.1	5908.2	1851.12
Price per bottle 750 ml	664.25	492.35	154.26

- *Illustration based on a lower- end product attracting 70% countervailing duty*
- *Local tariffs applied based on Maharashtra values*

Although since April 2001 foreign brands are able to enter the Indian market, some lesser-known regulations create huge barriers to new entrants and favour the incumbent players.

In states like Tamil Nadu and Delhi, the government monopolises distribution of liquor. In Delhi, the Delhi State Industrial Development Corporation (DSIDC)'s 300 outlets are the only authorised sales outlets of all liquor products in the capital. DSIDC's entry conditions for new labels include proof of their having achieved a qualifying volume of sales in other states. Delhi being the first target market of international brands, this pre condition makes it impossible for new brands to be launched in Delhi. The qualifying volumes in each category are based on sales levels of domestic brands, most of which are in the low and mid price segments. Under these conditions, imported products, burdened with a 700% duty, and aimed at the premium market (1% by volume), may have lost the race even before they begin running.

Surrogate advertising: Officially, India has banned the advertising of alcohol and tobacco products on electronic media. However, several players have deftly used the fine print to mock the very intention of the law. Advertisements of tobacco companies continue to appear prominently in print media (even on the back cover page) without showing the product, while alcohol brands use surrogate advertising heavily, retaining the entire original advertisement, but substituting texts like 'clarified apple-juice', or 'crystal glasses' for 'whisky' in the voice over or in the super text. Therefore, Indian laws may tempt global brands to advertise surrogates like Johnnie Walker mineral water, Hennessey VSOP crystal, and Dom Perignon cork openers, without violating the law on mass advertising, theoretically. So long as the non-availability of advertised products in the trade channel is not an offence, surrogate advertising shall continue to make a mockery of these laws.

1.6 India's competitive position

1.6.1 Resource Base

India is one of the largest producers of food. However, the development of the resource base is not to its full potential on account of the following factors:

- Restrictions on entry of organised business enterprises in cultivation prevent the sector from realising the benefits of commercial production: scale, yield/ productivity, processing quality specifications and feasible price levels to suit processing industry requirements.
- The present controls on land ownership and small sizes of farm holdings render any possibilities of mechanised and intensive farming practices unworkable to produce any organised and sustainable supply of raw materials locally
- Weak intellectual property laws on planting materials (hybrid seeds and other germ plasm) hamper induction of improved variety seeds and genetic materials.

As a result, India is not able to effectively compete in process grade food products, given the complete absence of organised private sector participation.

1.6.2 Nascent food processing industry

While India has covered a lot of ground and has achieved complete self-sufficiency in food grains (India has a surplus in some grains), the processing industry remains nascent. India is one of the world's major food producers but accounts for less than 1.5% of international food trade. According to a report by an international consulting firm, '**India is an agriculture giant but a foods pygmy**.'

Some factors, which dampened growth of processed food industry have been:

- Traditional food habits and easy availability of domestic help (at low wages). Indians prefer freshly cooked home made food. A large percentage of women still guard the role of 'home maker', and spend a good part of their time in cooking.
- Uneconomical processing costs due to poor yields and non suitability of currently farmed produce in modern processing plants.
- Absence of adequate cold storage facilities to ensure pre-processing shelf life for processing industry.
- Reservation of several categories like biscuits, bakery products, ice creams, and boiled sugar confectionery for exclusive manufacture in small-scale industries, resulting in the market being served by small and unorganised operators, with lower product standards and technologies.

1.6.3 Market conditions

- High excise levies on branded foods has made most value added foods unaffordable for the masses.
- India's cultural diversity results in a market highly fragmented in respect of food habits, which limits the evolution of a national-market approach in several products.
- Organised retail, the world's largest industry, is absent in India due to investment restrictions. This prevents the establishment of private supermarket chains involved end-to-end, from procurement and collection to distribution and retailing of farm produce.
- India's traditional foods do not have sufficient demand from developed (export) markets due to lack of market awareness. Therefore, the export opportunity remains untapped for ethnic foods.
- Trade between India and EU is affected by the disparities in national food safety laws not only between Indian and EU laws but also lack of harmonisation of member state laws in the EU
- Implementation of quality certification systems has been ineffective, particularly in respect of new requirements such as traceability, organic certification, pesticide free certification etc.

2. Major players

As a result of industrial regulations, the food sector has seen a profusion of small-scale industries, and very few national level players in the organised sector. For a long time, national brands existed only in a few categories: aerated beverages, bakery products, jam/ squashes and a few milk products, besides smaller segments like chocolate.

With the introduction of economic liberalisation, the market is diversifying in product range as well as category depth with the entry of several new including foreign brands. Players with substantial foreign ownership, notably Unilever, Pillsbury, Britannia, and Nestle, have a presence in multiple categories, drawing upon the experience and product lines of the foreign partner and introducing an increasing range of products and brands to the Indian market.

Though several foreign companies entered the market through joint ventures or acquisition of shares in existing Indian companies, there are several instances of the Indian partner exiting through a sale of holdings to the foreign partner. NoTable examples are ConAgra (ITC), Agrolimen (Dabur, chewing gum), Nestle (Dabur, biscuits), and Allied Domecq (DSC, spirits).

2.1 Major domestic companies

Processed cereals and grains: Satnam Overseas, LT Overseas,

Ingredients (sugar, spices, salt): Tata, Dhampur Sugar, Balrampur Chini Mills, Parry, DCM, MDH

Edible oils: ITC, Marico, SM Foods, Godrej, Adani-Wilmar, Wipro

Bakery goods: Modern Foods, Harvest Gold, Parle Foods, Bakeman

Milk and dairy products: GCMMF (Amul), Britannia, Vadilal, Arun, Vijaya Dairy, MarkFed, JIL

Meat and Fish products: Allanasons, Hind Foods, Amalgamation Fisheries, Venkateshwara Hatcheries, Vista Foods

Fruit and vegeTable products: Parle, Dabur, GCMMF, Marico,

Beverages (tea, coffee, soft drinks, water): Tata Tea, Consolidated Coffee, Bisleri, Modern Foods,

Alcoholic spirits: United Breweries, Shaw Wallace, Mohan Meakins, Radico Khaitan, JIL

Others including impulse foods: Haldirams, Bikanervala

Fast Food chains: Nirula's

2.2 Major foreign companies (including joint ventures)

The food sector has attracted several global players, since the first round of liberalisation in 1991. Up to 2000, industrial proposals for investments of more than Rs.732 billion had been approved. Since 1991, Rs.109 billion worth foreign investment have been approved in the processed foods sector

Processed cereals and grains: Cargil Foods, ConAgra, Pillsbury, and Unilever

Ingredients (sugar, spices, salt): Unilever, Heinz, McCormick

Edible oils: Unilever, ConAgra

Bakery goods: Nestle, Danone, Pillsbury

Milk and dairy products: Nestle, Unilever, Movenpick, Baskin Robbins, Blue Bunny, SmithKline Beecham, Heinz, Nutricia

Meat and Fish products: no significant player

Fruit and vegeTable products: Nestle, Tropicana, Heinz, Unilever

Beverages (tea, coffee, soft drinks, water): Cadbury, Nestle, Unilever, Coca Cola, Pepsi Co, Danone

Alcoholic Spirits: Seagram, Pernod Ricard, IDV, Stroh, Fosters, Allied Domecq

Others including impulse foods: Cadbury, Nestle, Kellog's, Danone, Perfetti, Agrolimen

Fast Food chains: Domino's, Pizza Corner, Pizza Hut, and McDonald's

Table FP 16 — Investment trends in food processing, July 1991 - Dec 2000

Sector	Proposals	Investment in billion Rs. Rs billion	
		Total	Foreign
Grain Milling and Grain products	432	67.88	11.18
Fruits & VegeTable Products	2,130	84.55	10.66
Meat & Poultry Products	135	17.76	2.09
Fish Processing & Aquaculture	295	26.31	5.48
Fermentation Industry	1,031	95.09	44.93
Soft Drinks/ Water/confectionery	690	150.80	21.46
Milk & Milk Products	1,112	147.05	9.14
Others: food additives, flavours etc.	62	8.60	4.98
Edible oil/ Oil seeds	1,675	134.16	-
Total	7,562	732.20	109.92

Source: Annual Report, MFPI.

Actual inflows till December 2000 have been Rs.26 billion compared to the 109.92 billion Rs approved for foreign investors). Prospects in aerated drinks, alcoholic products, dairy and confectionery have attracted some of the world's biggest brands to India.

2.3 Analysis of EU company experiences

European presence in the sector has been mostly in the following areas:

- Milk and Dairy Products: Unilever, Nestle, Nutricia, Bongrain, Besnier, Parmalat
- Beverages: Unilever, Nestle, SmithKline Beecham, Cadbury
- Confectionery and bakery products: Perfetti, Agrolimen, Leaf, Danone, Nestle, Cadbury
- Hybrid Seeds and Agri inputs: Sandoz, Novartis, Zeneca, Rhone Poulenc, ProAgro

A fundamental distinction needs to be made between companies that entered India after liberalisation of policies in 1991, and older players that have been in India long before the economic liberalisation. While players like Danone, Nutricia and Perfetti entered India only in the 1990s, companies like Unilever, Nestle, Cadbury and Smith Kline Beecham have been operating in India for well over fifty years, and stayed in India despite several restrictions imposed on their operations due to their substantial foreign ownership (40% or more). Even for these older players, economic liberalisation ushered in new investments for expansion and new product lines, besides increases in foreign equity holding in the Indian entities.

Except in milk products, where an Indian co-operative producer is the market leader, the European companies mentioned above have leading market shares in all segments of their operation, and collectively account for more than two-thirds share of the total market in all segments of their presence.

Several EU companies (Bongrain, Besnier, Parmalat, Agrolimen, Danone and nearly all seed companies) have preferred to enter the market through joint ventures or acquisition of strategic stake in existing Indian companies, rather than setting up green field ventures as subsidiaries. In most cases, the partners have been reputed Indian companies, though not necessarily with an active presence in the food sector.

Analysing the success trends in EU ventures, a noticeable dimension is the high rate of successful ventures (Danone, Novartis-Sandoz, ProAgro) in cases where the Indian partners had prior expertise in the sector. Contrastingly, several high profile ventures such as Bongrain, Besnier, Leaf and Agrolimen (all with well-established Indian business houses) have under-performed. In all these cases, the local partners were entering the food sector for the first time, and tended to depend heavily on the foreign partners for technical, commercial and marketing expertise. This revelation assumes significance given that there were only a few players in these sectors, and that market conditions are generally favourable.

EU experiences in India's alcoholic products sector need specific mention. In the 1990s, several European brands obtained approvals for foreign investment in beer production. However, alcohol regulations being governed by central as well as state authorities, there have been innumerable delays in obtaining licences. The most harrowing experiences were in the state of Haryana (near Delhi), where several investment plans were scuttled midway, as a newly elected local government banned production and consumption of alcohol in the state, without any prior notice. Several players exited the market even before they could implement their ventures. Prohibition has subsequently been lifted in Haryana, but the threat of conflict between local and central legislation still looms large on this sector.

3. Opportunities

3.1 Future growth drivers

Future growth in the sector will be driven by the following fundamental factors, which are influencing Indian economic and social indicators:

Lifestyles

- Population demographics: India is a country of young people. More than 50% of the population is below the age of 21, and more than 70% below the age of 40. Food choices and consumption trends will be determined largely by the lifestyles and aspirations of the younger generation
- Convenience: The rise in disposable income in middle-class homes, and the increasing share of women in workplaces, places a new demand for convenience, reflecting in an increase in consumption of basic processed foods and culinary ingredients.
- Cross-cultural influences: Urban lifestyles are increasingly exposed to international trends, which result in growing acceptance of non-traditional foods, based on westernised food habits. Consumption trends of breakfast cereals, fruit juice and cheese are the most important examples of cultural penetration areas.

Globalization

- Increased market access for imports and exports both, offer new business opportunities for India, which is emerging from an era of food scarcity to a food surplus situation. With the right interventions in terms of policy and enabling frameworks, and harmonisation of food laws, external trade opportunities are considerable, given India's inherently competitive farming costs.
- The increasing protection of intellectual property will pave the path for sharing of proprietary materials and information among Indian and international enterprises, thereby facilitating the exploitation of market and technological resources.
- Liberal investment policies have the potential to attract FDI to harness the competitive advantages of location, resource base and market proximity, all of which are considered advantageous in India's case, if private investment is allowed in farming and plantations

3.2 Market growth potential

Presently, less than 3% of fresh produce output is processed into value-added products. Even in added-value terms, processed foods account for only 8% of the Indian food sector's value, compared to 23% in China, 45% in Philippines and 88% in UK.

Based on consumption trends in countries that have passed through similar states of economic development, the Indian market for processed foods is expected to grow rapidly. The value-added processed foods market is expected to grow to **Rs.2.25 trillion by 2005** (double its present size), most of which shall be accounted for by mass-based foods such as packaged cereals, liquid milk and poultry products.

3.3 Major opportunities for EU co-operation

To attain its market potential, the food-processing sector requires an estimated investment of nearly Rs. 300 billion over the next five years, most of it for the establishment of an efficient infrastructure:

- Effective cold chain facilities, improved transport facilities, storage warehouses, etc.
- Techniques for sowing, growing, fertilising, irrigating and harvesting, greenhouse technology, organic farming and tissue culture
- Integrated storage (cold storage chains) and refrigerated transportation
- Integrated livestock development,
- Export facilitation, and
- Retailing

The enormous resource need in the agriculture-food processing complex necessitates a facilitating framework that directs investments in the areas that need them most. Indian companies interviewed in the study recommend that EU companies interested in the sector must consider investing across the chain from farming to the consumer setting.

This involves larger outlays in three fundamental areas:

- Farming: livestock development, extension services support, diversification of crops
- Quality: hygiene and safety measures, post harvesting, storage and processing standards
- Yield: improvements through genetic engineering and biotechnology

There is a case for permitting foreign investments in captive, backward integration for processing and/or exports. As and when this happens, it will open up tremendous potential for EU companies for partnerships across the value chain, in some promising segments such as tropical fruits and vegeTables, meat processing and dairy products.

4. Issues and recommendations

4.1 Key issues and challenges

Production

Restrictions on entry of organized business enterprises in cultivation prevent the sector from realizing the benefits of commercial production: scale, yield/ productivity, and quality improvements to suit processing requirements, lack of cold chain infrastructure to transport perishable products to inland and international destinations handicap it as well.

Processing

Indian products have low yields, which together with inadequate preservation, increase the end product costs considerably. Compulsory reservation of products like biscuits, bakery products, ice creams, and boiled sugar confectionery, resulted in the market being served by small and unorganized operators, with lower product standards and technologies. Both tend to entail low quality high cost products. Import restrictions on commercially important crops like potato, and horticulture seeds/planting materials, which deter free import of exotic varieties for cultivation and delays in integration of national food safety laws with available international standards are key obstacles as well.

Domestic Trade

Regulations such as the Prevention of Food Adulteration Act impede the launch of new products, by stipulating cumbersome- and in some cases, unnecessary controls. The retail distribution network of perishables is not yet developed across the country, which reduces the useful life of horticulture products and limits the farmer's share of the consumer's rupee. This organized retail with the absence of prevents the establishment of private supermarket chains involved end-to-end, from procurement and collection to distribution and retailing of farm produce.

Exports

Indian exporters cite several non-tariff barriers in exports to EU. The most important concerns are in regard to the lack of harmonization of state laws, which accord differing treatment to Indian exports depending on the point of entry. Concerns Issues need to be resolved as to transparency in the inspection process, communication of amendments in national laws to exporter countries, the right to appeal and re inspection at an approved laboratory, and a common minimum qualifying standard for all points of entry.

4.2 Recommendations

Agriculture holds the keys to development and prosperity in India's rural areas. Given the strong agriculture linkages, a robust food-processing sector brings development benefits to primary agriculture, and therefore has a multiplier effect on the socio-economic indices of rural India.

Already, with a 15% share in India's exports, food processing is a principal area for India's future export thrust. Therefore, the food-processing sector requires an integrated, strategic approach that addresses overall growth and profitability of agriculture.

The key challenges are to align supplies to market requirements, to improve productivity of India's arable land, which is a fixed -if not dwindling- resource base, and to have an efficient and fair market system on commercial lines.

Improvements in Productivity

Improvements in productivity must emerge from these fronts:

- Creating a (planned) subsystem of processing-grade acreages at the state level, outside the purview of the mainstream Table consumption product mix
- Balancing production of fresh consumption, storage grades and processing grades. This would involve redistribution of existing crop acreages, and reduce the existing wastage (which we believe to be an unproductive surplus) of Table-grade produce. Induction of suiTable technologies and facilitating private participation in storage will enable substantial reductions in storage losses.
- Horticulture productivity depends on improving the quality of planting materials, which requires a continued process of selection, hybridization, breeding and tissue culture extending beyond public research bodies, which implies paying due consideration to IPR concerns.
- Introducing certification for special product zones: pesticide-free zones, organic-produce zones, etc
- Integrating livestock breeding with meat processing and dairy processing, in order to have a sustainable growth in the entire sector rather than a focus on only dairy products Wastage Control

State Produce Boards, besides setting advisory prices for fresh produce, should provide commercially important information of processing plants, varietal specifications and performance requirements, past price ideas including international prices, conversion ratios, etc. to assist in the development of a reliable market mechanism for processing varieties.

Procurement/Marketing

- While marketing of fruits and vegeTables is likely to be dominated by cooperatives and middle men in short term, organized direct sourcing and supermarkets are ineviTable in the long term, with increased consumption of mass-based primary processed products.
- Develop standard commercial specifications for farm produce that is to be used in secondary processing, which will enable a pricing mechanism for processing industry
- Modern auction systems must be developed, including creating facilities for auction halls, grading/ sorting, storage and transportation facilities.
- Contract enforcement remains an ineffective mechanism in agriculture, where both buyers and sellers default with impunity. Enforcement of contractual obligations must be facilitated.

Strengthening Export-centric businesses

- Export-centric investments must be accorded priority through special purpose vehicles (integrated agri-export zones, food parks, etc.) and assist private enterprise including foreign companies in backward integration to support export-oriented industries.
- Structural impediments that normally apply to domestic markets should not apply to export-oriented units.

Box 4 — Agri Export Zone Scheme

Recently, the Ministry of Commerce announced the 'Agri Export Zones (AEZ) Scheme', which seeks to provide «end-to-end» development for export of products from a geographically contiguous area. The emphasis of the AEZ scheme is on market orientation, and to provide remunerative returns to farmers on a sustained basis by improved access to exports. It starts with identification of products, which have good export potential, devising strategies for market penetration and niche marketing, and then taking necessary steps to exploit the market potential.

- Investment Mobilization:
- The enormous resource needed in the agriculture-food processing complex necessitates a facilitating framework that directs investments in the areas that need them most.
- Investments must be mobilised in areas that improve land and livestock productivity, bring costs to world competitive levels, and improve export realization through shifts from commodities to value added products.

This will in turn necessitate a re-look at permitting foreign investments in captive, backward integration for processing and/or expects. Significant changes warrants significant decisions, and the involvement of global leaders shall be a worthwhile means to pursue the end-to-end development of India's food processing sector toward a g lobally competitive position.

- Bilateral trade issues need to be resolved in order to enable two-way trade. There is need to bring about a common minimum qualifying standard for all points of entry into the EU, greater transparency in the inspection process, regular communication of amendments in national laws to exporter countries, besides the right to appeal and second inspection at another approved/ recognized laboratory in the country of arrival.
- Trade-facilitation measures must include bilateral level technical exchange programmes, involving interactions between the respective quarantine authorities, certification bodies, and independent testing laboratories under technical exchange programmes.

APPENDIX 1

COMPANY PROFILES

Bakery, Dairy and Confectionery

Britannia Industries Limited

Britannia Industries is the market leader in the organized biscuit and bakery product market in India. Biscuits contribute to more than 80% of the company's turnover. The company encompasses wide distribution network with 2500 distributors, 400 000 retail outlets in 2200 towns. Although biscuits lead the flagship, Britannia has been expanding its presence through brand extensions. The cheese segment presently accounts for 8% of the total revenues and is expected to contribute around 15% by 2003. Brands like Tiger, Good Day and Fifty-Fifty are popular amongst the biscuit segment.

	As on 313/01
Sales (in Rs Mn)	12859.00
PAT (in Rs Mn)	705.40
Product portfolio	Bakery products (biscuits, bread and cakes) and dairy products (cheese, butter, ghee, milk)

Marico Industries Limited

Marico is a leading player in the edible oil and food products segment. Marico's is business is built on the two pillars of strong equity and wide distribution network. Saffola and Sweekar are well known edible oil brands promoted by Marico. At Marico, focus has always been on few product categories and aggressive advertising.

	As on 313/01
Sales (in Rs Mn)	6579.90
PAT (in Rs Mn)	456.30
Product portfolio	Edible oil, food products, hair care and niche fabric products

Nestle India Limited

Nestle India Limited is a 51% subsidiary of Nestle` SA Switzerland and is a leading manufacturer of food products. Soluble beverages (30% of sales) and milk products (27% of sales) are major contributors to its revenues. Nestle India Limited's growth strategy is to expand capacities, launch new products and further improve logistics management. Cerelac, Nescafe, Maggie are popular brands under the Nestle India Limited flagship

	As on 12/00
Sales (in Rs Mn)	15820.30
PAT (in Rs Mn)	1185.90
Product portfolio	Food products, soluble coffee, coffee, tea, condensed milk, noodles, infant milk powders, cereals, chocolates and confectionaries.

Cadbury India Limited

Incorporated in 1984, Cadbury India Limited is a 51% subsidiary of Cadbury Schweppes Plc, UK. With over 70% share in the domestic chocolate market, the Cadbury brand is synonymous with chocolates in India. Dairy Milk, 5 Star, Eclairs and Gems are the major and much adored brands of the Company.

	As on 12/00
Sales (in Rs Mn)	5650.50
PAT (in Rs Mn)	520.30
Product portfolio	Chocolates, sugar confectionary, malted foods, cocoa powder, drinking chocolate and malt extract

Hindustan Lever Limited

Hindustan Lever Limited s a 51% subsidiary of Unilever Plc and is the largest FMCG Company in India. It is a leading player in branded food products, packaged tea, coffee, ice cream and other culinary products. Hindustan Lever enjoys a distribution network covering over 3400 distributors and 16 Mn outlets. Brooke Bond Lipton and Modern Foods are some of the important acquisitions done by Hindustan Lever.

	12/00
Sales (in Rs Mn)	106036.80
PAT (in Rs Mn)	12928.60
Product portfolio	Food and beverages (tea, coffee, ketchup, ice cream, flour, salt, and edible oils) and personal care products (toilet soaps, detergents, oral care, skin care)

Beverages

SmithKline Beecham Consumer Healthcare Limited

SmithKline Beecham is a 40% subsidiary of SmithKline Beecham Plc of UK. It is a leading manufacturer of malted

foods and gets its operating leverage from 2 strong brands, Horlicks and Boost that corner around 62% of the market share. Around 94% of the company's turnover comes from malted drinks. The company's distribution network currently has 1000 wholesalers and 0.325 Mn retailers.

	As on 12/00
Sales (in Rs Mn)	7356.70
PAT (in Rs Mn)	1120.20
Product portfolio	Malted drinks, biscuits, oral care, OTC brands

Tata Tea Limited

Tata tea is the largest tea plantation company in India. The company has more than 50 tea estates across the country. Gemini, Brahmaputra and Kanan Devan are the leading tea brands under the company flagship. During FY 00, Tata tea limited acquired the UK based Tetley group, which is the world's second largest branded tea company. Tata tea also has a 100% EOU in Cochin to produce and market packed tea and tea bags to Middle East and Polish markets.

	03/01
Sales (in Rs Mn)	8095.70
PAT (in Rs Mn)	1002.10
Product portfolio	Tea production

Tata Coffee Limited

Tata coffee is a subsidiary of Tata tea limited. It has well known brands in market like Tata Café, Tata Kaapi, Tata Coorg Double Roast and Tata Coorg pure coffee.

	31/03/00
Sales (in Rs Mn)	2089.53
PAT (in Rs Mn)	261.15
Product portfolio	Coffee, spices, plantation requirements (fertilizers, chemicals, estate implement, tyres and tubes)

Breweries

Shaw Wallace & Co Limited

Shaw Wallace & Company was incorporated in the year. It derives 65% of its revenue from liquor and brewery operations. The company has undertaken a massive modernisation and expansion project for its whisky facilities, especially in the areas such as fermentation, distillation and maturation. Director's Special, Royal Challenge, DSP Black brand, Haywards 5000 is some of its popular brands.

	As on 30/6/00
Sales (in Rs Mn)	7039.70
PAT (in Rs Mn)	44.20
Product portfolio	Wines, spirits and beers

United Breweries Limited

United Breweries Limited is the holding company of the UB group and is the leader in the beer market with a share of over 40%. 80% of its revenues come from the beer business. Kingfisher is a well-known brand promoted by United Breweries and is making inroads into overseas markets such as UK and USA.

	As on 313/01
Sales (in Rs Mn)	3354.70
PAT (in Rs Mn)	31.00
Product portfolio	Beer business and investment activities.

Financial Profiles of foreign players are not available due to there not being listed companies in India.

APPENDIX 2

ADDRESSES OF INDUSTRIES IN THE FOOD PROCESSING SECTOR

Smithkline Beecham
DLF Plaza Tower, DLF City Phase I, Gurgaon 122 002
Tel: 0916-358724,358700,001,002,003
Fax: 916358728, 0916-358720,21
simon.scarff@sb.com

General de Confitería India Pvt. Ltd.
M-51 (Mkt.) Greater Kailash-II, New Delhi
Tell: 91-11-6219210/12
Fax: 91-11-6219209

Perfetti India Ltd.
47, Milestone Delhi, Jaipur Highway Manesar, Gurgaon - Haryana 122050
Tel: 916-337337/8/9/40/41
Fax: 916-337342

Seagram India Ltd.
Block 4B, 5th Floor, DLF Corporate Park, DLF Qutub Enclave Phase III
Tel: 916358001
Fax: 916358070
param.uberoi@del.seagram.co.in

Allied Domecq Sprits & Wine (Pvt.) Ltd.
Hindi Bhawan, 4th Floor, 11 Vishnu Digamber Marg, New Delhi 110002
Tel: 0113222511
Fax: 0113236751
srikant.illuri@adsweu.com

Flavors of Italy Restaurants & Resorts Pvt. Ltd.
C-488 Defence Colony, New Delhi 110024
Tel: 0091-1—4645644; 4615594
Fax: 0091-11-4646840
flavors@flavorsnewdelhi.com

Tetra-Pak India Ltd
Mayfair Towers (Ground Floor) Wakdewadi,
Shivajinagar411 005 PuneIndia
Processing Systems Division , Pune

CEBECO India P Ltd.
K-13A, Haus Khas Enclave
New Delhi
Tel.: 6527123, 6527135

Clarico-FPC (India) Ltd.
601 Gateway Plaza, Hiranandani Gardens, Powai Mumbai (Zip : 400076)
91 22 5704411
91 22 5704412

Dabon International Ltd.
A - 41 & 42, Phase II - Extn. Hosiery Complex, Noida
Tel: 0118-4568722
Fax: 0118-4568563

Danone International Brands Paris Indian Liaison Office
Neville House, Ballard Estate, Currimbhoy Road
MUMBAI 400038

Nestle India Ltd.
Jacaranda Marg M Block DLF City Phase II
Gurgaon Haryana 122 002
Tel: +91 124 6389300

Radhakrishna Foodland Ltd.
7, Jyoti Wire House,
23-A,Shah Industrial Estate,
Andheri (West), Mumbai - 400 053.
Tel. : (22) 632 0842 / 633 3261
Fax : (22) 632 0844

Britannia Industries Ltd
33, Lawrence Road, Delhi 110035
Tel: 011-7187184-86/7181897
Fax: 011-7183499

Bush Boake Allen (India) Ltd.
1-5, Seven Wells Street, St. Thomas Mount, Chennai 600016
Tel: 231131 (5 Lines)
Fax: 2346017 (Delhi)

Hindustan Lever Limited
Hindustan Lever House165/166, Backbay Reclamation, Mumbai 400020
Tel: 0423-42422,42099 (Nilgiris)
Fax: 0423-42422 (Niligirs)

APPENDIX 3

LIST OF USEFUL ORGANISATIONS FOOD SECTOR

Ministry of Agriculture
Panchsheel Bhavan
August Kranti Marg
New Delhi – 110 049
Tel: 91-11- 649 2216/649 2174
Fax: 91-11- 649 3228
www.nic.in/agricoop

Ministry of Food Processing
Panchsheel Bhavan
August Kranti Marg
New Delhi – 110 049
Tel: 91-11- 649 2216/649 2174
Fax: 91-11- 649 3228
www.allindia.com/gov/ministry/fpi

Confederation of Indian Food Technology Industries
Federation House
Tansen Marg
New Delhi – 110 001
Tel: 373 8760
Fax: 332 0714
www.cifti.com

Agricultural and Processed Food Products Export Development Authority (APEDA)
3rd Floor, NCUI Building (opposite Asiad Village)
New Delhi – 110 016
Ph: 6534175, 6513219

All India Food Preservers Association
206, Aurobindo Place
Aurobindo Marg, Haus Kahs
New Delhi – 110 016
Ph: 6510860, 6518848

All India Rice Exporters' Association
PHD Chamber of Commerce and Industry
Phelps Building, Second Floor
9-A, Connaught Place
New Delhi – 110 001
Ph: 3322466, 3710508

II – MECHANICAL ENGINEERING

1. Overview

1.1 Size and growth trends

The size of the engineering goods sector is estimated to be Rs.1,100 billion, and has seen an average growth rate of 5.9% during the 1990s. Since liberalisation, growth in the engineering sector has been a major driver of GDP growth, despite uneven agriculture performance. The heavy growth period of the mid-1990s, in which the Indian economy grew by 7-8% for three years, was matched by industrial growth of 11-13%, with the highest growth being in 1996-97 at 13.2%. The engineering sector received the highest foreign investment inflows, most of these meeting the new demands of the automotive, consumer industries, infrastructure and other sectors.

The government has a large presence in the engineering sector, with 48 large public sector units engaged in the manufacture of heavy engineering goods, accounting for more than 20% of domestic production. The principal sub-sectors of interest to the study are automobiles (including auto components), capital goods / machinery, energy and power.

The growth of the engineering sector results from the following end use industries:

Transportation

Total vehicle production in 1999-2000 was estimated to be over 4.6 million units, including 0.7 million passenger cars, 3.7 million two-wheelers and 0.2 million commercial vehicles. The transportation sector accounts for a turnover of Rs.400 billion and supports a components industry of Rs.160 billion and a machine tools industry of Rs.11 billion.

Infrastructure

The performance of infrastructure has fluctuated in recent years. While the government has announced several policies to boost investments in infrastructure, several bottlenecks prevent the inflow of large-scale investment in power, roads and highways, ports etc.

Table ENG 1 — Growth rate of infrastructure industries, %

	Weight	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 Apr-Dec
Electricity	10.17	8.3	3.8	6.6	6.6	7.1	4.7
Coal	3.22	6.5	5.7	3.6	- 2.0	3.3	5.9
Steel	5.13	21.9	5.8	6.3	1.3	13.7	12.8
Crude petroleum	4.17	7.1	- 4.7	2.9	- 3.4	- 2.2	1.0
Petroleum refinery	2.00	3.9	7.0	3.7	5.2	25.2	25.9
Cement	1.99	11.5	9.6	9.1	5.7	14.1	2.3
Overall	26.68	10.6	3.7	5.6	2.9	8.8	7.7

Source: Economic Survey, 2000-01.

Power: The power sector is the largest end user of capital goods, accounting for more than 50% of the entire capital goods sector. The implementation of power generation projects is therefore key to growth in the capital goods sector. In this regard, the current pace of implementation is far below target. As against the target of 40,000 MW for the plan period 1997-2002, less than 12,500 MW of capacity has actually been created. Policy wrangles over the viability of power purchase agreements are the biggest bottleneck in the implementation of private sector power projects.

Roads: Private participation in roads has been more successful than other infrastructure areas. An investment of Rs 10 billion spread over 20 projects across India is under progress, several with foreign participation under the BOT (build-operate-transfer) model. Given the enormous resource need - Rs.540 billion - to achieve the planned coverage of 12,000 km of national highways, the government is also planning to shift from BOT to annuity-based returns, to attract private players into road projects.

Ports: The growth rate for cargo handled at major ports was 3.9% in 2000-01 against 9.2% in 1999-2000. However, the privatisation of ports as well as upgrade programmes in existing ports has generated some opportunities for capital goods. Proposals for private ports with an outlay of Rs.39 billion, besides government investment of Rs.94 billion are under implementation.

The overall investment needs in infrastructure are estimated to be Rs.6,000 billion over the next five years. With the greater involvement of the private sector following improved regulatory framework in the infrastructure sector, the demand for capital goods is likely to surge from the present poor levels.

Consumer goods

Demand in some segments of the capital goods industry is derived from growth in the consumer goods industry. Liberalisation in the 1990s also brought with it new demand in the

consumer goods sector, especially with the introduction of several new consumer durables in the Indian market. As a result several production facilities were created in goods like televisions, white goods and other consumer products including FMCG. The consumer goods sector has grown steadily in the past five years, although it is not necessarily a capital-intensive sector demanding frequent investments in capital goods.

Table ENG 2 — Industrial growth by use based classification, % rates

	Weight	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 Apr-Dec
Basic goods	35.57	10.8	3.0	6.9	1.6	5.2	4.8
Capital goods	9.26	5.3	11.5	5.8	12.6	6.9	3.2
Intermediate goods	26.51	19.4	8.1	8.0	6.1	8.8	4.7
Consumer goods	28.66	12.8	6.2	5.5	2.2	5.7	8.5
Consumer durables	5.36	25.8	4.6	7.8	5.6	14.1	17.5
Consumer non-durables	23.30	9.8	6.6	4.8	1.2	3.2	5.7
All industries	100.00	13.0	6.1	6.7	4.1	6.5	5.7

Source: Economic Survey, 2000-01.

Imports

India removed import quantitative restrictions in capital goods completely in 1992, and has progressively reduced import tariffs (from 85% in 1991 to 35% in 2000) to facilitate investment in up-to-date goods and technology in domestic industry. This has resulted in a significant rise in imports during the 1990s, peaking at Rs. 325 billion in 1998-99. Mechanical Engineering goods account for a major share of capital goods import in India.

Table Eng 3 — Capital goods imports, Rs billion

	1996-97	1997-98	1998-99	1999-00	2000-01 6m
Mechanical goods	151.30	166.64	167.63	149.16	93.18
Electrical goods	11.55	14.06	17.71	17.19	10.60
Project goods and others	135.83	99.46	137.70	67.64	45.72
All	298.68	280.16	323.04	233.99	149.50

Source: Economic Survey 2000-01.

Capital goods import in 1999-00 stood at Rs. 234 billion, representing a decline of nearly 30% from the previous year. The downtrend has continued in 2000-01 as well, with a 15% decline in imports during the first six months of the year. Project goods recorded the steepest decline, more than 53% over the previous year, and reflect the slow down in the manufacturing sector in India.

Exports

The exports of the engineering sector (excluding electronics and computer software) during financial year 1999 was provisionally placed at US$4 billion, as against actual performance of US$4.6 billion in 1997-98, thereby registering a negative growth of 13.1%. In Indian Rupee terms it however remained stagnant at Rs.171 billion in financial year 1998.

This dismal performance has been attributed to the Asian financial crisis, and slowdowns in Russia and some Latin American countries. Also during financial year 1999 there was a fall in oil and commodity prices, which also had an adverse impact on export performance, as OPEC reduced imports of industrial products. On the other hand, during the first 5 months of financial year 2001, exports have grown at 25% and the government hopes to hit the target of US$5.3 billion for the year.

Table ENG 4 — Break-up of Engineering exports (Rs billion)

	1998-99	1999-00	2000-01 6 months
Capital goods	48.9	50.5	62.1
Iron & Steel Products	20.9	32.6	86.4
Metals	43.3	53.8	67.1
Electronic goods	20.9	24.4	34.3
Transport equipment	32.1	34.2	35.8
Total	156.5	195.5	285.7

1.2 Principal sub-sectors

1.2.1 Automobiles

India's automobile industry was one of the biggest beneficiaries of liberalisation, and has seen the introduction of more than 30 passenger car brands in a span of 6 years, in a market where only 3 brands had existed previously. However, India is essentially an entry-level market for automobiles, as two-wheelers are the most important means of personal transport.

Total vehicle production in 1999-2000 was estimated to be over 4.6 million units, including 0.7 million passenger cars, 3.7 million two-wheelers and 0.2 million commercial vehicles. The transportation sector accounts for a turnover of Rs.400 billion and supports a components industry of Rs.160 billion and a machine tools industry of Rs.11 billion.

The auto sector is saddled with huge over-capacity and therefore while sales may pick up in the coming years, the demand for capital goods in the sector may still be sluggish. It is looking to encourage consumer credit as a major factor in the increased sales of automobiles.

Two wheelers

The demand for two wheelers is driven primarily by the need for means of transport, rather than leisure / lifestyle choices.

India is the largest producer and second largest market (after China) of these vehicles, with over 3 million units sold in the domestic market annually. The motorcycles segment is the driver of growth in the sector with 37% growth in 1999-2000 against an overall growth of 12% in two and three wheelers.

Cars and utility vehicles

Passenger car sales crossed the 600,000 mark in 2000, driven by the small car segment (less than 1000cc engine capacity). India is still a small market for bigger cars by world standards, due to various factors such as low purchasing power, high tariffs and duties on CKD/SKD kits. All the leading car manufacturers from Japan, USA, Korea and EU have invested in India in the passenger car industry, including Mercedes Benz, Skoda and Peugeot.

After initial growth in the mid 1990s growth has stabilised in the automobile sector mainly due to an overestimation of the passenger car market by new entrants. Mid-sized and luxury car sales have been dismal. Industrial recession in the late 1990s has also impacted the off-take of commercial vehicles.

Commercial vehicles

The passenger carrier (bus) segment derives its major portion of sales from State Transport Undertakings (approximately 80%) and private bus operators. But for goods carriers, the major portion of sales is from fleet operators and transport companies (approximately 80%) and the rest from government institutions and private bodies.

High tonnage multi-axle vehicles have recently been launched in India by Volvo, which has a manufacturing plant in India.

Table ENG 5 — Automobile production trends (‘000 nos.)

	1980-81	1990-91	1995-96	1996-97	1997-98	1998-99	1999-2000
Cars & utility vehicles	49.4	220.8	410.7	483.0	474.7	472.4	689.6
Commercial vehicles	71.7	145.5	296.3	327.3	226.8	169.6	173.5
Two & Three -wheelers	447.2	1842.8	2653.9	2979.9	3035.8	3277.8	3697.8

Source: Economic Survey 2000-01.

The automobile industry is one of the largest generators of direct and indirect employment - every direct job generates another 60-70 jobs through indirect employment. For example, Maruti Udyog Limited, the largest company in India, employs about 5,500 persons directly, but the secondary employment in their suppliers/ancillary units is about 250,000, including transportation of the cars. Likewise, there is huge additional employment in organisations which supply fuel, lubricants, accessories, music systems, service centres etc.

Auto components

The value of auto components production in 1999-2000 was Rs.163 billion, up from Rs.120 billion in 1997-98. Engine parts account for 32% of total auto components production. Transmission and steering parts account for 17%, suspension and brake parts for 16%, electrical for 8%, and other parts and equipment for 27%. The major input to the auto component sector has come from the introduction of several international models of cars and other vehicles in India, which have increased OEM demand and also brought in new quality and technology requirements.

Table Eng 6 — Auto-components production

Year	Value (Rs. billion)
1995-96	90.6
1997-98	120.3
1999-2000	163.6

Source: ACMA.

Exports account for more than 10% of total output of the auto components industry, and stood at Rs.166 billion in 2000-01. However, 95% of exports came from car and tractor parts. Almost 60% of exports were to the EU and USA and the industry targets US$ 1 billion in export revenues by 2005. The replacement market accounts for about 65% of auto components demand, which to an extent insulates the segment from the swings in the OE market for automobiles.

1.2.2 Capital goods

India has a strong and diversified capital goods sector, which accounts for a major share (35.7%) of value addition in the manufacturing sector. Growth in the capital goods sector has been erratic in the last five years, ranging from 5% to13%. The sector has been witnessing a slowdown during the past three years, due to several internal issues as well as some global factors. Last year it recorded a 3.2% growth, the lowest recorded in the last decade.

The performance of the capital goods industry changed for the worse in the first half of financial year 2001. After the excellent growth of 12.5% over the second half of 1999 through financial year 2000, the first semester growth in financial year 2001 was a negative 1.2%, which came from an increase in prices of raw materials, a fall in the number of new project investments and a loss of competitive edge in the international playing field.

The recession came after the industry had achieved a good growth of 12.5% during financial year 1998-99. The negative growth in the capital goods sector has affected the overall performance of the industry in the current fiscal year. The doubts of an industrial recession are resurfacing with the overall growth rate of industry dipping below the 6% mark for the current fiscal year.

The government has also reduced to Rs 1.6 billion (down from Rs. 3.7 billion) the Consolidated Fund of India’s capital account disbursements it allocates to the engineering industry. This has dealt a blow to the demand from renovation of infrastructure for public sector enterprises (PSEs).

Table ENG 7 — Industrial growth by use based classification (%)

	Weight	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 Apr-Dec
Basic goods	35.57	10.8	3.0	6.9	1.6	5.2	4.8
Capital goods	9.26	5.3	11.5	5.8	12.6	6.9	3.2
Intermediate goods	26.51	19.4	8.1	8.0	6.1	8.8	4.7
Consumer goods	28.66	12.8	6.2	5.5	2.2	5.7	8.5
Consumer durables	5.36	25.8	4.6	7.8	5.6	14.1	17.5
Consumer non –durables	23.30	9.8	6.6	4.8	1.2	3.2	5.7
All industries	100.00	13.0	6.1	6.7	4.1	6.5	5.7

Machine tools

India's machine tool industry has over 1,000 players of which only 150 are organised players, accounting for more than two-thirds of total production. The organised sector also includes a large captive segment of major automobile (30-40%) and engineering (15%) companies. India's production capabilities extend to CNC machines. The total market for machine tools is Rs.11 billion, of which imports are substantial (Rs. 5 billion). Imported machine tools have tended to be high end products for which capabilities do not exist in India, such as multi-axis, multi-spindle CNC machining centres.

The automobile sector accounts for 30-40% of the machine tools demand with the balance shared between engineering goods (15%), railways (10%), defence and other industrial sectors.

Table ENG 8 — Production, import-export of machine tools, Rs million

	1997-98	1998-99	1999-2000
Production	7,546	6,568	6,040
Import	8,040	8,943	5,060
Export	431	593	310

Source: Ministry of Heavy Industries & Public Enterprises.

Textile machinery

The demand for textile machinery is driven by the performance of textile industry (yarn, fabric, garments), which occupies an important place in India's export basket. The production of man-made fibre and yarn increased from 0.2 million tonnes in 1980-81 to 1.7 million tonnes in 1999-2000. Fabric production also increased in 1999-2000 by a healthy 8.6% over previous year. Yet, the production of textile machinery has declined from Rs.8.7 billion in 1998-99 to about Rs.8.2 billion in 1999-2000. In the same period imports increased from Rs. 4.5 billion to Rs.16 billion.

India produces the entire range of textile machinery, from opening of fibber, to the finishing of the fabrics. Over 600 units are engaged in manufacture of textile machinery and spares, out of which about 100 units manufacture the complete range of textile machinery. The total investment in the sector is about Rs. 15 billion. However, present turnover capacity utilisation is low (about 30%) with a sales turnover of only Rs.11 billion, against an installed capacity of about Rs. 36 billion.

Box 5 — The national textile policy, 2000

Announced by the Government of India in November 2000, is aimed at preparing the industry for successfully meeting the challenges of the coming barrier-free era and at taking advantage of the opportunities that will unfold. (The government recently de-reserved the manufacture of garments from small-scale industries and will phase out their quota by 2005.) The main thrust of this new policy is on modernisation and technology upgrading as well as enhancement of productivity. To achieve this objective, one of the important targets is to vigorously implement the Technology Up-gradation Fund Scheme (TUFS).

In order to improve its capacity utilisation, the textile machinery industry will have to upgrade its technology, for which high cost of capital in India has been an important inhibiting factor. The TUFS, launched in April 1999, provides an interest reimbursement of 5% on loans availed by textile units for modernisation or technology upgrading, thus lowering the obstacle of high capital costs. The objective of the scheme is to assist the industry in modernising, to meet the challenges of post MFA (Multi Fibber Agreement) global textile trade. The scheme covers all manufacturing sub-sectors of the industry covering spinning, weaving, processing, garment making, cotton ginning and pressing. To January 2001, a total of 803 proposals had been sanctioned, for a total of Rs.42 billion, of which Rs.22.4 billion had already been disbursed. The government is also considering representations by the industry, for a reduction in import tariffs on textile machinery to zero or 5%, in order to improve the export competitiveness and to attain the target export of US$ 50 billion by 2010.

Table ENG 9 — Production and exports of textile machinery (Rs billion)

Year	Production		Exports	
	Value	Growth	Value	Growth
1996-97	12.9		3.13	
1997-98	15.0	16%	3.25	4%
1998-99	11.4	- 24%	2.60	- 20%
1999-2000	11.1	- 2%	1.70	- 35%

Agriculture and Food Processing machinery

Harvesting equipment: India has a tractor production of about 265,000 units, most of which are in the 30-40 HP range. North India is the major market for tractors and harvesting equipment with the entry of mechanised harvesting practices in agriculture. The demand for threshers, combine harvesters and power tillers, has resulted in tractor manufacturers adding on accessories and related agriculture machinery to their standard product range. Power tillers are the most important accessories, with present production of the order of 15,000 units.

Food processing

Since the deregulation of food industry in 1991, there has been a surge in new investment in the food-processing sector. To December 2000, a total of 678 projects had been implemented, for an investment of about Rs.75 billion. In addition, 250 export oriented production projects, with a combined investment of Rs.43 billion had been implemented out of 1,132 proposals envisaging an investment of Rs.194 billion.

Food processing machinery comprises grain processing, horticulture processing, packaging and preservation machinery, which collectively represent a Rs.28 billion market. Dairy, sugar and fermentation machinery are the most important segments in food processing machinery. Imports account for approximately 25% of the market. India is the largest milk producer in the world and nearly 15% of the output goes into processing in the organised sector. Consequently, there is also an active dairy machinery industry, covering evaporators, milk refrigerators, storage tanks, milk and cream deodorisers, centrifuges, clarifiers, agitators, homogenisers, spray driers, heat exchangers etc., with an estimated market size of Rs.2 billion. Several international players such as Niro, APV, Alfa Laval and Tetrapak are present in India in the sector.

India is also the largest sugar producer in the world, with a production of 17 million tonnes annually. Sugar machinery manufacturers in India also occupy a predominant position in the world scenario, with capability to manufacture sugar plants of latest design, for a capacity up-to 10,000 TCD. There are at present 27 units in the organised sector, with total production valued at Rs. 1.4 billion. Equipment financing for modernisation of sugar plants is available from the Sugar Development Fund.

Earth Moving and Construction machinery

India's present range of earth moving and construction machinery covers shovels (10 cu.m. capacity), bulldozers (770 HP), Dumpers (120 HP), Excavators (8.5 cu.m.), scrappers and graders (up to 280 HP), walking draglines, mobile cranes, graders, loaders, excavators, vibratory compactors, hot mix plants etc. The total production of earth moving and construction machinery was about 6,500 units in the year 1999-2000.

Other engineering goods (process plants and industrial equipment)

This sub-sector covers pumps and compressors (Rs.6 billion), cement machinery (Rs.3.5 billion), material handling equipment (Rs.2.8 billion), pulp and paper machinery (Rs.0.5 billion), printing machinery (Rs.1.5 billion), metallurgical machinery (Rs.3.7 billion), and mining machinery (Rs.2.1 billion).

1.2.3 Energy and Power

The energy and power equipment industry includes prime movers – boilers, generating sets, gas turbines and electrical motors, transformers, capacitors, circuit breakers, transmission line towers, etc. The demand for electrical equipment is derived from the projections of generation capacity, that is to say a growth from the actual 3,433 MW to about 100,000 MW in the coming decade.

However, the poor implementation of power generation projects and the withdrawal of several foreign companies from the sector have dampened the prospects for electrical equipment for new projects. Even replacement demand in the existing installations, has stagnated in the past three years, with the general slowdown of the economy.

Table ENG 10 — Electrical equipment production (first 6 months of each year)

Product	Unit	1998	1999	2000
Motors	000 KW	1957	1687	1616
Transformers	000 KVA	18637	17741	15305
Capacitors	000 KVAR	4499	4104	3940
Circuit breakers	Nos.	145119	114787	140313
Transmission line towers	MT	74565	84899	72681
Energy meters	000 nos.	2478	2700	3335

Source: IRIS Handbook, 2001

The transformers industry is equipped with state-of-the-art technology, to manufacture the whole range of power and distribution transformers, including the REC ratings of 25, 53 and 100 KVA, as well as the extra high voltage range of 400, 600 KVA. Special types of transformers required for furnaces, rectifiers, electric tract etc. and series and shunt reactors, as well as HVDC transmission up to 500 KVA, are also manufactured in the country.

The industrial boilers market is estimated to be around Rs.5 billion. The two largest players are the public sector enterprises BHEL and ABB. The poor availability of power has resulted in a huge demand for diesel sets, for stand-by as well as additional generation. The production of diesel engines is estimated at 350,000 units and has grown steadily at 10% in the last five years. Given the present scenario, the outlook for diesel engines is bright, with sales expected to grow by 10% per annum.

1.3 Key determinants and factors

Technical Skills

Technical manpower has been the major force behind the high indigenisation and self-reliance of Indian manufacturing. In numerical terms, India has the required base of skilled workers and technical persons to support the continued growth of engineering goods for the domestic as well as export markets.

Given the right environment and focus, India's technical resource base can be turned into a globally competitive base for applied research, industrial design and product development, with considerable commercial value in terms of licensable intellectual property.

Small enterprises

India is a competitive exporter of engineering goods in the form of primary metal conversion (castings and forgings) and components. This is largely because of the wide base of small scale enterprises which are able to produce several lower technology products competitively.

Labour costs are lower than those in developed countries in nominal terms, but low labour productivity, the high cost of capital, scale-inefficient production volumes, and export documentation take away some of the advantage of lower wages.

Infrastructure

Implementation of infrastructure projects, for roads (expressways, highways and flyovers), power generation, telecom network etc. is the key determinant of industrial activity and growth in a developing country like India. The pace of infrastructure development holds the prospects for growth in key subsectors such as automobiles, especially commercial vehicles.

Environment and Fuel efficiency Norms

Two important challenges before the Indian engineering industry are switch-over to less polluting and energy efficient equipment. However, in India, the judiciary, not the industry, has been the crusader against vehicular pollution, especially in seriously polluted cities like Delhi. The most visible example of judicial intervention is Delhi, where the Supreme Court order brought about major changes such as:

- Switch over of all public transport buses and other commercial vehicles plying in the city to CNG (or any other alternative clean fuel)
- Ban on use of taxis and other commercial vehicles older than eight years from plying within city limits,
- Compliance with Euro II emission norms for all new cars, and
- Induction of unleaded petrol at all dispensing stations

Where emission norms and non-polluting fuels have been implemented in major cities in the name of public interest, vehicular pollution norms will take some years to be fully implemented all over India.

1.4 Policy and regulatory environment

1.4.1 Import policy

With the exception of automobiles and other transportation vehicles, there are no quantitative restrictions on the import of engineering goods. Imports are allowed for actual users as well as for trading purposes. Engineering goods were among the first to be considered for tariff reductions and binding ceilings. Tariffs on most goods (except specified consumer durables and automobiles) have been bound tariffs at the 40% level. Border tariffs (basic duties) are already lower than the bound levels. Final tariffs range from 26% to 62.86% depending on the type of goods.

Table ENG 11 — Import tariffs for selected products, %

	Basic duty	Addl. duty	Spl. Addl. duty	Total	Bound rate
Outboard motors, power generation equipment, etc.	5	16	4	26.67	40
Aircraft starter ground units	15	16	4	42.74	40
Mechanical/ electrical machinery	25	16	4	50.80	40
Home appliances and durables, including new automobiles	35	16	4	62.86	40
New automobiles	35	40	4	96.56	Unbound
Second hand automobiles	105	40	4	198.48	Unbound

Source: EXIM Tariffs.

Import of second hand equipment

Government policy on import of second hand goods has been guided by concerns relating to technology as well as residual life of equipment, notwithstanding specific case-to-case merits of such imports.

Imports are allowed for second hand goods less than ten years old, based on a valuation and fitness certificate. Goods less than five years old do not require prior approval or licensing for import, while goods older than five years require approvals based on specific merit. Goods older than ten years are not permitted for import.

Power projects and Highway development projects

Imported capital goods for independent power generation projects attract a concessional import duty of 5%, while equipment used in construction of roads and highways are fully duty-exempt.

Import of automobiles and parts

Import policies are different for the import of CKD/SKD kits as part of a manufacturing programme in India, as op-

posed to completely built up units traded into the Indian market.

Completely knocked down kits (CKD) or semi-knocked down kits (SKD)

Automobile manufacturers setting up manufacturing facilities in India are allowed to import CKD/ SKD kits under a licence / MOU with the directorate General of Foreign Trade, with the following conditions:

- Establishment of production facilities in India with a minimum investment of US$ 250 million in case of cars, US$ 100 million in case of commercial vehicles, and US$ 25 million in case of two-wheelers and three-wheelers. In case of cars, an additional investment of US$ 12.5 million in R&D facilities is also necessary
- A minimum 50% indigenization of components by end of third year and 70% by fifth year
- Imports must be foreign exchange neutral during the licensing period, i.e. balanced by exports of end products or components, which may begin after the first two years of operation.

With the lifting of Quantitative Restrictions with effect from 1st April 2001, new entrants are not required to comply with Government obligations pertaining to localisation levels, exports, etc.

Completely built up units

The import of completely built up units (CBUs) in new condition is allowed under licensing conditions (presently only to car manufacturers having a manufacturing plant in India or joint ventures). A 96.56% customs duty applies to the import of new vehicles.

The import of second hand cars and other personal transport equipment is restricted at present. There is a proposal to open this segment from 2003. However, import conditions are expected to include emission control norms meeting EURO II norms, only right hand drive vehicles, an upper limit on the age of vehicles (expected to be 3 to 5 years), and so forth. Even then, the import duties are likely to be prohibitive at 198.48%, and will leave no commercial incentive for the import of used cars into India.

1.4.2 Export policy

Export Promotion Capital Goods Scheme

Special duty concessions are available for the import of capital goods linked to export performance under the EPCG scheme. The scheme has two variants, 0% and 5% duties, based on the extent of export-obligations to be undertaken by the importer. The scheme applies for a specified list of capital goods, with a maximum licence value of Rs.200 million (CIF).

Table ENG 12 — EPCG scheme overview

Scheme variant	Duty	Extent of export obligation	Period
Zero-duty	Nil	FOB exports 6 times the CIF value; or Net foreign exchange earned 5 times CIF value of EPCG licence	6 or 8 years*
5% duty scheme	5	FOB exports 5 times the CIF value; or Net foreign exchange earned 4 times CIF value of EPCG licence	8 years

* The obligation must be fulfilled in 6 years in case of products like leather, textiles, food processing, electronics, software, etc, and 8 years for other sectors.

Source: EXIM Policy.

The EPCG scheme is an alternative to the 100% Export Oriented Units scheme inasmuch as the export obligation is specified in terms of value, and not on a specified % of output. EPCG is a more flexible option for companies selling more than 33% of their production on the domestic market.

Export incentives

Engineering exports, like other exports presently enjoy export incentives in the form of income tax concessions, duty remissions (drawback) and duty free import replenishment. More than 600 items in the engineering sector have been covered under the Duty Entitlement Pass Book (DEPB) Scheme, which provides for duty credits (the basic custom duty and any surcharge) on the deemed import content of the exported products. The DEPB scheme operates on a post-shipment basis, in the form of a passbook containing the details of exports and corresponding credits, which range from 10-50% of the export value depending on the product, which may be used for future import of inputs or even endorsed in favour of other importers. The deemed import content is defined on the basis of published standard input-output norms that have been worked out for a wide range of goods. The DEPB scheme is slated to be withdrawn in 2003.

1.4.3 Tax incentives

Infrastructure projects qualify for special tax and tariff incentives: five year tax holidays, a further five year period of concessional taxes (30% concession), exemption from import duties on highway construction equipment, etc. This also enables foreign construction companies and suppliers to provide high cost modern construction equipment to Indian infrastructure projects under leasing schemes.

1.4.4 Government procurement

Government has been a large buyer of engineering goods, especially goods used in infrastructure and utilities. At the

same time, Government-owned concerns are among the leading manufacturers of heavy machinery. Presently, government tenders include a Purchase Preference clause, which allows PSEs to match the price of the lowest Indian private bidder within 10% of the bid price in all domestic purchases. However, the scheme does not apply to international bids, covering only purchase values exceeding Rs.10 million, and will be withdrawn after 31 March 2002.

1.4.5 Disinvestment

Under its disinvestment programme, the government has identified 27 public sector corporations in which government equity is to be diluted or a strategic partner (including foreign investors) is to be identified for the acquisition of substantial control. The privatisation process involves a global bid and is being handled by a separate Department of Disinvestment.

1.4.6 Foreign Investment

Investment regulations support foreign investment in the sector, allowing up to 100% foreign equity in most segments, on an automatic basis. The only sector-specific investment conditions are:

- items reserved for small-scale industries, in which a maximum 24% equity is permissible
- defence production: in which a maximum 26% equity is permissible
- automobiles: in which foreign investment is permitted based on specified minimum investment norms

1.5 India's competitive position

The competitiveness of India's engineering sector needs to be considered in terms various facets, including the availability of skills, factor costs, quality standards, and industrial research and design innovations.

Skills availability

Technical manpower has been the major force behind the high indigenisation and self-reliance of Indian manufacturing. In numerical terms, India has the required base of skilled workers and technical persons to support the continued growth of engineering goods for the domestic as well as export markets. However, the current emphasis on academic knowledge needs to be tempered with more exposure to practical problem-solving skills, which are central to the process of innovation.

Given the right environment and focus, India's technical resource base can be turned into a globally competitive base for applied research, industrial design and product development, with considerable commercial value in terms of licensable intellectual property.

Production cost advantages

Overall, production cost advantages are fairly mixed. India is cost competitive in basic iron and steel products. Labour costs are lower than those in developed countries in nominal terms, but low labour productivity, the high cost of capital, scale-inefficient production volumes, and export documentation take away some of the advantage of lower wages.

Engineering exports are primarily in the form of primary metal conversion (castings and forgings) and components. This reduces the scope for value-added exports out of India. Size has a lot to do with manufacturing advantages in engineering. Most Indian companies tend to be very small by EU and US standards, and limited by their ability to undertake large volume processing to meet the requirements of large players. The use of lower levels of automation and labour-intensive metalworking also results in inconsistencies in the quality of export goods, which disrupts supply schedules and limits the potential for large volume processing to suit the global requirements of customers. As a result, Indian companies are yet to evolve as a reliable source of mission critical supplies.

Quality standards

With the increasing involvement of foreign companies in India, as well as the export growth of engineering goods, quality certification has become increasingly important in the Indian engineering industry. International certification is considered an entry-level differentiator and is even becoming a pre-qualification for supply contracts. More than 2,500 Indian engineering companies - mostly medium and large companies - have ISO 9000 accreditation, and several have taken steps to conform to newer or additional standards such as ISO 14000, QS 9000, CE marking and GS certification.

There are a few 'islets of excellence' in India that have world-class manufacturing facilities and technologies. They produce under a global sourcing programme, replete with strict delivery schedules, low turnaround times and flexible manufacturing. Companies like General Motors and General Electric consider some of their Indian vendors as world-class, in terms of product quality, reliability, and cost advantages.

Supply schedules

Adherence to supply commitments is stated to be a major concern for buyers, given that the majority of suppliers tend to be small-scale units, not having sufficient resources and capabilities to handle or intervene in special situations that affect commercial commitments. The lack of professional support and insufficient delegation of authority also affect owner-managed enterprises in servicing large customers efficiently, despite having adequate manufacturing facilities.

In sectors like automobiles, Indian suppliers have traditionally enjoyed long-term - even exclusive - relationships with customers, which to an extent insulated them from competition and assured them of business volumes. In increasingly free-market conditions, these advantages are fading.

Design and Innovation

While the seeds of competence are present, India has so far had an unimpressive record in terms of new product development, which is the front end of engineering, world-wide. To harness its full potential, India needs to step up efforts in applied research and product design to participate in the development of new products for use by consumers or by other industries, world-wide.

2. Major players

India's traditional emphasis on industrial self-reliance has facilitated the development of a strong and diverse engineering sector, spanning several categories of goods and services. Policy frameworks have always been more favourable for induction of new technologies and modernisation of capital goods. This has resulted in the presence of a mix of Indian and foreign players operating in various segments.

Public sector enterprises have played a major role in developing indigenous capabilities in heavy engineering goods and machinery.

2.1 Principal domestic and foreign players

Major domestic companies

Automobiles: Maruti Udyog Ltd., Telco (Tata), Hindustan Motors, Bajaj, Mahindra & Mahindra

Auto-components: Tata Automotive Components (TACO), TVS, Lumax, Sona Steering

Capital goods: HMT, LMW, L&T

Electrical & Power equipment: BHEL, Crompton Greaves, L&T, KEC

Major foreign companies

Automobiles: Daewoo, Hyundai, General Motors, Ford, Mercedes Benz, Honda, Mitsubishi, Fiat, Skoda, Peaugot, Ford New Holland, Volvo

Auto-components: Delphi, Goodyear, Bridgestone, Grazziano Transmissions

Capital goods: Rieter, Savio, Alfa Laval, Tetrapak, APV, Niro, Ingersoll-Rand, Atlas Capco

Electrical & Power equipment: General Electric, Siemens, ABB, Cummins, Schindler, Kone, Philips

E&C companies: Bechtel Overseas Corporation, Fluor Daniel, Kvaerner, Svedala

Foreign Investment trends

From 1991 to 2000 the engineering sector received 7,450 applications for technical and financial collaborations, with proposed investment of the order of Rs.478.5 billion, representing almost 20% of total foreign collaborations approved. The principal segments receiving investment are: industrial machinery, agriculture goods, machine tools, earth-moving equipment and prime movers including boilers and steam generation plants.

The sector continues to attract the largest volume of FDI, with inflows of Rs.14.26 billion (US$ 326 million) in 1999-2000. FDI has fallen to Rs.12.46 billion in 2000-01, which is a 13% drop in Rupee terms, and probably even higher in Dollar terms.

Table ENG 13 — Foreign investment approval trends, 1991-2000

	No	Technical	Financial	Value (billion Rs.)	% of total FDI
Electrical & electronic equipment	3,599	1,108	2,491	245.0	9.97
Transportation	1,260	538	722	184.0	7.48
Industrial machinery	1,337	807	530	22.4	0.91
Misc. mechanical & engineering	808	331	477	15.2	0.62
Agriculture machinery	46	30	16	4.5	0.18
Machine tools	197	86	111	3.9	0.16
Boilers & steam plants	75	42	33	1.5	0.06
Earth moving equipment	67	41	26	1.1	0.04
Prime movers excl. Electrical	61	38	23	0.9	0.04
Total	7,450	3,021	4,429	478.5	

Source: Ministry of Commerce and Industry Annual Report.

2.2 Presence of EU companies

EU has been the largest participant in India's engineering sector. All the principal automotive companies, leading electrical equipment manufacturers and capital goods manufacturers are present in India through subsidiaries or joint ventures. Several companies, with the exception of the automobile sector, have been present well before the current round of liberalisation.

Major EU companies

Automobiles: Mercedes Benz, Fiat, Skoda, Peugeot, Ford New Holland, Volvo

Auto-components: Grazziano Transmissions. Inwel Transmission

Capital goods: Rieter, Savio, Alfa Laval, Tetrapak, APV, Niro, Atlas Capco

Electrical & Power equipment: Siemens, ABB, Philips, Tractebel, MAN, Wartsila

E&C companies: Kvaerner, Svedala

2.3 Analysis of EU experiences

Business performance and experiences of EU companies reveal significant variations across segments. In general, the experiences of principal investors- US, EU and Japan- all mirror macro-economic situations in the country. Yet, there are sharp contrasts in the patterns of leadership in various segments.

EU companies tend to be market leaders or dominant players in the power, electrical equipment and construction, important examples being ABB, Siemens, Tractebel, Kvaerner, Svedala, Wartsila.

EU companies have a lead over other origins in market share in capital goods and machinery. EU companies such as Tetrapak, Nichrome, APV and Alfa Laval dominate the food processing and packaging machinery segment, and have a substantial level of domestic production in India, serving regional market requirements. Similarly, important textile machinery manufacturers- Savio, Benninger, Rieter- all have manufacturing ventures in India, or collaborations with Indian manufacturers.

However, in the automobile sector, the performance, compared with Japanese players and US shows serious differences.

- No EU company enjoys serious market power in any segment of India's auto industry- heavy vehicles, passenger cars, two-wheelers, or auto components, unlike US, Japanese or Korean companies, which dominate at least one principal segment
- Major EU companies such as Peugeot, Mercedes Benz and Fiat faced serious market failures in their initial phases, besides problems with managing JV partnerships. All these companies have restructured their businesses or exited the market altogether.
- The nascence of India's upmarket segment, and the opening up of imports of completely built units, makes it non-viable to manufacture the premium segment in India, which only intensifies manufacturing competition in the small and mid-sized segments. In these segments, EU companies have been late entrants, and have lost some market advantages to other competitors.

2.4 Reasons for EU companies' weak presence in the sector

EU investment and presence in India's engineering sector is considered to be far below its potential, and EU investments in India are considerably lower than in other important FDI recipient countries.

While sector-specific factors play more important role in determining the attractiveness of the location, certain underlying common realities affect the overall patterns of investment experiences.

EU companies generally find the following aspects impeding their presence and growth in India:

- The fact that government is the client in most infrastructure projects complicates issues, as it brings public and environmental lobbies to the forefront, adding to the unpredictability. Consequently, the pace of infrastructure creation is seriously hampered right from project conceptualisation to its implementation. Players involved in the process, equipment suppliers, designers, contractors and technical specialists, risk entailing enormous 'idle time' costs, including cash flow losses.
- Implementation of investment plans involves dealing with numerous local level authorities and several clearances, some of which become serious bottlenecks. Project implementation can often take more than 24 months, after the funds are in place, to procure clearances for power, water and other utilities, besides statutory clearances under various industrial regulations.
- Relocation, of industries that have become non-competitive in the home country, is a major driver of outbound investments. In this respect, FDI involving relocation of old plant and machinery to more competitive locations, can be a positive factor for home and host countries. This is particularly applicable to engineering sector, where the industry does not face high risks of technological obsolescence. However, India's regulations restrict the import of second hand capital goods, and prohibit import of any equipment more than ten years old (notwithstanding its residual economic life). As a result, FDI involving relocation of industrial equipment, which is a major component of FDI in China, is not attracted into India, even if such proposals do not involve raising capital from Indian financial markets or institutions.
- A weak intellectual property protection regime on industrial designs is a key concern of engineering goods companies considering the sale and transfer of high technology goods to India. India's Industrial Designs Act, 1911, does not grant sufficient protection against the copying of industrial designs on the lines of copyright or patents, and potentially opens up threats of reverse engineering and cannibalisation by unscrupulous competitors, at lower prices. While India is progressively aligning national laws with international models, protection of industrial designs still remains a weak area for the time being.
- In general, investing companies consider India's tariffs on industrial inputs to be high on account of progressive/ multiple taxation at various stages of value addition or transaction. To a large extent, this has been due to the absence of an integrated VAT system. While India is committed to move to a nation-wide uniform VAT system, there are serious doubts on its actual pace of implementation all over India.

Other determinants that have a bearing on EU companies' presence in India are cited to be:

- Inadequate and unreliable infrastructure- power, water, telecommunications
- High incidence of indirect taxes – import duties as well as excise duty
- Import/Export hurdles that impair turnaround time for international cargoes
- Absence of appropriate policy for downsizing/ right sizing/ retrenchment of industrial labour and voluntary closure of unprofiTable enterprises

3. Opportunities

3.1 Future growth drivers

The future growth of the engineering goods sector is linked with the pace of economic recovery, growth in infrastructure spending and increased implementation of investments in the various end-use sectors.

To a considerable extent, the future growth depends on the following factors:

Domestic market

- Improved market penetration of high value durables such as automobiles, can result from economies of scale –facilitated by development of infrastructure as well as fiscal restructuring (lower excise duties and custom duties)
- Harmonisation of state indirect tax laws, which skew the price structures of inputs as well as end products. For manufacturers, there are disadvantages of differences in tax rates. While states levy local sales tax, ranging from 2% to 16%, on local sales, while inter-state sales attract a uniform 4% central sales tax. This tax disparity between inter-state and intra-state sales inverses the logic of proximity in supply chain policies, and often results in locating vendors outside the state, other things remaining equal. While India is moving toward a uniform sales tax policy and a national VAT system, the pace of implementation and sorting out transition issues among states are a cause for concern.
- Implementation of private power projects and other infrastructure projects, like roads and ports
- Increasing mechanisation in agriculture and investments in food processing industry
- Up-gradation and introduction of energy efficient and environment friendly technologies in all sectors of manufacturing
- Availability of consumer credit, which has been a major factor in the increased sales of automobiles: 80% of commercial vehicles and nearly 50% of personal vehicles are purchased on instalment schemes.
- Policy for scrapping of old vehicles after a specified service life, in line with the practices in other countries.

Export market

- Special incentives for modernisation and technology upgradation in export competitive sectors. For instance, textiles are an important part of India's export basket. As textile quotas are slated for a phase-out by 2005 under the Agreement on Textiles and Clothing, export centric investments are strategically important in the textile sector. Recently the government also de-reserved the manufacture of garments from small-scale industries, which facilitates the entry of large, including foreign players in the sector.
- Improvements in import-export linkages and efficiencies, which affect competitiveness to meet the growing international sourcing requirements, in major sectors, especially in automobiles and engineering machinery.

3.2 Market growth potential

Growth of the engineering sector has traditionally been higher than the overall GDP growth. The positive effect of liberalisation in the 1990s saw the sector achieve double-digit growth, driving the overall GDP growth of 6%. Although the current period is marked by industrial slow down all over the world, recovery in the economy (India has a long term growth target of 8% per annum) holds out the potential for India's engineering sector to post at least 10% annual growth consistently, inline with earlier trends.

3.3 Opportunities for EU companies

Revival of the economy will undoubtedly result in a pick-up of industrial activity, including acceleration of growth in the engineering sector. EU companies already present in the sector stand to gain most from the recovery process.

However, there are also new areas of opportunity to be considered by existing as well as potential entrants:

Specialised technical education and training centres

- While India has a sufficient resource pool of engineering personnel, there is a need to develop further specialisation, in areas like machine building, industrial design and advanced materials, which require specialised curriculum outside the realm of general engineering. One of the identified needs is the establishment of post-graduate level technical education programmes, as well as higher level technician training programmes, building upon the generalised education presently meted out in diploma and graduate level programmes.
- Education programmes are commercially viable, have low gestation periods and have the full support of government as well as industry, and therefore represent a sound business opportunity for Indo-EU co-operation.
- Two examples of Indo-EU partnerships in such areas are the Don Bausch Technical Institute, and Tool Room & Training Centres, operating in several cities, which address the technician level requirements of engineering industry.

Industrial Applied Research and Design centres, including prototyping

- Increasingly, companies such as General Motors, General Electric and even European companies are setting up global research and development centres in India for their captive industrial research and design needs. In this regard, availability of scientists, researchers and technicians at Indian costs, as well as the government incentive for tax

deductibility of R&D costs (up to 150% of actual R&D expense is tax deductible), are important advantages for other EU companies to consider similar initiatives.

- International protocols as well as Indian legislation on environment standards, have further outlined the need for induction of R&D in the development of clean technologies in all sectors of engineering. This necessitates engineering industry to enter into partnerships and contractual relationships with applied research institutions. Therefore the scope for private research centres is enhanced by the demands for environmental safety.
- Like education and training, applied research and design is also commercially viable given that several European companies out-source industrial design in other markets under the protection of intellectual property treaties.
- India's acceptance of the TRIPS Agreement relating to industrial designs, trade secrets and integrated circuits facilitates the protection of proprietary research carried out by foreign companies/ subsidiaries within the territory of India. Patents and industrial design registrations are therefore possible in India, with protection in all WTO member countries.

Induction of clean and energy efficient technologies (including for retrofitting needs)

Switch-over to less polluting and energy efficient technologies/equipment, is one of the major challenges before the Indian engineering industry. For instance, the recent decision taken by the Delhi state government, based on intervention by the judiciary, to switch over all public transport buses and other commercial vehicles plying in the city to CNG, resulted in major business opportunities for EU and other foreign companies offering technology for retrofitting of vehicles with CNG kits.

4. Recommendations

Specific to the interests of EU-India investment and trade in engineering sector, the following aspects need to be addressed, as part of business initiatives.

Specialised technical education centres

While India has a sufficient resource pool of engineering personnel, it is important to develop further specialisation, in areas like machine building, industrial design and advanced materials, which require specialised curriculum outside the realm of general engineering. One of the identified needs is the establishment of post-graduate technical and design education programmes, as well as higher level training schemes. Education programmes are commercially viable, have low gestation periods and have the full support of government as well as industry, and therefore represent a sound business opportunity for Indo-EU co-operation. Don Bausch Technical Institute and Tool Room & Training Centres are two examples of such a partnership.

Applied Research and Design

The availability of scientists, researchers and technicians at Indian costs, as well as the government incentive for tax deductibility of R&D costs (up-to 150% of actual R&D expense is tax deductible), are important advantages for EU companies to consider investment initiatives, already considered by major companies such as General motor.

International protocols as well as Indian legislation on environment standards, have further outlined the need for induction of R&D in the development of clean technologies in all sectors of engineering. This necessitates engineering industry to enter into partnerships and contractual relationships with applied research institutions.

India's acceptance of the TRIPS Agreement relating to industrial designs, trade secrets and integrated circuits facilitates the protection of proprietary research carried out by foreign companies/ subsidiaries within the territory of India. Patents and industrial design registrations are therefore possible in India, with protection in all WTO member countries.

Both these recommendations are practically feasible, within the domain of private sector, and can be undertaken in partnership with and the support of Indian as well as EU engineering enterprises.

APPENDIX 1

PRINCIPAL PLAYERS OF THE ENGINEERING SECTOR

1. **Bajaj Auto Limited**
   Net sales: Rs 30.9 bn
   PAT: Rs 6.3 bn
   Bajaj Auto is the world's largest manufacturer of two-wheelers. A former licensee of Vespa for scooters, the company has a technical collaboration with Kawasaki for motorcycles. The company is also planning to raise the motorcycle capacity in order to meet the increased demand in the segment.

2. **Hero Honda Motors Limited**
   Net sales: Rs 22.4 bn
   PAT: Rs 0.92 bn
   Hero Honda Motors is a venture of the Hero group (world's largest bicycle manufacturer) in collaboration with Honda Motor Company, Japan to manufacture four-stroke motorcycles in India in 1984. It is the leader in motorcycles with a 37.5% share of the market.

3. **TVS Suzuki Limited**
   Net sales: Rs 15.4 bn
   PAT: Rs 0.85 bn
   TVS Suzuki is the market leader in the mopeds and the scooterettes segment and enjoys a prominent presence in motorcycle segment as well. It has a market share of 22% in the two-wheeler market and 53% in the moped system. In the motorcycles and scooters segments it enjoys market shares of 18.2% and 10% respectively.

4. **Tata Engineering and Locomotive Company Limited (TELCO)**
   Net sales: Rs 71.37 bn
   PAT: Rs 0.92 bn
   TELCO manufactures heavy commercial vehicles and commands a market share of 68%, light manufacture vehicles for which it has a market share of 64%, passenger vehicles and multi utility vehicles for which it enjoys a market share of 32%. TELCO' s product development skills, scales, low import content and wide distribution network give it cost and competitive advantages.

5. **Maruti Udyog Limited (MUL)**
   Net sales: Rs
   PAT: Rs
   India's largest passenger car manufacturer, Maruti entered the Indian car market with the avowed aim to provide high quality, fuel - efficient, low - cost vehicles. Its cars operate on Japanese technology (Suzuki Motors, Japan), and have been substantially indigenized and adapted to Indian conditions.

6. **Bharat Heavy Electricals limited (BHEL)**
   Net sales: Rs 60.2 bn
   PAT: Rs 5.99 bn
   BHEL is one of the largest engineering enterprises of its kind in India. It is a fully integrated player in power generation and transmission and competes with the likes of General Electric, Siemens, Alstom and ABB. With 13 manufacturing locations in the country, BHEL offers a wide spectrum of equipment, systems and services in fields like transportation, oil & gas, non-conventional energy sources and telecommunications in addition to the power segment. It manufactures over 180 products under 30 major product groups.

7. **Larsen & Toubro Limited**
   Net sales: Rs 73.8 bn
   PAT: Rs 3.13 bn
   L&T is India's largest engineering company. It has a diversified portfolio of businesses ranging from cement, earth moving equipment, electrical accessories, project goods, fabrication and erection of process plants, and infrastructure projects. Nearly 60% of its revenues come from the E&C division.

8. **HMT Limited**
   Net Sales: Rs 7.53 bn
   PAT: Rs (367.70) mn
   HMT limited, a govt. owned agency, has a diversified business with a presence in watches, printing machines, tractor assembling and lamps. HMT has undergone restructuring and will focus on its core business of machine tools, watches and tractors. Each of the core business has been hived off into subsidiaries with HMT as the holding company.

9. **Laxmi Machine Works Limited (LMW)**
   Net sales: Rs 4.3 bn
   PAT: Rs 0.2 bn
   LMW manufactures the entire range of textile spinning machinery in India, and has technical collaborations with several international manufacturers including in Europe and Japan. It has 60% market share in the domestic textile spinning machinery industry.

10. **Blue Star Limited**
    Net Sales: Rs 4.63 bn
    PAT: Rs 0.23 bn
    Blue Star is the market leader in central and packaged air-conditioning systems, with a market share of 35% in the central AC segment. Central air-conditioning business contributes 69% of the total revenues. The company enjoys leadership in the ducted segment with a 33% market share, water cooler segment with a market share of 41%. The company has a technical collaboration with Yodogawa of Japan.

APPENDIX 2

ADDRESSES OF INDUSTRIES IN THE ENGINEERING SECTOR

FIAT International
Suit No.131, First Floor, Hotel Taj Place, New Delhi 110021
Tel: 4102978/9
Fax: 0114102980
fiatind@del2.vsnl.net.in

SONALIKA International Tractor Ltd
Sonalika House, 283 AGCR Enclave, Karkadooma
Tel: 91 11 216 37 85
Fax: 91 11 215 04 92
lachman@del2.vsnl.net.in

New Holland Tractors (India) Pvt. Ltd.
210, Okhla Industrial Area – III, New Delhi
Tel: 0116932207, 6932209
Fax: 0116932208
tpalani@newholland.com

Rolls-Royce India Limited
DLF Centre, 2nd Floor, Sansad Marg, New Delhi
Tel: 0113357118, 3357120
Fax: 0113357117
martin.lodge@rolls-royce.com

Pirelli Tyre (Europe) S.A.
M-24, Greater Kailash Part II, New Delhi 110048
Tel: 00091-11-6214579
Fax: 0091-11-6216788
pirelli"del2.vsnl.net.in

Asea Brown Boveri Ltd.
15-16, Qutab Institutional Area, S.J.S. Sansanwal Marg
Tel: 011-6856201
Fax: 6856201

Wartsila Diesel India Ltd
24 Sri Fort Road
Tel: 9111 625 11 05
Fax: 91 11 625 11 09

Rieter India Pvt. Ltd.
38, Ring Road, Lajpat Nagar-III
Tel: 011-6924801
Fax: 6924363
rieter@giasdl01.vsnl.net.in

Svedala Industri India Pvt Ltd
6th Floor, DLF Gateway Towers, DLF City, Phase –III, Gurgaon (Haryana)
Tel: +91 124 6351541
Fax: +91 124 6388326

Veejay Savio Lakshmi Machinery Ltd.
Flat No. 1102, Signature Tower 1, South City 1, Delhi Jaipur Highway, Gurgaon
Tel: 0124 6805101-2-6805102
Fax: 0124-6805103

Siemens Power Engineering Pvt. Ltd.
484-485, Phase-III, Sector 20, Udyog Vihar, Gurgaon

Mita Harig India Pvt. Ltd.
GT Road, Mohan Nagar, Ghaziabad 201 007
Tel: 0575-733292, 733744, 732616
Fax: 0575-734309

Sulzer Flovel Hydro Ltd.
13/1, Mathura Road, Faridabad (Haryana)
Tel: 0129-274319
Fax: 0129-274320

Lurgi India Company Ltd.
A 30, Mohan Cooperative Industrial Estate, Mathura Road, New Delhi 110044
Tel : 0116950035, 6950107
Fax : 0116950042
dr_sudhir_kapur@lurgi.de

APPENDIX 3

LIST OF USEFUL ORGANISATIONS ENGINEERING

Society of Indian Automobile Manufacturers (SIAM)
Core 4B, 5th Floor
India Habitat Center, Lodi Road
New Delhi - 110 003
Ph :+91 11 464 7810-12/464 8555
Fax : +91 11 464 8222
E-mail : siam@nda.vsnl.net.in
Website http://siamindia.com

Automotive Component Manufacturers Association of India (ACMA)
6th Floor, Capital Court
Olof Palme Marg, Munirka
New Delhi
Ph: 6160315, 6175873
http://www.indianauto.com

Indian Machine Tools Manufacturers Association (IMTMA)
17, Nangal Raya Commercial Complex
Nangal Raya
New Delhi – 110 046
Ph: 5592814
http://www.imtma.org

Engineering Export Promotional Council (EEPC)
Head Office
World Trade Centre (3rd Floor) 14/1B, Ezra Street
Calcutta 700001
Telephone : 033-250442/3/4
Fax : 033-2258968
Email : eepcho@giascl01.vsnl.net.in
http://www.eepc.gov.in

Delhi office
Surya Kiran (4th Floor), 19 Kasturba Gandhi Marg
New Delhi 110001
Telephone : 3314171/4, 3317795
Fax : 337795
Email : eepc@del3.vsnl.net.in

Duesseldorf office:
Indische Technishe Handelsberatung 40210
Duesseldorf, Immermannstr. - 59
Duesseldorf
Germany
Telephone : (211) 359011/2
Fax : (211) 358456
Email : eepcddorf@aol.com

Western India Automobile Association
Lalji Naranji Memorial Building (IMC Building) 76,
Veer Nariman Road, Churchgate,
Mumbai 400 020
Tel: 91-22-2041085, 2047032, 2041293, 2880407, 2041271
Fax: 91-22-2041382

III — TELECOMMUNICATIONS

1. Overview

India's telecom sector has witnessed some fundamental structural and institutional reforms in the past decade. The National Telecom Policy, initially formulated in 1991 and substantially amended in 1994 and in 1999, has been the driving force of development and liberalisation in the sector. The current regulatory environment allows the entry of private companies in all areas of telecom services and equipment manufacturing, except international long distance communications and strategic communication.

Important developments of the 1990s have been:

- Entry of the private sector (including foreign investment) into the equipment manufacture;
- Progressive liberalisation of imports, and a reduced import tariff of 5% on capital goods;
- Private sector participation (including limited foreign equity) in basic and value added services on a licensing model;
- Reductions in long distance tariffs;
- Setting up of an autonomous regulatory authority; and
- Corporatisation of government-owned monopoly entities.

Since the initial formulation of the Telecom Policy in 1991, the telecom landscape has grown substantially in the past ten years to include a range of services.

- Fixed line voice services: local, national, international, pay phones, voice mail and home direct
- Fixed line Non-voice: Telegraph services, telex, ISDN, leased line circuits and packet switched data networks
- Value-added services: Mobile telephony, radio paging, VSAT, Internet, videoconferencing, INMARSAT and intelligent networks.

As a result, the sector has been growing by more than 20% since 1996, despite a recessionary trend in overall industrial growth. Private investment in value-added services and infrastructure have played an important role in the sector's growth and diversification.

Table TEL 1 — Telecom sector milestones

Year	Event
1851	First telephones in India
1943	Nationalisation of telephone companies
1985	Dept. of Telecommunication created
1991	National Telecom Policy formed, telecom equipment segment liberalised
1992	Value added services like paging and VSATs opened to private sector, foreign investment guidelines initiated
1994	Guidelines for private sector participation in basic services and cellular services
1996	First round cellular services and basic services launched
1997	Telecom Regulatory Authority of India formed
1998	Internet Service Providers Policy announced, second round of bids completed
1999	New Telecom Policy, Migration from license fee to revenue sharing
2000	National long distance opened, long distance tariffs reduced, DoT corporatised
2001	Fourth round of basic service licenses and cellular licenses finalised
2002	International long distance to be opened up to private sector

Source: compiled from various sources.

1.1 Size and growth trends

India currently has more than 37 million basic telephone lines, 4.0 million cellular phones, 2.7 million Internet connections, 0.6 million radio-pager subscriptions and 15000 VSATs in operation. The telecom sector consists of a services market estimated to be Rs 345 billion, an equipment market estimated to be Rs 180 billion, and Rs. 51 billion of related services (mainly software).

Table TEL 2 — India's Telecom Industry, RS. billion*

Segment	Size	Fixed	Mobile	ISP	VSAT	Paging	Trunking
Telecom services	345	290	38.6	9.69	3.69	2.10	0.34
Equipment	179	Carrier	Cables	Enterprise Data	Enterprise voice	Phones	Testing
		93.70	43.20	19.96	4.63	13.52	3.7
Related services	51	Telecom software 41.00, remainder other services					

* Excludes carriage revenues from incoming international long distance calls, estimated to be Rs 35 billion.

Source: Voice & Data, 2001

In 2000-01, telecom sector companies had combined revenues of Rs 650 billion, which was 22.3% higher than the previous year. The sector is expected to continue growing at more than 15% annually over for the next five years, with cellular services expected to have the fastest growth.

Tele-density

Despite being the sixth largest network in the world, and the third largest among the emerging economies, India has a telecom density of just 3.7%, which is far below the world average of 10%. Cellular penetration is even lower at 0.1%, compared to China (1.1%) and Malaysia (2%). Attaining In-

dia's telecom vision - a basic tele-density of 7% by 2007 and 15% by 2015 requires India to add 50 million new telephone connections by 2007 and 130 million telephone connections by 2015. Similarly, cellular subscriptions are expected to grow from the present 4 million to 30 million connections.

At current capital costs (over Rs 30,000 per line), this requires cumulative investments of Rs. 1.6 trillion (USD 35 billion) by 2007, to generate service revenues of Rs 700 billion by 2007. Private, including foreign, investment is expected to contribute a significant share of these growth needs.

Table TEL 3 — Additional line requirements to meet tele-density target

Period	Fixed lines	Cellular lines	Total
2002-03	8.73	2.23	10.96
2003-04	8.45	3.42	11.87
2004-05	10.02	4.64	14.66
2005-06	10.96	6.69	17.65
2006-07	12.86	9.65	22.51
Total	51.02	26.43	77.45

Source: Business World, Aug 2001.

Industry Structure

The sector operates under the overall policy directives set by the Ministry of Communications, and is consists of several classes of operators- monopoly service providers, competitive service providers, equipment manufacturers and infrastructure providers, administered under independent regulatory bodies.

The industrial competitive structure consists of four distinct profiles of players:

- Government owned/ controlled large undertakings called Public Sector Undertakings (PSUs)
- Integrated private service providers that are regional or national level players, including joint venture companies with foreign telecom enterprises
- Smaller players offering one or more value added services, but are non-integrated in the value chain
- Equipment manufacturers, including foreign companies operating in India through subsidiaries and joint ventures

In all, there are close to 60 operational entities in the sector, including one international long distance operator, two national long distance operators, 6 private basic service operators, 22 cellular service operators, 15 radio paging operators, 6 VSAT and other service providers, besides numerous equipment manufacturers, not counting the numerous Internet Service providers. However, less than ten players account for a major share of service revenues, service coverage and customer base, and capital investments in the sector.

The competition structure shows a clear demarcation across the main segments:

- State-controlled enterprises dominate basic and long distance services (more than 99% market share), but are virtually absent in cellular and other value-added services;
- Private enterprises dominate value added services, and have more than 95% share of cellular services and 100% share of paging services, are building their networks to offer interconnectivity, data transmission and long distance voice services;
- The telecom equipment market is well distributed among Indian manufacturers, subsidiaries and joint ventures of foreign companies, and overseas suppliers, with imports accounting for 33% of the market. Foreign-controlled enterprises dominate technology supplies and also leading suppliers of telecom equipment

The present structure is largely a result of transformation of a monopoly industry to a multiple-player environment, under a gradual and controlled privatisation process, and is expected to change substantially over the next five years, when private operators will have rolled out long distance services as well as basic services all over India.

Restructuring and consolidation have been major developments since 1999, with the introduction of several changes, such as transferability of licenses (which made mergers and acquisitions possible), the removal of caps on the number of circles for each player, and the announcement of national long distance policy, which permitted unlimited competition in fixed line services. Given that most telecom operations still have negative or marginal cash flows and that policies favour larger players offering full-spectrum services, the sector has witnessed enormous activity in form of alliances, buyouts and shakeouts.

Regulatory Bodies

The Telecom Regulatory Authority of India (TRAI)

TRAI was founded in 1996, as a regulatory body to supervise the development of the sector in accordance with the stated policy, and to monitor fair play in a competitive market environment that was emerging with the progressive privatisation of the sector. The TRAI has been set up as an independent authority, with its role extending to functions including formulation of regulatory policy for each segment, setting up of normative tariff structures, service quality specifications and settlement of disputes between players.

Telecom Disputes Settlement Appellate Tribunal

In line with the basic right to appeal as provided in India's legal system, the Telecom Disputes Settlement Appellate Tribunal has been set up as an appellate authority, for disputes between the regulator and the service providers on the legal/ procedural aspects of the telecom policy and guidelines.

Convergence Commission of India

While technology has blurred the distinction between voice, video and data and provides for an integration of telecommunication services, India's current licensing regime requires service operators to apply for licenses separately for various services. This has changed with the adoption of the Communication Convergence Bill, 2001, which proposes to have a single authority termed the 'Communications Commission of India' responsible for issuance of licenses and regulating the communications sector, including the infrastructure and the content delivered through the infrastructure. The bill defines the physical network, network services and the content delivered over them independently, enabling service operators to bundle multiple services over the same network, which shall reduce the cost and other overheads.

The commission would be responsible for providing licenses in four categories:

1. Network Infrastructure facilities (Infrastructure Service Provider)
2. Network Services (Network Service Providers)
3. Application Services (Application Service Providers)
4. Content application services (Content ASP)

1.2 Principal sub-sectors

1.2.1 Fixed Line Services (Basic Telephony)

Fixed line services consist of local or basic services, national or domestic long distance services, and international long distance services. India has 21 basic telecom circles, covering the entire national territory, graded in three categories A, B and C, in declining order of commercial potential. The domestic market (i.e. excluding international revenues) has a current market size of Rs 290 billion, of which domestic long distance revenues accounted for nearly Rs 138 billion.

Under the National Telecom Policy, India had set the following targets for basic telephony:

- Telephone on demand by 2002
- National tele-density of 15%by 2010
- Rural tele-density of 4% by 2010
- Internet access to all district headquarters by 2002
- Availability of high -speed data and multimedia capability using technologies including ISDN to all towns with a population greater than 2 million by the year 2002

There has been a slip-up in meeting these targets, due to several factors, primarily the failure to implement privatisation in basic services as originally planned and included in the targets.

While the target of telephone on demand will still not be attained by 2002, the government considers it possible to attain a tele-density target of 7% by 2007, and 15% by 2015. However, attaining these targets requires a substantial investment by state-owned players as well as private players. The pace of implementation of private sector projects holds the key to achieving these targets.

Basic Services

In 2000-01, more than 5.9 million lines were commissioned, taking the installed base to 37 million lines. The state operators (BSNL and MTNL), account for almost 99% of revenues from basic services. Private sector services (first introduced in 1996) are presently available in only six circles, and have less than 0.3 million connections, since the first round of licences were issued in 1995. However, private services focus on the business / corporate sector, and offer reliable, high-end services, such as leased lines, ISDN, closed user group and videoconferencing. As a result, private operators generate more average-revenues-per-user (ARPU) than state-owned service providers.

Table TEL 4 — Fixed line revenues (domestic revenues)

Operator	Revenues Rs billion		Subscriber base million lines	
	2000-01	1999-00	2000-01	1999-00
BSNL	230	204	32.4	26.5
MTNL	57.3	51.8	4.33	4.00
HughesTele.com	1.4	0.64	0.07	0.02
Bharti Telenet	1.1	0.52	0.125	0.067
Tata Teleservices	0.85	0.25	0.058	0.026
HFCL Infotel	0.09	Nil	0.025	Nil
Shyam Telelink	0.08	Nil	0.013	Nil
Total	290.82	257.21	37.02	30.6

Source: Voice and Data, 2001

A high demand growth has been projected for fixed line services, with a requirement of more than 50 million new connections to be installed until 2007. Nearly 20% of these are expected to be provided by new entrants.

The experience with privatisation has been unsatisfactory. Out of 21 circles offered for licensing, services have been rolled out in only six circles. Even in these circles, achievements have been dismal: private operators collectively have added less than 300,000 subscribers in the six circles that were opened up

Box 6 — Privatisation of basic services

Basic services were opened for private sector participation in 1995 in the form of a competitive bidding process for licences in various circles. Circles were classified in three groups, A, B and C, according to consumer base and revenue potential (Class A circles being the most important); in all 21 circles were identified. Only one private operator was permitted per circle, and the licensing process mandated a maximum of two (A and/or B) circles per licensee. Licenses were issued only to Indian incorporated enterprises, and foreign participation was capped at 49% in all enterprises providing private telecom services. The first round was mired in controversies and scam, as a result of which licenses could be issued for only 6 telecom circles: Andhra Pradesh, Gujarat, Maharashtra, Madhya Pradesh, Punjab and Rajasthan.

In 2000, a second round of bidding was initiated in basic services, with a substantially revised licensing procedure outlined in the New Telecom Policy 1999. The new round attracted considerable interest: more than 100 players made bids for multiple circles, now that the national long distance market was also opened to the private sector and that limited mobility services could be offered inside the basic circle. Even cellular service providers made bids in circles where they were currently present, in order to switch over from CDMA to the more economical WLL model. The new round of licensing has seen several large players entering into the remaining circles, to have a footprint covering the entire telecom market of the country. The major players entering basic services are: Reliance Infocom, Bharti Televentures, and Tata Teleservices, which have plans for the long distance market as well as other value added services.

in 1996, of which three states account for more than 200,000 lines. The principal reasons for the poor showing by private sector services can be traced to the following:

- The basic services bidding process resulted in players offering high license fees in all the important circles. As a result, several entrants faced serious hurdles in achieving financial closure.
- In each circle, private operators compete with the government owned service, which resulted in several obstacles in developing a customer base.
- Private operators were barred from offering long -distance services, and were constrained to route long distance calls through government operators resulting in giving away up to 70% of long distance revenues to the state-owned service provider, at times even without assured bandwidth.
- Project costs were typically higher for private operators, considering that they had to rely on wireless in local loop to roll out services in the shortest possible time, while gradually switching over to wired cable links.
- Recovery of higher costs necessitated a business model focused primarily on corporate/ business users, which was concentrated in few cities, which did not assist in a mass customer base.

The initial experience with privatising fixed line services brought with it the wisdom of hindsight, and paved way for more wide sweeping changes in the regulatory policy. It was becoming clear that the key to private sector participation lay in creating a level playing field, especially the opening of inter-connectivity among basic service providers, between mobile services and long distance services, and the opening of national long distance services to private operators, besides facilitating the entry of large, scale-efficient, national level players.

These important developments were brought about in the second round of policy changes beginning in 2000, which saw the following nearly simultaneous developments:

- Corporatisation of the DoT into BSNL
- Opening of national long distance services to private sector
- Reopening the remaining 15 basic telecom circles on a free market basis, based on a fixed license fee.
- Removal of caps on the number of circles per player

Several players participated in the second phase of licensing, selecting circles based on their potential and economic viability as part of a network rather than as isolated revenue pockets. With the new policies providing for bundling of voice and data services, players are in a position to deploy a mix of fixed line and cellular services for developing their customer base in various circles. The current segmentation of the market- cellular players and fixed line players is blurring with the roll out of basic services by operators already having cellular networks in service.

National Long Distance (NLD) services

India's national long distance market is estimated to be Rs 138 billion in revenue, representing more than 30% of the total telecom services market. The market has two segments: intra-circle (within the same state/ circle) and inter-circle (from one state/ circle to another, including from cellular to fixed lines). Inter-circle revenues are estimated to be Rs 57 billion (from 6.7 billion minutes), intra-circle revenues-Rs 48 billion (from 20 billion minutes), and Rs 3 billion from cellular calls.

The national long distance market is expected to be Rs. 240 billion by 2007 and Rs 500 billion by 2010, according to TRAI estimates. Of this, the inter-circle market is expected to grow to Rs.170 billion by 2007.

After remaining a monopoly of the Department of Telecom, National Long Distance (NLD) services were opened to the private sector in August 2000. NLD licenses govern only inter-circle connectivity, but operators may provide services in the short distance calling areas (SDCAs) through agreements with the basic service providers in those areas. The NLD network consists of 322 long distance charging areas (LDCAs) and licensees must roll out services in at least 15%of these within 2 years, and cover all areas within 8 years. NLD operators may also enter basic circles by paying an entry fee, thereby providing the full range of services. The National Long Distance Operations (NLDO) policy also allowed private Infrastructure Providers to set up telecommunications infrastructure for captive as well as third party use.

Growth in the long distance market will emerge from the following factors:

- Voice tariff is expected to reduce by 20% annually, while traffic shall increase 25%.
- Data, which has only 5% of traffic currently, will increase its share to 65% in 2007
- Data transmission costs will come down significantly with economies of networking.

Table TEL 5 — National Long Distance market

Category	Traffic minutes	Revenue Rs billion
Intra circle	20 billion	48
Inter-circle	6.7 billion	57
Cellular long distance	n.a	3
Domestic carriage of International calls	n.a	30
Total		138

Source: Voice & Data, March 2001

As of now, only two private operators – Bharti and Reliance-have obtained NLD licenses, and are investing more than Rs 300 billion in national fibre optic backbones. Reliance has the most ambitious project of all, entailing Rs. 250 billion in a 1-terabit fibre network, spanning 115 cities having 85% of India's telecom revenue. BSNL already has 123600 km going to 238000 by 2005.

Table TEL 6 — National and International Long Distance Call Charges

From Oct 2000, Rs/min	Night rates	Off-peak rates	Peak rates
Up to 50 km	0.8	1.00	1.20
50-200 km	4.00	5.00	6.00
200-500 km	8.00	10.00	12.00
500-1000 km	12.00	15.00	18.00
Above 1000 km	16.80	21.00	25.20
SAARC/neighbouring countries	16.80	21.00	25.20
Africa, Europe, Gulf, Asia and Oceania	27.20	34.00	40.80
Americas and the western hemisphere	32.80	41.00	49.20

Source: VSNL

Data transmission costs will come down significantly once network is in place, with economies of networking. Annually 20% tariff fall expected, while traffic increase 25%. Voice tariff will reduce by 70% by 2006.

The opening up of national long distance services resulted in restructuring among private service providers, resulting in consolidation of market territories and operational efficiencies. The intent behind the NLD policy appears to be to encourage market-efficient restructuring in basic services sector and to facilitate the presence of national players, as substantiated by the following:

- Net worth guidelines have weeded out virtually all small players- especially most of the basic service providers already operating in the six circles- from entering the national long distance market, resulting in a competitive environment consisting of a few large, national level players.
- NLD licensees have also been allowed to enter into the intra circle traffic (by paying the entry fee), which considerably reduces any incentive for players to set up fixed line services in individual circles, where last mile access requires massive capital investment (Rs 400 billion).

Table TEL 7 — National Long Distance Network advantages

	4 cities	8 cities	23 cities	40 cities
Investment	4.5	6.1	7.0	11.0
Equity				5.0
Market size	7.6	17	36	54
Revenue at 15% market share	1.1	2.5	5.4	8.1
Costs	1.66	2.7	4.3	6.6
Profit (loss)	(0.56)	(0.2)	1.1	1.5

The bias toward large players became fully clear when the second round of licensing was initiated for the remaining 15 basic circles: the new guidelines removed the duopoly system and allowed for multiple licences in basic circles, on the basis of a fixed entry fee and revenue sharing with DoT. The most aggressive bidders this time were players that had national long distance licences and were investing in a nationwide fibre optic network to connect basic circles to support NLD services.

International Long Distance Services

International long distance telephony continues to be under monopoly of the government-owned Videsh Sanchar Nigam Limited (VSNL). With a market size of 2.24 billion minutes, representing Rs 69 billion in revenue, in the year ending March 2000, international traffic has been growing 16% in volume; though revenues have stagnated.

India is bound under multilateral agreements to open up international long distance services for private participation before 2004. However, the Ministry of Communications has preponed the same to April1, 2002. After privatisation, the international long distance voice market is slated for significant competition, especially in the form of aggressive price wars, influenced by global partnerships and the economics of convergent technologies such as submarine/, terrestrial/ satellite networks as well as new asynchronous protocols such as Voice over Internet Protocol. As in national long distance, the market may well become the terrain of regional/global players owning or controlling a seamless global service network offering voice, data and broadband services.

Table TEL 8 — International long distance market

	1998-99	1999-00	2000-01 est.
International traffic, billion minutes	1.93	2.24	2.48
Revenues, Rs billion	67.5	69.0	66.6

Source: VSNL Annual Report

Meanwhile, the government had recently embarked on a plan for disinvesting 26% of its share-holding in the state-owned VSNL in favour of a strategic partner. The market value of the transaction is estimated to be worth Rs. 50 billion. However, as the policy guidelines on international long distance were not announced until October 2001, there had been little interest from international players in the exercise.

In October 2001, the government also announced that Internet Telephony (presently banned in India) would be legalised from April 1, 2002, coinciding with the de-monopolisation of international long distance services, International calls through the Internet are estimated to become 90% cheaper than conventional long distance calls (though the voice quality is decidedly poorer). While this may be good news for the consumer, it alters the business plans for several prospective entrants who were preparing for launching international long distance services from March 2002.

The legalisation of Internet Telephony would change the focus of customer acquisition efforts, and favour players that have the lead in Internet services. With VSNL having 80% market share of Internet subscriptions, the decision favours VSNL more than any one else, and gives it sufficient lead-time to roll out its own domestic long distance services while retaining a large share of the international voice market.

Following these new developments, the VSNL disinvestment process is expected to gain momentum. At least two Indian telecom companies, Reliance and Tata are reported to be serious contenders, besides some global players that have large footprints in the international long distance market.

1.2.2 Cellular Mobile Telephone Services

India has adopted the Global System of Mobile Communication (GSM) for provision of cellular services. Cellular services in India operate in the frequency band 890-902.5 MHz / 935-947.5 MHz., each operator has been allocated a frequency spectrum of 6.2+6.2 MHz in metro cities (5.8+5.8 MHz in Chennai), and 4.4 +4.4 MHz in other telecom circles.

Cellular services, first introduced in 1995, are presently available in 18 telecom circles and 4 metro cities (Delhi, Mumbai, Chennai and Calcutta). Cellular and billed revenue was Rs 38.65 billion in year 2000-01, of which the four metro circles accounted for 51%. Pre-paid subscriptions are becoming more popular: nearly 70% of new subscriptions were pre-paid, which reflects the low usage of services in In-

dia. At present, 22 private companies provide cellular services in 18 telecom circles and 4 metro cities (Delhi, Mumbai, Chennai and Calcutta). Altogether, there are 51 cellular services in operation nationally. However, five players having services in 44 of these circles control the market.

Several changes have taken place since the first round of licensing in 1995. The first licenses were granted on the basis of competitive bidding for four metro circles, with two licenses for each circle. In the first round, licences were issued for 18 territorial circles, based on a fixed licensing fee. However, until 1999, there was limited growth in subscriptions and several operators ran into severe losses, with most licensees defaulting on license fees.

However, there has been accelerated growth in the segment since 1999, with subscriptions growing by more than 90% per annum. Policy changes such as migration from fixed license fee regime to a revenue sharing regime, customs duty reduction on mobile phones from 25% to 5%, and tariff reductions resulted in the subscriber base growing by almost 90% annually and crossing the 4 million mark in June 2001 (estimated to cross 5 million by end of 2001). The segment is witnessing further competition with the announcement of the Department of Telecom Operations/ Mahanagar Telephone Nigam Limited as the third operator in each service area and the recent bid in July 2001 for the fourth cellular operator for various circles. No further entry of operators is envisaged in the cellular circles, for the time being.

Table TEL 9 — Major cellular service providers

Service Provider	Subscriber base	Major Territories
Bharti Cellular	1.1 million	Delhi, Tamil Nadu,West Bengal
BATATA	1.1 million	Mumbai, Karnataka
Hutchison Telecom	0.8 million	Delhi, Mumbai
Escotel Mobile	0.3 million	Punjab, UP, Haryana
Reliance Telecom	0.2 million	Gujarat
RPG Cellular Services	0.1million	Tamil Nadu
Spice Telecom	0.3 million	Karnataka

Source: compiled from various sources.

Annual demand for cellular handsets is estimated to be more than 2 million sets, though the grey market accounts for more than two-thirds of the market. Nokia, Ericsson, Siemens, Motorola and Samsung are the leading brands in the mainstream market

Table TEL 10 — Cellular subscriber base

Territory	Subscribers (as of June 2001)
Metros	1567547
Class A cities	1368704
Class B Circles	1007702
Class C Circles	134009
All India	4077962

Source: Department of Telecom

Internationally, cellular services have grown faster than fixed line services. Capital costs and roll-out speeds have been important factors in the rapid growth of cellular services in India. Unlike fixed line services, which are capital intensive (Rs 30,000 per line), and often get entwined into operational problems especially last-mile access, cellular services can be rolled out expeditiously (six to eight months), and also involve lower capital costs than setting up fixed line networks. These aspects result in formidable advantages for cellular services in reaching low teledensity areas even before fixed line services, and fulfilling the unmet communication demand in various parts of India.

Table TEL 11 — Roll-out costs - basic versus cellular services

	Basic	Cellular
Cost per customer	30,000	12,000
Investment: Class ‘A’ circle	11-15,000 million	4,500 million
Investment: Class ‘B’ circle	7-8,000 millions	3,000 millions
Implementation	24 months	8 months
Monthly rental	200.00	500.00

Source: Compiled by Ace Global

Wireless in Local Loop (WiLL)

The compulsions of introducing rapid reforms to increase tele-density resulted in the TRAI allowing basic service (fixed line) providers to introduce WiLL services as a means to enable last mile connectivity. However, serious complications arose as basic service providers were also allowed to offer limited mobility within a 25 km radius, without any extra tariffs. Cellular operators considered the policy as seriously detrimental to their interests on following grounds:

- Fixed line tariffs three-minute local call costs Rs 1.2 per minute, incoming calls free. In comparison, a cellular service offered out going calls at Rs 4 per minute, including incoming calls.
- The DoT charges 17% of cellular service gross revenues, as against 8-12% for fixed service revenues
- Cell operators pay BSNL interconnection charges equivalent to 1 call charge, while basic operators pay no charges on local circle calls, 40% on national long distance and 55% on international long distance.
- WiLL needs much lower capital investments than the Code Digital Multiple Access (CDMA) format used in cellular services, and can be rolled out quickly

The only difference is that cell operations charge a single flat fee for local and national long distance calls, unlike basic services, which have a graded tariff structure based on the distance.

In 2001, to restore parity among various segments, revenue sharing for cellular operators has been brought down to 12%, in line with revenue sharing for Class-A fixed line service providers. Cellular service providers were also allowed to provide voice, data, message, and even fixed line services in their circles using their own GSM network.

Table TEL 12 — Comparison of will, cellular and fixed line costs, Rs.

	WiLL	Cellular	Fixed line
- Cost of acquiring customer	35000	6,000	20,000
- Outgoing call	1.2	4.5	1.2
- Instrument	10,000	5,000	1,000

Consolidation

The important changes in long- distance policy and the opening of multiple licences (earlier policy restricted basic services to two circles and cellular services to three circles) in cellular and fixed line services has paved the way for economies of scale, and provided a basis for the emergence of national players in the cellular service segment. Integration of limited mobility services with fixed line services (WiLL), and fixed line services with cellular services (using own Global System Mobile-GSM- network and broadband cables) have made voice services seamless, blurring the distinction between cellular and fixed service providers. The policy changes facilitated a new profile of players- integrated service providers offering fixed, mobile voice telephony besides data and broadband services nationally, and eventually international long distance services after 2002.

While the new opportunities necessitated huge investments in infrastructure, customer base and footprint size were becoming key success factors. Consequently, mergers and acquisitions have been the most noteworthy aspects in 2001. After a nation-wide wave of consolidation, five players, who account for more than 90% of the customer base, and have a nation-wide presence, control the cellular services market.

1.2.3 Other Value Added Services

Radio Paging

In 1992, the government opened Radio Paging Services for private participation, and invited proposals for award of license in 27 major cities. For other areas of the country, licenses were issued to cover 18 telecom circles. Initially India adopted POCSAG standard operating at 150 MHz, subsequently, FLEX standard was allowed as well.

Paging services are now available in a number of cities, with 16 licenses in place in the 27 cities. In 2000, the changes in the licensing/ tariff structures in mobile services – from license fee to revenue sharing agreements- brought down cellular tariffs considerably, almost to the same levels as paging services. As a result, the radio-paging segment has seen its consumer base declining rapidly due to customer attrition in favour of cellular services. As of June 2001, the consumer base is below 0.6 million subscribers, down from 1 million in 1999, and only six of the 16 licensees are active currently.

Table TEL 13 — Roll-out costs – Cellular services versus Radio Paging

	Cellular	Radio Paging
Handset/Instrument	4500	4000
Monthly rental	495	300
Roaming facility (extra cost)	Optional Not available	

Source: Compiled by Ace Global.

A revival package for the paging industry is under preparation, which proposes waiver of revenue to the government, and interconnectivity with basic fixed line service providers to offer.

Internet Services

The government considers information technology as an agent for transformation and the prime driver of future economic development of India, and has envisioned India as an IT superpower in the 21st Century. Internet presently links more than 2 million computers and serves 50 million users in India.

Keeping in view the strategic importance of IT, the government announced a policy for the entry of private Internet Service Providers (ISP) in November 1998 to enable efficient, high-speed data networks to support data communication applications like e-mail, Internet services, Web Hosting, Virtual Private Network, IT-enabled services and e-commerce.

India currently has a subscriber base of 2.7 million, growing at an average of more than 100% annually. In 1999-2000, revenues were estimated to be Rs. 9.7 billion, of which dial up services accounted for 2.2 billion, the rest coming from leased line, broadband, wireless and other corporate services. Over 100 ISPs have already commenced service. Clearances have also been given to 50 ISPs to set up their own international gateways (satellite medium), and 220 gateways are under implementation.

The 113% growth in dial-up services was driven by free-subscriptions; more than one-third of the subscriptions are free. Broadband DSL connections made their debut and have a base of 11,000 subscribers, most of them provided by a single player.

Very Small Aperture Terminal (VSAT) Services

VSAT services were among the earliest services opened to the private sector. Till date, 14 licenses have been issued to Indian companies (with a maximum 49% foreign shareholding) for operating 64 Kbps close-user data networks using VSAT, 13 via INSAT-II satellite system, on the extended C band, and one license in the space segment of INSAT-II in inclined orbit on the extended C band. The scope of VSAT services was initially limited to data application only. However, on the industry's demand, the Government allowed limited voice in close users group.

Four licenses have been cancelled for various reasons, and further licenses are being considered on a non-exclusive basis using the Ku-band, which has been recommended for use for communication purposes under the new telecom policy

VSAT networks presently serve 5000 subscribers, and the market is stated to grow by 40% annually.

1.2.4 Telecom Equipment

The introduction of a wide range of value-added telecommunication services in India has fuelled the demand for telecom equipment. In 2000-01, the market size was estimated to be more than Rs 178 billion (nearly US$ 4 billion). Imports account for a substantial part of the equipment market, especially capital goods for telecom service projects.

Table TEL 14 — Telecom equipment market, 2000-01 Rs. billion

Description	End Use	Market
Traditional equipment	Basic and cellular services	81.48
Telecom cables	JFTC and OFC	43.17
Carrier data	Switches, routers etc	12.20
Sub total		136.86
Enterprise data	Networking products	19.96
Enterprise Voice	EPABX, KTS	4.62
Fixed phones	Including feature phones	3.45
Cellular phones	Including grey market	10.08
Equipment related services	Training, integration	11.00
Other		3.7
Total		178.68

Source: Voice & Data.

Manufacturing facilities, based on foreign technologies and indigenous technologies now exist in the country. The telecom equipment sector has a large number of private sector companies. Medium sized units dominate the industry, though there are a few large sized units. Public sector share in manufacturing is on the decline with its presence mainly in exchanges and transmission hardware. To facilitate growth, import duties on capital equipment have been slashed down to a concessional level of 5%, and duties on terminal equipment have been reduced progressively.

The government attaches high priority to the indigenous production of telecom equipment through international partnerships, and allows up to 100% foreign investment in the manufacture of telecom equipment. Alcatel, Siemens, Ericcson and Nokia are among the European equipment manufacturers operating in India in this segment, and have a large market share in important categories, especially digital exchanges, ISDN Switches, Gateway Switches, and terminal equipment.

Table TEL 15 — Demand indicators in telecom equipment (annual)

Sub Sectors	Demand (Units)
Telephone Instruments	25 million
Cellular Mobile Phones	2 million
Radio Pagers	0.3 million
Radio trunk line handsets	0.3 million
V-SAT terminals	5000
Feature phones/ ISDN Terminals	100,000
Internet equipment	1.3 million

Source: US Deptt. Of Commerce, News letter, 2001

1.3 Key determinants and factors

1.3.1 Role of Government

As a sector that has been monopolised by government for several decades, and is gradually being opened up for private sector participation, regulations and policy making have the most profound impact on the development of the market.

Telecom privatisation has been a trial-by-fire learning process for India, with the system of progressive liberalisation throwing up new competitive forces and eliminating several earlier players with each subsequent stage of policy making (as seen from the restructuring in basic circles, paging and cellular services). However, the present policy framework is considered to be fairly transparent and conducive for the sTable development of private enterprise in various segments, including long distance services.

At the same time, the government needs to balance its roles as a service provider and a policy maker, which have the inherent potential for bias favouring the incumbent state-owned service providers. In India's case, the state operator still has the dominant presence in fixed line services, and a monopoly over international services. While tariff setting, policy aspects and ensuring fair play have been entrusted to an independent regulatory authority, several aspects remain unresolved at present, and impede the formation of free-market conditions in the sector.

1.3.2. Investment/Capital

In its initial phase, telecom is proving to be an investment guzzler for all players, while cash flows are mostly negative. Setting up a cellular network in a metro circle requires upwards of Rs 15 billion, while a national long distance operation entails infrastructure investments of Rs 100 billion. Up-front entry fee and bank guarantees represent a sizeable share of initial investments. Roll-out obligations necessitate participants to have financial closure well in place to undertake capital investment in infrastructure and spend on customer acquisition efforts.

Therefore, the sector requires players with deep pockets and the ability to withstand negative cash flows for several years, while making strategic investments in networks and acquiring smaller players, besides expanding the consumer base, at a time when tariffs will continue to drive downwards.

Table TEL 16 — Investment estimates of leading private players, Rs billion

Bharti	Value	Reliance	Value
License fee for four basic circles	10	License/guarantee fee for 15 basic circles	22
Licence fee for six cellular circles	7	Domestic long distance	
Domestic long distance	15	National backbone	300
Submarine cable	30	International long distance (VSNL stake)	10
Acquisitions	20	Acquisitions	
Supporting Infrastructure	10	Future Infrastructure	300
Total investment needs in telecom	92	Total investment needs in telecom	632
Existing customer base (million)	1.4	Existing customer base (million)	0.3

Source: compiled from press releases.

Telecom players are among the biggest business enterprises (in terms of capital and asset base): the three biggest private sector players Bharti, Reliance and Batata-BPL have a combined investment of more than Rs. 400 billion, matching the might of the government operators BSNL and VSNL.

The latest eligibility criteria for bidding in fixed line services specify promoters to have 'minimum net worth' requirements (Rs 10 billion in basic licences and Rs 25 billion for NLD) for, besides at least one promoter having prior telecom experience. The net worth conditions automatically filter out almost all but the top 200 companies in India, and favour players that already have one or more telecom operations underway, or have foreign partners with telecom experience in other markets.

While such criteria are important in order to weed out non-serious players the bidding stage, they also tend to support existing and older players, which may have business implications in the long run, especially at a time when operations become increasingly profiTable.

1.3.3 Consumer Acquisition

With annual revenues of Rs 10,000 per customer in case of cellular services, consumer acquisition is a major objective of all players offering integrated voice and data services. Leading cellular service providers are understood to incur market development cost of Rs 10,000 per customer, almost a year's revenue from the customer. Players justify the present costs, expecting a boom in the growth of cellular phone users as had happened in other Asian markets in recent years. Therefore, alliances and acquisitions have seen valuations based on customer base and contiguity more than cash flows.

1.3.4 Spectrum Allotment

Early bird advantages are critical for success, given the limited spectrum available for telecommunications. The government has presently allotted spectrum under 2 bands- 800 MHz and 1800 MHz, for basic service operators. The policy states that not more than 5 MHz will be given to any single player in each circle. Of the total 20 MHz govt. has earmarked for basic services, BSNL alone has 5 MHz in each circle, while six operators share 5 MHz in the six circles awarded in 1996. This leaves only 10 MHz for all new operators. Even with 2.5 MHz per player, no more than 4 players can practically be accommodated in each circle, even though technically the policy allows unlimited competition in basic services.

1.3.5 Interconnection Agreements

The government's dual role as a regulator and a player can be exploitative in interconnection issues. Even though the policy mandates interconnectivity between local circles, the charges and other interconnectivity conditions are to be mutually negotiated between the parties concerned. This results in an indirect advantage for the state-owned long distance service provider, which is the only interconnectivity provider in several circles as of now.

BSNL has been reported to be tardy in providing the requisite switching and interconnections to private operators, frustrating the roll-out of any long distance services to the latter's consumers. Further, BSNL has proposed to increase interconnection charges from private operators -50% of the revenues from local calls, 70% from NLD and 80% from ILD. At present, private operators give BSNL nothing on local calls, 40% on NLD and 45% on ILD revenue.

The Telecom Disputes Settlement Appellate Tribunal (TDSAT) has asked BSNL to shelve its plans for increasing interconnect tariffs, till it awards the final judgement. Irrespective of the ruling, BSNL will have the negotiator's advantage in interconnection agreements until other players have fully rolled out their networks all over India.

1.3.6 Consolidation

The telecom policy in its latest form provides for multiple licences in cellular and fixed line services (earlier policy restricted basic services to two circles and cellular services to three circles) has paved the way for economies of scale, and provided a basis for the emergence of national players in the cellular service segment. Integration of limited mobility services with fixed line services (WiLL) and fixed line services to cellular services (using own GSM network and broadband cables) have made voice services seamless, blurring the distinction between cellular and fixed service providers. The policy changes facilitated a new profile of players- integrated service providers offering fixed, mobile voice telephony besides data and broadband services nationally, and eventually international long distance services after 2002.

While the new opportunities necessitated huge investments in infrastructure, customer base and footprint size are becoming key success factors. Consequently, mergers and acquisitions have been the most noteworthy aspects in 2001. After a nation-wide wave of consolidation, five players, who account for more than 90% of the customer base, and have a nation-wide presence, control the cellular services market.

1.4 Policy and regulatory environment

1.4.1 Licensing Guidelines

- Fixed Line Service License Guidelines
- The license period is 20 years, extendible by 10 years .
- License is assignable after signing a tripartite agreement among Licensee, Licensor and Lender
- Equity could be through an investment company in which FDI up to 49% is permitted.
- A one time entry fee is payable, ranging from Rs 10 million to Rs 50 million per circle, with a bank guarantee four times the fee
- Revenue share ranging from 8%, 10% and 12 % for category C, B and A circles
- Fixed Service Providers are freely permitted to establish 'last mile' linkages
- Inter-circle connectivity with national long distance operators is mandatory to provide consumers a full range of facilities

- Promoters (including foreign partners) must have a minimum net worth of Rs. 10 billion in category A and B circles and Rs 5 billion in category C circles * (some states have lower values)
- Existing licensees are allowed to migrate from the earlier fixed license fee to a revenue share regime at par with the new entrants.
- Fixed service providers are allowed to offer limited mobility through the WLL technology, to roll out last mile access faster and to make the services viable.

National Long Distance Licensing Guidelines

- There are no restrictions on the number of operators to be allowed
- Only one application is allowed per applicant
- NLD operators may only carry inter-circle long distance voice, and data traffic. However, intra-circle traffic carriage is allowed only by mutual agreement with fixed service providers operating in the respective circles
- Licence entails a one-time entry fee of Rs.1.0 billion and bank guarantees of Rs.4.0 billion (refundable in four stages) towards roll-out obligations
- The licensee shall share with the DoT 15% gross revenues, @ 10% as revenue share and 5% contribution towards the Universal Service Obligation (USO) fund
- Operators must roll out services in all the 322 long distance charging areas (LDCA) within eight years, of which 15% must be rolled out within 2 years. Defaults in roll out schedules attract forfeiture of a stipulated part of the bank guarantee.
- License is valid for an initial period of 2 years, with a one-time extension of 10 years; at least 15% of the prescribed area must be serviced during the initial two-year period.
- License for NLD service to be issued to the Indian registered company
- Companies seeking license for NLD service must have a minimum paid-up capital of Rs.2.5 billion
- Promoters having more than 10% equity in the applicant company should have a combined net worth of Rs. 25 billion or more
- Total foreign/ Non Resident Indian (NRI)/ Overseas Corporate Bodies (OCB) /International funding agencies equity is limited to 49%of the paid up equity in the licensee company.

International Long Distance Guidelines

- International long distance services shall be opened for unlimited competition from April, 2002.
- There are no restrictions on the number of operators to be allowed
- Operators may offer two types of services: 'toll quality' services and 'less than toll quality' services. However, less than toll quality services must be provided at lower tariff rates and on a different dialling code.
- Operators must set up their own gateway facilities. Switch-less resellers are not permitted.
- Operators may organise their own interconnection by mutual agreement with national long distance operators, or directly with access providers operating in the respective circles
- Licence entails a one-time entry fee of Rs.0.25 billion and unconditional bank guarantee of Rs.0.25 billion towards roll-out obligations
- The licensee shall share with the DoT 15% gross revenues less pass-through revenues inclusive of the contribution of Universal Service Obligation (USO) fund
- Operators must set up a minimum of 4 points of presence, one in each region, and ensure that traffic is carried to and from all the exchanges of the country within three years of signing the licence agreement.
- Operators are required to set up at least four direct routes, one each to North America, Arabian Gulf region, Europe and any one out of South East. Far East or Oceania.
- License is valid for an initial period of 20 years, with an automatic extension of 5years; subject to satisfactory performance.
- License for ILD services shall be issued to only an Indian registered company
- Promoters/ applicants must have a minimum net worth of Rs.0.25 billion
- Total foreign/ Non Resident Indian (NRI)/ Overseas Corporate Bodies (OCB) /International funding agencies equity is limited to 49%of the paid up equity in the licensee company.

Cellular Services Guidelines

- License is valid for 20 years, extendible by 10 years
- Licenses to be issued on the basis of an entry fee (determined by a informed bidding process), and sharing of 12% of gross revenues
- Cellular service providers can carry their own long distance traffic within their service area, and negotiate direct interconnectivity agreements with other licensed Cellular Mobile Service Providers and share infrastructure with other types of service providers in their area of operation
- Operators are free to provide, in their service area of operation, all types of mobile services, including voice and non-voice messages, data services and public telephones.
- License is assignable after signing a tripartite agreement among Licensee, Licenser and Lender.
- Foreign Direct Investment (FDI) up to 49% is permitted through the automatic route.
- Import of infrastructure equipment is allowed at a reduced customs duty of 5%.

Radio Paging Guidelines

- Operators must share 5% of gross revenues with the licenser
- Foreign Direct Investment (FDI) up to 49% is permitted on automatic basis.
- Import of infrastructure equipment is allowed at 5% customs duty

Internet Service Provider Guidelines

- There is no restriction on the number of Service Providers and multiple licenses are allowed per ISP.
- Licences are valid for a period of 15 years, extendible by 5 years
- No licence fee is applicable until October 2003. Thereafter a token fee of Re 1 per annum applies, for those ISPS who obtain licences prior to November 2003.
- Telephony on Internet not permitted (will be legalised from April 2002)
- Service Providers are allowed to set up international gateways and submarine landing stations for international gateways for Internet (after obtaining security clearance)
- Foreign Direct Investment (FDI) up to 49% is permitted on automatic basis in ISPs; and up to 100% FDI in ISPs without gateways.
- ISPs can negotiate transmission links with DoT, basic service operators, railways, State Electricity Boards, etc or set up their own transmission links in their service areas, subject to permission from the Department of Telecom.
- Service providers are free to fix tariffs, subject to TRAI's review and revision at any time
- Import of infrastructure equipment is allowed at a reduced customs duty of 5%.

VSAT licence Guidelines

- There is no restriction on the number of service providers
- License is valid for ten years, extendible by five years;
- License fee is Rs 50,000 per terminal, with a minimum of Rs 10 million per annum for the first two years, minimum Rs 15 million for third year, Rs 7.5 million in the fourth and fifth years, and Rs 10 million in the sixth year;
- Foreign Direct Investment (FDI) up to 49% is permitted on automatic basis;
- Equity could be through a investment company in which FDI up to 49% is permitted
- Import of infrastructure equipment allowed at reduced customs duty of 5%.
- Use of extended C-band and Ku-band is allowed

Infrastructure Provider Guidelines

1. **Infrastructure Provider Category-I**
   (who provide assets such as dark fibre, Right of Way, duct space and towers on lease / rent out / sale basis to the licensees of telecom services on mutually agreed terms and conditions)

✓ No license is required.

✓ There is no restriction on the level of foreign equity.

✓ There is no restriction on the number of infrastructure providers.

✓ No entry fee or license fee is payable until October 31, 2003. Thereafter a token fee of Rs 1 per annum is applicable.

2. **Infrastructure Provider Category-II**
   (who lease / rent out / sell end-to-end bandwidth i.e. digital transmission capacity capable of carrying a message)

✓ There is no restriction on number of infrastructure providers.

✓ There is no entry fee, but a Performance Bank Guarantee of Rs.1 billion is required before signing of the license agreement.

✓ Licensees are required to share 10% of the revenue, plus prescribed contributions towards the Universal Service Obligation (USO) fund, with a total cap of 15% of revenue.

✓ License is initially valid for 20 years, extendible by 10 years.

✓ Total foreign/ Non-Resident Indian (NRI)/ Overseas Corporate Bodies (OCB)/ International funding agencies equity is limited to 49%.

✓ The applicant company to make its own arrangements of Right of Way.

1.4.2 Bandwidth Spectrum Allocation Guidelines

✓ Each operator shall get up to 5 MHz of frequency on a first-come first served basis.

✓ Companies will be allocated 2.5 MHz+2.5 MHz of frequency in 824-844 MHz paired with 869-889 MHz bands once they install points of presence (PoP) in the short distance charging areas (SDCAs).

✓ Subsequent allocation of spectrum up to 5MHz+5MHz has been linked to roll-out obligations in terms of setting up PoPs in various SDCAs.

✓ Licensees who are not able to meet their roll-out obligations as stipulated, shall forfeit their right to use the spectrum.

✓ Any spectrum already allocated but not effectively used shall stand withdrawn after one year, and shall be allocated to other users.

1.4.3 Foreign Investment Regulations

Foreign direct investment is permitted up to 49% of paid up equity capital in all services- basic, cellular, paging and Value Added Services, and Global Mobile Personal Communications by Satellite, subject to grant of licence from Department of Telecommunications, besides lock-in period for transfer and addition of equity and other licence provisions. In FDI is limited to 49%

FDI up-to 74% is permitted in ISPs with gateways, radio-paging and end-to-end bandwidth. These services would be subject to licensing and security reasons. Proposals involving up-to 49% foreign equity do not require prior government approval.

FDI up-to 100% is allowed for the following activities in the telecom sector:

- Telecom manufacturing activities
- ISPs not providing gateways (both for submarine and satellite cables)
- Infrastructure providers providing dark fibre

- Electronic mail;
- Voice mail

Services would be subject to licensing and security requirements, wherever required.

1.5 India's competitive position

India's competitiveness in telecom depends on its ability to offer adequate and reliable services, at costs that are internationally competitive and determined by market forces. To a large extent, these depend further on the influence of policies and neutrality of the government as a regulator while enabling the state-owned service provider to smoothly transit into a competitive environment with private sector players. The following aspects are important indicators to the current competitiveness.

1.5.1 Tariffs and Revenue Sharing

The present dispensation of fixed tariff bands for local, national and international long distance do not provide for free-market pricing of basic services. Unless tariffs are allowed to be set freely by operators, Indian consumers will continue to subsidise the more inefficient players in a controlled regime under the TRAI, as is happening in long distance tariffs presently.

Cross-subsidisation of tariffs

India's tariff policy has traditionally been to load international and long distance tariffs while subsidising intra circle tariffs. Given that nation-wide connectivity is a priority, the tariff policy has been to keep rentals low enough to enable penetration of services in lower teledensity areas, and to load commercial tariffs to subsidise non-commercial segments.

India's service tariff structure consists of two parts: a rental to amortise the capital costs; and a variable call charge to recover variable and operating costs.

The current incremental cost of expanding India's telecom network is about Rs 30,000 per line, of which nearly 25% of the capital cost goes toward long distance capital asset creation. However, the long distance consumer base is small: essentially urban homes and commercial establishments. On the other hand, local calls account for 85% of total usage in India. Actual rentals, at Rs 375 per billing cycle are lower than the economic levels of Rs 625 per month based on the current costs per line. As a result, Indian long distance rates are higher than free-market levels for similar technologies, to subsidise rental tariffs and for local call charges. This results in compulsions of pricing controls on alternative technologies like cellular telephony, and broadband voice services.

Border pricing

India's international call charges have been several times higher than free market rates prevailing in the US and other economies. Following negotiations with the US and EU international tariffs have been slashed by 15-25% in October 2000, which resulted in a revenue growth of less than 2% despite a 16% volume growth last year. Even despite the reductions, outbound tariffs from India to the US are almost twice the US tariffs to India.

India is increasingly under pressure to reduce outbound long distance charges further- foreign inter-carrier rates are expected to fall drastically, from US$0.8 to US$0.23 per min, in the next 4-5 years, which will erode the margins of VSNL and BSNL on long distance revenues.

1.5.2 Technology and Integration

Technology and economic aspects of convergence are erasing the distinction among various services. It is becoming imperative for service providers to migrate to a seamless network covering all basic and value added services, offer a wide range of last-mile options in order to achieve critical mass of consumers at the circle level, and perhaps most important, offer high quality data transmission capabilities – by 2007, data will account for 30% of Indian telecom traffic - on their networks.

The readiness of incumbent players to quickly roll out data transmission capabilities competitively, will hold the keys to market development, given that access providers will continue to depend at least partly on the state operators for interconnection and network sharing arrangements.

1.5.3 Foreign Investment Ceilings

The present licensing regulations – a 49% cap on foreign investment in any telecom service activity (but not infrastructure providers)- relegate foreign players to lesser roles, as strategic investors with a small initial stake, as part of a joint-venture consortium, as financial institutional investors, rather than main promoters, unless they are investing as infrastructure providers, where even a 100% ownership is allowed. While it is accepted that several countries follow a similar policy on foreign investment, global leaders are justified in having concerns about operating Indian ventures as minority partners, contrary to their global policy.

Inability to have management control in Indian operations is a serious concern to foreign players while leveraging their proprietary knowledge, systems and international networks to support Indian operations.

1.5.4 Poor Return on Investment

By capping the number of licensees, the earlier policy justified pre-emptive bidding, resulting in high up-front license fees based on future market potential and not immediate business volumes. Revenues were depleted further by mandatory interconnection charges (55- 70% on long distance from basic services, and 100% local call charges from cellular providers) levied with the government- owned service provider that carried calls to its fixed line subscribers. Consequently, most players have had negative cash flows till

date, and it will take several years before these businesses break even.

Until 2000, the policy also prohibited transfer of licenses as a result of restructuring and sell-off, thereby forcing promoters to continue loss-making operations without an exit route. However, now that suiTable changes have been made, efficient restructuring is an active possibility for all players and has resulted in strategic acquisitions and alliances among older and newer licensees.

1.5.5 Labour Productivity

With nearly half- million employees on its rolls, India's state owned providers have one employee for every 50- and one engineer for every 200- subscriber, representing a very poor productivity given the low teledensity levels. In 1999, telecom workers were successful in extracting assurances of non-retrenchment as a precondition to the Corporatisation of telecom services, and the biggest hurdle in the privatisation of VSNL is the absence of a policy on right-sizing the labour force. While both players brush off labour concerns citing the enormous cash reserves, the long-term consequences of unproductive labour are, clearly, ominous.

2. Major players

2.1 Domestic players

Basic: BSNL, MTNL, Tata Tele, Hughes.tele, Shyam Telelink, Bharti, HFCL,Reliance

Cellular: Bharti, BPL Mobile, Spice, Birla-AT&T-Tata, Escotel, Reliance, RPG

NLD: BSNL

ILD: VSNL

ISP: VSNL, Bharti, Satyam, Rediff, Tatanova

Equipment: ITI, BEL, Bharti, Himachal Futuristic, Rajasthan Communications, Punwire

The most important players in the sector are:

- Bharat Sanchar Nigam Limited (BSNL), the government-owned fixed line services provider, which was converted into a corporate entity. With a revenue of Rs. 230 billion and a paid up capital of Rs 50 billion, BSNL is the largest player in the sector
- Mahanagar Telephone Nigam Ltd (MTNL), which was formed in 1986 by hiving off the Delhi and Mumbai circles (the biggest revenue circles in India) into a separate corporate entity, in order to serve their growing telecom service needs
- Videsh Sanchar Nigam Limited (VSNL), the government-owned international long distance service provider, with revenue of Rs 69 billion and paid up capital of Rs. 28.5 billion

Private Sector Players:

- Bharti Group, India's largest cellular service provider, and an aggressive entrant in fixed line services including national long distance services, having a revenue of Rs. 10 billion and capital of Rs.54 billion
- Hutchison Telecom, part of the Hong Kong-based Hutchison Whampoa group, the second largest player in terms of cellular subscriptions
- BATATA-BPL, a consortium of three cellular service providers (Birla -AT&T, TATA and BPL) with collective base of 1.1 million customers in 11 telecom circles
- Reliance Infocom, the telecom division of India's largest business group, emerging as the largest private service operator in basic services (18 circles), and rolling out long distance services and a national Internet backbone covering 115 cities of India

Reliance and Bharti have, by far, been the most aggressive players in the sector, and the most integrated across the entire spectrum of services. Reliance, considered to be a late entrant and a conservative player has already invested close to Rs 300 billion, and aspires to be the largest player in the sector by 2007, after all its services are fully in place.

2.2 Major foreign players

Basic: Hughes.tele

Cellular: Hutchison Max, AT&T (Birla), France Telecom (BPL), Sing Tel (Bharti), First Pacific (Escotel)

Equipment: Alcatel, Siemens, Cisco, Lucent, Ericsson, Nokia, Motorola, Samsung

2.3 Foreign investment trends

Up to June 2000, FDI inflow had reached Rs 42 billion, nearly one-third of the total private sector investment in telecom. Cellular services received more than 49% of inflows, holding companies investing in downstream telecom outfits, brought in Rs 9.2 billion (22%), manufacturing and consultancy accounted for Rs 6.7 billion, ranking third, while basic services received just Rs 2.6 billion. However, there have been several exits from the sector in recent years: Telecom Italia and British Telecom have been among the entrants to sell off their investments in Indian ventures.

Table TEL 17 — FDI inflow in telecom, August 1991 to June 2000

Service/Item	FDI Rs million	%
1. Basic Telephone Service	2,665.90	6.32
2. Cellular Mobile Telephone Service	20,823.50	49.33
3. Radio Paging Service	909.9	2.16
4. E-Mail Service	687.5	1.63
5. VSAT Service	137.7	0.33
6. Cable TV Network	514.5	1.22
7. Satellite Telephone Service	481.2	1.14
8. Radio Trunking Service	61.6	0.15
9. Manufacturing	6,688.49	15.85
10.Holding Companies	9,241.20	21.89
Total	42,211.50	100.00

Source: Department of Telecommunications, 2001.

The regulatory changes in the sector, and the prospect of opening up international long distance to private and foreign participation is expected to result in increased foreign investment flows in the sector. Inflows during January-April

2001 alone, at Rs 5.3 billion, exceeded the combined inflows in the two previous years.

2.4 EU experiences

Presence of EU companies

Basic services: none

Cellular services: France Telecom (BPL)

National Long Distance services: none

International Long Distance services: none

Internet Service Providers: none

Equipment: Alcatel, Siemens, Ericsson, Nokia

The presence of EU companies is most visible in the telecom equipment segment, with players like Alcatel, Siemens, Ericsson and Nokia having a strong presence in their respective areas of business (switching equipment and terminal equipment).

The only player visible in the services segment is France Telecom, with a minority stake in the cellular services venture BPL Cellular, operating in Bangalore and Mumbai circles for cellular services. However, several European players- British Telecom, Telecom Italia, Swiss Telecom, KPN Nepostel- have exited their joint ventures in the past two years. Their holdings were bought out by the Indian partners or by other strategic partners.

However, the lack of direct presence can be misleading, given the high import content in the telecom sector- in the form of equipment, turnkey projects, technical and billing solutions, testing/maintenance services, and consulting. EU companies, including companies that do not have a direct presence in India, obtain a share of this growing import content to meet the telecom sector's requirements.

2.5 Reasons for the weak presence of EU companies

Besides case-specific issues, the following factors have been most important in the limited presence of EU companies, including several high profile exits like British Telecom and Telecom Italia.

UnsTable policies: Until recently, India did not have a comprehensive set of licensing guidelines covering all segments of services. The earlier rounds of licensing were disastrous: marked by ambiguity in award of licences, discretionary and arbitrary changes in policy that contravened the bidding conditions, a spate of litigation, and several implementation hurdles. Licensing was completed in only six of 21 circles. Several bidders had formed consortia with foreign including EU companies in their bids. The long delays in the award and the subsequent developments resulted in a cancellation of all remaining bids, and froze the licensing process until 1999. Several players withdrew from their earlier intents.

Foreign ownership: Given that telecom is a long gestation business, large outlays in the form of equity are required in new ventures. When such investments must be made in other countries, the ownership regulations have an impact on the accounting treatment of such investments. Because Indian laws do not permit more than 49% equity to foreign companies, investors are unable to book losses on their Indian investments in the initial phases- balance sheet integration is only possible for overseas subsidiaries, which by definition require more than 50% ownership. European companies report increasing difficulties in infusing large capital as minority partners, and also not being able to integrate the losses from Indian operations in their balance sheet.

3. Opportunities

3.1 Future growth drivers

The stability of the policy framework, especially the smooth transition from monopoly to a competitive market mechanism, holds the key to future growth of the sector. Therefore, the role of the government, and the autonomy of the regulatory authority are the major determinants to development of the sector.

The following aspects still remain unresolved, and require attention in policy setting and implementation:

- Strengthening the rights of the regulatory authority with respect to determining, administering and monitoring interconnection arrangements
- Resolving tariff structures in WLL and cellular telephony, without unduly biasing the competitive environment to suit one segment over the other
- Enacting overriding power of the government to facilitate right of way, local municipal permissions toward last mile connectivity, etc. which presently risk roll out obligations and forfeiture of guarantees
- Switching over to a Calling Party Pays model, to shift the onus of costs at the place of demand
- Introducing number portability and service migration regulations, to allow subscribers to select service providers of their choice, while retaining the same telephone number. The available global experience suggests that portability is more often enforced by regulation than evolved jointly by providers.

3.2 Market growth potential

Attaining India's telecom vision - a basic teledensity of 7% by 2007 requires India to add 50 million new telephone connections by 2007 and 130 million telephone connections by 2015. Similarly, cellular subscriptions are expected to grow from the present 4 million to 30 million connections. At current capital costs, this requires cumulative investments of Rs. 1.6 trillion (USD 35 billion) by 2007, to generate service revenues of Rs 700 billion by 2007. Private, including foreign, investment is expected to contribute a significant share of these growth needs.

Table TEL 18 — Basic services investment requirements, 2002-07 (Rs billion)

	State owned operators	Private operators	Total	Rural
2002-03	207	47	254	84
2003-04	217	38	255	70
2004-05	228	80	308	85
2005-06	240	109	350	92
2006-07	251	173	424	110
TOTAL	1143	447	1590	441

Source: Telecom Commission Estimates, 2001.

Private sector players expect a much sharper growth in cellular services, even overtaking the fixed line subscription base, which would involve a similar level of investments in cellular services.

Telecom equipment

The requirement of telecom equipment by various users during the tenth five-year period from 2002–2007 is estimated at USD 22.3 billion; USD 18.5 billion of which is likely to be produced within India. With the increased investment in the value added services, the demand for switching products such as Cellular Switches, International Subscriber Digital Network (ISDN) Switches, Gateway Switches, Asynchronous Transfer Mode (ATM), frame relays; transmission equipment, and WiLL systems equipment is expected to grow sharply. Production of telephone answering machines, key telephone systems, cordless telephones, pagers, cellular phones and hand sets of radio trunk service, pay phones, fax machines, ISDN terminals, line jack units, data terminals and modems, too provide excellent opportunities for manufacture and trade.

3.3 Opportunities for EU companies

Under the evolving business scenario, EU companies are competitively placed to take advantage of the opportunities emerging in the following areas:

- Collaborations in NLD/ILD services: as partners, equipment and solution providers, as technical partners
- International Carriage arrangements with Indian ILD operators: which has only one player now
- Infrastructure Provider: investing in dark fibre and landing stations, and end to end bandwidth for onward sales to private sector service providers
- Leasing of satellite and submarine bandwidth
- Re-enter the cellular services and basic services segments with a new profile of partner, under the revised, unlimited entry model

4. Issues

Interconnectivity

Until 1999, interconnectivity had been the most contentious issue between cellular services and the DoT. Before the New Telecom Policy 1999, only one interconnection point in each service area (circle) was provided to cellular operators, which resulted in fixed-to-mobile calls traveling distances of more than 200 km. This arrangement enabled the DoT to collect long distance call charges (upto 24 times the local call charge) from the cellular services operators as interconnection charges. Under a receiving party pays principle, this resulted in enormous tariffs for the mobile phone subscriber. The setting up of the TRAI has eased matters substantially, and multiple interconnection points are now obligatory.

Spectrum

The 12.5 MHz spectrum allotted in each circle seriously limits the actual number of players thus preventing free market condition.

WiLL versus Cellular

The compulsions of introducing rapid reforms to increase tele-density in basic services resulted in the TRAI introducing WiLL, within a 25 km radius, without any extra tariffs, as a means to enable last mile connectivity in basic telephony. Cellular operators considered the policy as seriously detrimental to their interests for their costs are a lot higher, they pay heavier toll to the DoT (12% of revenue against 8-12%) and to BSNL, and they require more capital investment. Furthermore, their license fee is heavier, they suffer from worse interconnection terms and their spectrum allowed is far more limited (4.4 MHz paid Rs8.3 Bn per MHz against free 30 MHz).

FSPs will be able to provide mobile service at Rs 1.20 for three minutes since they are intended to cross subsidize their mobile services from their retained long distance revenues. This would amount to 60% of STD call revenues, 45% of ISD revenues and 100% of local revenues.

However, WLL does not allow carriage of intra-circle long distance traffic, multiple points of interconnection, caller line identification, or paid services such as short messaging, and Internet connectivity on phone.

Privatisation

The results from nearly six years of privatisation have been frustratingly dismal. Basic services have been rolled out in only six circles, with less than 0.5 million subscribers. Radio paging services are folding up, Only two players have applied for NLD and VSNL disinvestment stands stalled.

India's piece-meal policy making favors later entrants, the initial having had to spread themselves thin in order to have a larger share of the telecom business. The new mantras are convergence, footprint size, mergers and seamless networks, drastically reducing the number of players in the sector. The opening of long distance operations and fourth licenses for cellular and basic services brought in new, larger players that had a clean slate and had learnt from the experiences of earlier entrants.

The consequences of frequent policy changes are that plans and strategies are completely sent out of gear even in later stages of a business presence.

By capping the number of licensees and by imposing mandatory sharing of interconnection charges the earlier policy has resulted in nearly all operators having had negative cash flows till date. However, now that suiTable changes have been made, efficient restructuring is an active possibility for all players and has resulted in strategic acquisitions and alliances among older and newer licensees.

Notwithstanding other complications, implementation of business plans has been besieged by problems of right of way, delays or denials for permissions toward last mile connectivity, legal disputes, protests from trade unions, employees of nationalized telecom companies, and other lobbies and interest groups.

Calling Party Pays model

India presently follows an MPP model where the airtime charge as well as the cost of conveyance on the fixed leg of calls placed from fixed line networks to mobile service networks are paid by mobile subscribers.

On the one hand, the CPP model would allow the responsibility to pay shifts to the person originating the communication and local call to be received through unexpensive fixed lines instead of the actually preferred mobile. On the other hand, business subscribers may not want calling clientele to pay for calls and CPP model may discourage fixed line subscribers from calling mobile subscribers, defeating the long-term objective of mobile service penetration. Furthermore a CPP model requires infrastructure investments by basic service providers in all local exchanges and installing billing subsystems like IN nodes.

Yet, India is now legally ready for a CPP regime, but it will become a commercial proposition only when the called party is equally accessible on a landline and on a cellular line- in other words, when a high degree of basic teledensity has been achieved.

Universal Service Obligation Fees

Provision of village telephones was an important condition in the issue of basic service licences. The NTP has provided for the revenue sharing agreements to include a fee toward Universal Service Obligations (USO). The USO fee is capped at 5% of gross revenues, and is to be deployed toward the development of rural telephone networks, which are more of a socio-political priority than a commercial opportunity.

The commitment toward USO is seen by many as an attempt by the government to compensate the state operator for the attrition of revenues from long distance and interconnection charges, to private operators.

Its funds are allocated to the DTS that has a discretionary power in selection of rural areas for coverage to suit its own commercial interests. It rises doubt on the administration of the fund, especially penalties on DoT for not utilizing them efficiently and according to rollout milestones

Rollout obligations in long distance services

Where the state itself has failed to provide telecom to the masses even after forty years of monopoly, private operators have been set performance milestones in the form of rollout obligations. National long distance operations must be fully achieved in four phases covering eight years. Given the complexities involved in rolling out a national backbone, while competing with other players, the rules are considered to be unfair to the new players.

Number Portability

Number portability, a product of free market competition in telecom services, deals with the facility for consumers to change their service providers without having to change their telephone numbers. Even as increased competition potentially lowers costs, the absence of number portability can lead to enormous costs arising from a change of service providers- reprinting stationery, website updates, postage and advertising, not counting the opportunity loss. Indirectly, these become entry barriers for incumbent players.

APPENDIX 1

PROFILES OF TOP PLAYERS

Bharat Sanchar Nigam Limited (BSNL)
BSNL, the rechristened identity of the national telecom service department (Dept. of Telecom), is the largest telecom entity in India. BSNL covers the entire county barring (Delhi and Mumbai) with its fixed line network, consisting of a network of 28 million subscriber lines, bringing in revenue of Rs 220 billion, two-thirds of which comes from long distance services. Given its present reserves of Rs 300bn, revenues of Rs 10,000 per line and a 22% return on revenues, BSNL is in a comforTable position to retain its stranglehold in basic services, despite emerging competition in national long distance services from the private sector.

However, the real threat for BSNL in the long term shall be from technology, given that private service providers shall be offering services incorporating the latest generation technologies.

Bharat Sanchar Nigam Limited
20 Ashoka Road, Sanchar Bhawan, New Delhi – 110 001
Tel – 91-11-303 6980
www.bsnl.co.in

Videsh Sanchar Nigam Limited (VSNL)

VSNL is India's monopoly carrier of international telecom traffic. Its basic services include telephony, telex and telegraph. It also provides a host of value-added services like gateway packet data transmission, electronic data interchange, on-line data search, Internet, International Maritime Satellite (Inmarsat) mobile services, satellite up-linking, private leased channels, video conferencing etc. It is at present the monopoly gateway access provider for international data transmission and Internet.

More than 90% of the company's revenue comes from international telephone connectivity. With steadily declining tariffs, VSNL is in the process of adding other services besides exploring opportunities in the national long distance services.

VSNL shall also lose its monopoly on international telephony in April 2002. The Government proposes to divest 26% of its equity in VSNL, to strategic investors with global background and experience, and also seek listing on the New York Stock Exchange.

Videsh Sanchar Nigam Limited
Videsh Sanchar Bhawan, Mahatma Gandhi Road, Mumbai – 400 001
www.vsnl.net.in

Bharti Group

The Bharti Group has interest in all segments of telecom - manufacturing, telecom services and infrastructure, through its subsidiaries and joint ventures. The activities include basic/ cellular services, Internet services, manufacture of telecom equipment, VSATs etc. The group has undergone significant restructuring in the recent past.

The group provides basic Services in 5 circles, cellular services in 12 circles, internet services in 10 cities, and is an important player in infrastructure with 8 Gateways, 10,000 km fibre optic backbone, 11,800 km submarine cable linking Mumbai, Chennai and Singapore. It has also rolled out national long distance services. The group's total investment in telecom sector is about Rs 55 bn, and it has partnerships with Sing Tel, Telia and Warburg Pincus. Meanwhile some of its partners –British Telecom and Telecom Italia, have sold out their holdings to the Indian partner.

Bharti Cellular Limited
D-184, Okhla Industrial Phase 1, New Delhi – 110 020
Tel – 91-11-696 1321
Fax – 91-11-681 0041
www.airtelworld.com

Reliance Telecom Limited

Reliance offers cellular services in seven circles - Bihar, Orissa, Madhya Pradesh, Himachal Pradesh, West Bengal, Assam and Northeast and has licenses covering 13 states representing more than 35 % of India's landmass and 33 % of India's population.

The group provides basic Services in 16 circles, cellular services in 13 circles, internet services in 2 cities, and is the largest player in infrastructure with 60,000 km fibre optic backbone, covering 115 cities of India, representing 85% of the total telecom market. The group is rolling out national long distance services and is slated to enter the international long distance market as well. The total investments in the sector exceed Rs. 300 billion and Reliance is the only player in the sector that matches the government operator in investments. By 2007, the group expects revenue of Rs 33 billion, representing 30% market share of the telecom sector, bulk of its revenues coming from data and value added services.

Reliance Telecom Limited
N-53 Panchsheel Park, New Delhi - 110 017
Tel- 91-11-649 4736
Fax- 91-11-649 4750

Hutchison Max Telecom Limited (HMTL)

The company, which started off as a joint venture, the principal collaborator of which is Hutchison Telecom - part of the Hutchison Whampoa Group of Hong Kong. is the cellular licensee for the metropolitan city of Mumbai and it offers services under the brand name of Orange. Hutchison Max Telecom Limited is the leading cellular service provider in the city of Mumbai.

Hutchison Max Telecom has grown significantly over the last five years to emerge as the leader, not just in Mumbai, but also as a major Telecom player in India. Hutchison Max Telecom, which has over 2,30,000 subscribers, has success-

fully accepted the challenges posed by the city of Mumbai, in terms of network and brand building.

Hutchison Max Telecom Limited has pioneered new services and marketing initiatives. They were the first operator to provide Global Text Messaging Service, EFR Digital Super Sound and Mobile Banking. It has the largest Auto roaming network coverage amongst the cellular operators in India, providing access for Orange customers to over 400 cities in over 76 countries across the globe.

Hutchison Max
Stanrose House, 1st Floor, Standard Mills Compound, New Prabhadevi Road, Mumbai – 400 025
Tel – 91-22-431 2020
Fax – 91-22-431 0202
www.maxtouch.com

Other Telecom companies

BPL Mobile Communications
126, Manmala Tank Road, Talkawadi, Mahim (West), Mumbai – 400 016
Tel – 91-22-437 5373
www.bplmobile.com

Escotel Mobile Communications
A-36, Mohan Co-operative Industrial Estate, Mathura Road, New Delhi – 110 044
Tel – 91-11-695 9364
Fax – 91-11-695 9253

Birla AT&T Communications
11/1, Sharda Centre, Erandwane, Off. Karve Road, Nera Nal Stop, Pune – 411 004
Tel – 91-212- 367 172
Fax- 91-212- 367 174

BPL Cellular Limited
BPL Telecom Centre No. 54, Richmond Rd., Bangalore – 560 025
Tel- 91-80 559 4917
www.bplmobile.com

Mahanagar Telephone Nigam Limited (MTNL)
124 Connaught Circus, New Delhi – 110 001
Tel – 91-11-374 2212
www.mnl.net.in

Birla Ericsson Optical Fibre Limited
Udyog Vihar, PO Chorhata, Rewa, Madhya Pradesh – 486 006

ITI Limited
45/1, Magrath Road, Bangalore -560 025
Tata Telecom Limited
Bombay House, 24 Homi Mody Street, Mumbai – 400 001
www.tatatelecom.com

APPENDIX 2

ADDRESSES OF INDUSTRIES IN THE TELECOM SECTOR

Ericsson Communications Ltd.
The Great Eastern Plaza, 3rd Floor, 2-A, Bhikaji Cama Place
Tel: 0116180808
Fax: 0116187993
jan.campbell@eci.ericsson.se

France Telecom
13, Palam Marg,3rd Floor, Vasant Vihar
Tel: 0116141424, 6141425
Fax: 0116140487
sanjay.kumar@id.eth.net

Nokia India Ltd
Nokia Networks
4F, Commercial Plaza, Radisson Complex
National Highway No. 8, Mahipalpur
NEW DELHI 110 037
Tel: +91 11 6779000
Fax: +91 11 677 9149
www.nokia.com

APPENDIX 3

TELECOM CIRCLES AND THE AREAS COVERED BY THEM

S.No.	Name of Circle	Areas covered
01.	Andaman & Nicobar Island	Entire area falling within the Union Territory of Andaman & Nicobar Island.
02	Andhra Pradesh	Entire area falling within the State of Andhra Pradesh.
03.	Assam	Entire area falling within the State of Assam.
04.	Bihar	Entire area falling within the re-organised State of Bihar and newly created State of Jharkhand pursuant to the Bihar Reorganisation Act, 2000 (No.30 of 2000) dated 25th August, 2000.
05.	Delhi MTNL	Entire area of Delhi Telephone System
06.	Gujarat	Entire area falling within the State of Gujarat and Union Territory of Daman and Diu, Silvassa (Dadra & Nagar Haveli).
07.	Haryana	Entire area falling within the State of Haryana
08.	Himachal Pradesh	Entire area falling within the State of Himachal Pradesh
09.	Jammu & Kashmir	Entire area falling within the State of Jammu & Kashmir including the autonomous council of Ladakh.
10.	Karnataka	Entire area falling within the State of Karnataka
11.	Kerala	Entire area falling within the State of Kerala and Union Territory of Lakshadeep and Minicoy.
12.	Madhya Pradesh	Entire area falling within the re-organised State of Madhya Pradesh as well as the newly creaed State of Chattisgarh pursuant to the Madhya Pradesh Reorganisation Act, 2000 (No:28 of 2000) dated 25th August, 2000.
13.	Maharashtra	Entire area falling within the State of Maharashtra and Union Territory of Goa, including areas covered by MTNL Mumbai.
14.	North East	Entire area falling within the States of Arunachal Pradesh, Meghalaya, Mizoram, Nagaland, Manipur and Tripura.
15.	Orissa	Entire area falling within the State of Orissa.
16.	Punjab	Entire area falling within the State of Punjab and Union territory of Chandigarh.
17.	Rajasthan	Entire area falling within the State of Rajasthan.
18.	Tamilnadu	Entire area falling within the State of Tamilnadu and Union Territory of Pondichery including the areas covered by Madras Telephone System.
19.	Uttar Pradesh-West	Entire area covered by Western Uttar Pradesh with the following as its boundary districts towards Eastern Uttar Pradesh : Pilibhit, Bareilly, Badaun, Etah, Mainpuri and Etawah. It will also include the newly created State of Uttaranchal pursuant to the Uttar Pradesh Re-organisation Act, 2000 (No.29 of 2000) dated 25th August, 2000.
20.	Uttar Pradesh _ East	Entire area covered by Eastern Uttar Pradesh with the following as its boundary districts towards Western Uttar Pradesh : Shahjahanpur, Farrukhabad, Kanpur and Jalaun.
21.	West Bengal	Entire area falling within the State of West Bengal and the State of Sikkim including the areas covered by Calcutta Telephone System.

APPENDIX 4

LIST OF USEFUL ORGANISATIONS TELECOM

Ministry of Communications
Department of Telecommunications
Sanchar Bhawan
20, Ashoka Road
New Delhi – 100 001
Tel: 91-11-371 0350
Fax: 91-11- 371 1514
www.dotindia.com

Telecom Regulatory Authority of India
A 2/14, Safdarjung Enclave, New Delhi-110 029
Tele-fax: 91-11-610 3294
http://www.trai.gov.in

Telecom Manufacturer's Association (TEMA)
http://www.india-times.com/tema/

Association of Basic Telecom Operators
Email - abto@abto.org
http://www.abto.org/

APPENDIX 5

ELIGIBILITY REQUIREMENTS AND LICENSE FEES

Telecom Circles	Net worth requirement (Rs. Crore*)	Paid-up Equity required (Rs. Crore)	Entry fee (Rs. Crore)	Performance Bank Guarantee (Rs. Crore)				% of revenue as Licence fee.
				20% BG1	30% BG2	50% BG3	100% 1+2+3	
Category A Circles								
Andhra Pradesh	1000	100	35	28	42	70	140	12%
Delhi	1000	100	50	40	60	100	200	12%
Gujarat	1000	100	40	32	48	80	160	12%
Karnataka	1000	100	35	28	42	70	140	12%
Maharashtra (including Mumbai & Goa)	1000	100	115	92	138	230	460	12%
Tamil Nadu (including Chennai)	1000	100	50	40	60	100	200	12%
Category B Circles								
Haryana	700	70	10	8	12	20	40	10%
Kerala	700	70	20	16	24	40	80	10%
Madhya Pradesh (including Chattisgarh)	1000	100	20	16	24	40	80	10%
Punjab	700	70	20	16	24	40	80	10%
Rajasthan	1000	100	20	16	24	40	80	10%
U.P. (West) (including Uttaranchal)	1000	100	15	12	18	30	60	10%
U.P. (East)	1000	100	15	12	18	30	60	10%
West Bengal (including Calcutta)	1000	100	25	20	30	50	100	10%
Category C Circles								
Andaman & Nicobar	20	2	1	0.8	1.2	2	4	8%
Assam	500	50	5	4	6	10	20	8%
Bihar (including Jharkhand)	500	50	10	8	12	20	40	8%
Himachal Pradesh	200	20	2	1.6	2.4	4	8	8%
Jammu & Kashmir	200	20	2	1.6	2.4	4	8	8%
North-East	200	20	2	1.6	2.4	4	8	8%
Orissa	500	50	5	4	6	10	20	8%

ROLL OUT OBLIGATIONS

Phase	Time period for completion from effective date of licence agreement	Cumulative % of coverage in terms of Point of Presence to be achieved at SDCA level at the end of each phase	% of performance guarantee that can be released on fulfillment of obligations shown under column 3
I	2 Years	15%	—
II	3 Years	40%	20%
III	5 Years	80%	30%
IV	7 Years	100%	50%

IV — INFORMATION TECHNOLOGY

1. Overview

India's information technology sector is a unique example of a developing country's global competitiveness in a high-technology domain. India has several characteristics of developing economies, especially low teledensity and IT penetration in the domestic economy. With a total installation of less than 6 million PCs, less than 2 million Internet connections and less than 1 Gbps of data transmission capacity and a telephone density of 3.2 per hundred persons, India's Infotech record has been extra ordinary, compared to all its other business sectors:

- From a fledgling level of US$43.5 million in 1990, the sector notched up revenues of around US$11 billion in 2000-01, representing nearly 3% of India's GDP. Exports accounted for US$5.8 billion, a major engine of growth for the Union's InfoTech industry.
- India today ranks as the most competitive supplier of skilled information technology professionals and is the preferred supplier of software solutions to the developed world led by the US.
- In 2000, 185 of the Fortune 500 companies out-sourced software requirements to India.
- Of the 32 companies world-wide having SEI/CMM Level 5 certification – the highest quality standard in software, 16 are Indian companies.
- Indian companies have earned credibility in delivering to mission-critical requirements, following the successful implementation of Y2K and Euro conversion solutions.

1.1 Size and growth trends

In 2000-01, India's Information technology sector posted a Rs.497 billion (US$ 11billion) gross revenue, representing a 53% rise over the previous year. Exports, exceeding Rs.263 billion (US$ 5.7 billion), accounted for more than half the sector gross revenues, registering a 64% growth over the previous year. Hardware, software services and training are the biggest segments in the domestic market, although their revenues are substantially driven by software export trends.

Table IT 1 — India's IT industry segmentation, Rs. million

Particulars	2000-01	%	1999- 00	%
Total Hardware	134 090	27.0	95 380	28.8
Packaged Software	19 440	3.9	16 200	4.9
Maintenance	15 780	3.1	11 820	3.6
Training	23 290	4.7	15 610	4.7
Domestic Software Services	39 780	8.0	29 470	8.9
Others	1 230	0.2	1 540	0.5
Total Domestic Market	233 610	47.1	170 020	51.4
Exports	263 160	52.9	160 510	48.6
Total	496 770	100	330 530	100

Source: CIOL, Aug 2001.

The sector has seen an average 42% annual growth in the past ten years, standing head and shoulder above other sectors of the economic landscape.

Software exports grew from US$ 3.5 billion in 1999-00 to US$ 5.7 billion in 2000-01, rising by a record 64%. Services rendered as projects (on site development contracts), and professional consultancy (body shopping) are the main profit centres, together sharing 75% of 2000-01 exports.

Six OECD countries U.S.A, Japan, U.K., Germany, France and Italy account for 85% of India's exports. The US continues to be the major market for India's software exports, accounting for more than 67% of total exports in 1999-00, while Europe had a steady market share of 20% up to 1999-00. The current year trends, however, point to an increasing EU share at the expense of that of the US, despite the increase in the US H1B visa quota from 115 000 to 195 000 professionals, perhaps reflecting the recent slowdown in the US economy.

End-user application products and services dominate the Indian focus in software services. Banking, Insurance and Financial Services, Manufacturing, Retail and Distribution are the principal sectors in which Indian companies have drawn revenue. Y2K and Euro Conversion solutions have increased India's image in the world market. Development activities are shifting towards web-based applications, data warehousing and WAP applications, while enterprise solutions (ERP) implementation and migration/porting services are falling as a share of export revenues.

India's exports derive primarily from low-end services such as out sourcing of coding and maintenance and generate US$ 20,000 per billable IT professional per annum. Most such work is carried out in India itself. However, high-end work can yield revenues up to $500,000 per professional and is the focus of on-site projects bid by Indian and US-based enterprises, with extensive recourse to body-shopping in India itself.

Table IT 2 — Exports by destination, % of total value

Destination	1996-97	1997-98	1998-99	1999-00	2000-01
USA	58.0	60.4	63.5	67.2	56
Europe	21.0	21.4	21.5	21.1	25
Japan	4.0	6.1	4.5	2.5	4.5
Rest of World	17.0	12.1	10.5	9.2	14.5

Source: CIOL, Aug 2001.

Domestic market

The domestic market, consisting of **five segments** - hardware, packaged software, maintenance services, training and software services - had revenue of Rs. 233 billion in 2000-01, reflecting a 37% growth over the previous year. Hardware is the largest segment in the domestic sector, although, being heavily import-dependent, it brings the least value-addition.

Hardware

The domestic market is driven by the hardware needs of software exporters (66-70%), increased IT spending by government (15-20%) and public sector enterprises (15-16%). Telecom, banking and manufacturing are the biggest IT spenders in the domestic market, though they are collectively lower than export-centric spends in the sector. The small office / home office segment, currently accounting for 10% of hardware sales, is the fastest-growing (volumes) market, driven by increased Internet penetration, falling PC prices and the rise of self-employment and entrepreneurship.

In spite of yearly shipments totalling close to 1.75 million units, the installed PC population (6.2 million units) and PC penetration (6.2 per thousand) are far lower than other Asian markets. In line with tariff reduction commitments under the WTO's Information Technology Agreement (ITA), India has reduced import duties on IT hardware substantially, and is slated to phase out duties completely by 2005. The reduction in duties has facilitated the growth of the Small-Office-Home-Office (SOHO) segment, which is the most interesting segment for the mass-development of IT conversancy and bridging the digital divide.

Table IT 3 — PC infrastructure in select countries, 2000

Country	PC sales (Thousands)	Installed base (Millions)	PC penetration (Per thousand)
China	7,168	26.3	21.9
India	**1,740**	**6.2**	**6.2**
Indonesia	417	2.8	11.2
Malaysia	670	1.9	69.4
Philippines	279	1.7	19.1
Singapore	490	2.4	700.0
Thailand	525	1.9	22.0
UK	6,000	19.2	296.0
USA	48,620	153.8	500.0

Source: CIOL.

Training

The burgeoning need for software workers has resulted in an enormous growth in India's IT training market, which posted revenues of Rs 23 billion (US$ 525 million) in 2000-01, reflecting a 33% growth over the previous year. The bulk of the demand is met by private educational and training centres, most of them being under the franchise model. The training industry is highly skewed, with the top two players, Aptech and SSI, accounting for more than 50% and the top ten players accounting for 70% of total revenues.

Table IT 4 — India's top private training vendors

Vendor	Revenue US$ Mn	Vendor	Revenue US$ Mn
Aptech	68.43	NIIT	87
SSI	29.5	LCC Infotech	10.7
Tata Infotech	8.90	CMC	8.7
Datapro	8.17	STG International	6
CMS	4.76	IIHT	4.6
Boston Education	4.35	Jetking School	4.02
IBM Global Services	3.87	IIS Infotech	3.26

Source: compiled by Ace Global.

However, training institutions must continually update and fine-tune their curricula in consultation with the industry, to ensure that India retains a competitive edge as a top class human resource base. This requires constant reviews of their business models, and close partnerships with software developers as well. The rapid introduction of developer courses in ERP, COBRA, COM and now .NET, under certification/license arrangements has provided the leading training companies opportunities to stay ahead of the competition, while diversifying the skill base to respond to new needs in the advanced markets. Meanwhile, leading Indian business houses are setting up captive campuses to train future employees in development tools of strategic interest to their business plans.

1.2 Key determinants and factors

Resource base

India's domestic InfoTech manpower resource consists of approximately 420,000 software personnel, employed in close to 1,600 companies, which together represent more than 90% of industry turnover. Additionally, almost 500,000 Indians are reported to be working in the US on H1B visas. In all, close to one million highly skilled Indians are employed in the cutting edge of information technology. The resource base is highly skilled: engineers and post graduates accounted for more than 70% of the staff in exporting companies, and nearly 50% in companies deriving revenues from the domestic market.

Table IT 5 — Employee Qualification trends in software companies

Qualifications	Domestic companies	Software Exporters
Diploma, PG Diploma, Graduate %	49.3	29.5
PhD%	2.6	0.5
M Tech, MBA, CA, ICWA%	6.7	7.6
B Tech, BE, MSc, MCA%	41.4	62.4

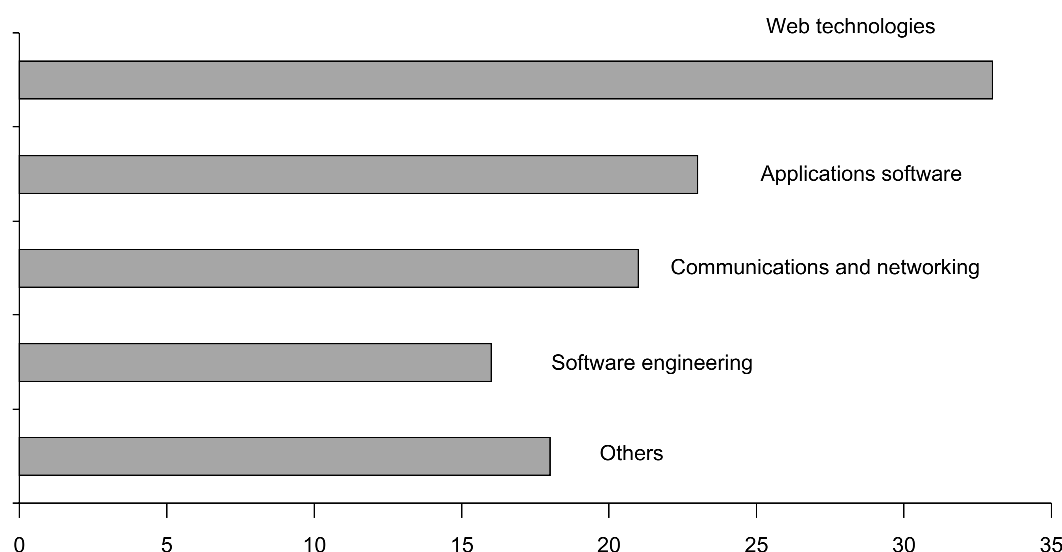
Source: assorted publications.

Ensuring a steady supply of IT professionals will be India's major challenge in the short term.

At present, an estimated 68,000 graduates / post graduates pass out of India's recognised institutions which include 6 premier Indian Institutes of Technology, 32 Regional Engineering Colleges and 320 Universities. While the supply has expanded enormously, it is well short of the annual demand of 280,000 persons needed to meet the growth vision of the country. Meanwhile, enormous attrition rates are being witnessed in the industry, with more than 10% of recruitment caused by attrition as opposed to business growth. Attrition rates are expected to increase even further, buoyed by the increased H1B visa quota from the US.

The shortfall of skilled professionals is increasingly being met by private institutes conducting a multitude of computer courses, most of which are not formally recognised as graduate level courses. The absence of any entry barriers in training schools requires a rigid certification process to be put in place, in order to retain the threshold skill levels of Indian software personnel passing out of unrecognised institutions.

Chart 1 — IT skills demand growth (per cent)



Business Structure

While there are more than 5,500 business entities involved in the sector, real growth is spearheaded by less than 25 companies including some multinational companies, which collectively represent more than 50% of industry revenues. Within the services sector, the picture is even more skewed: in 1999-00, the top ten companies accounted for 76% of revenues (US$1.65 billion), 75% of profits (US$0.28 billion) and 74 % of gross assets (US$0.58 billion) within the software services market. Thus, the future landscape of India's IT sector will be shaped in large part by the investments, market development initiatives and business strategies of less than 25 companies. The employment structure in the domestic sector reflects the composition of business: about 35% of the revenues come from companies employing less than 60 people, and about 50% comes from companies employing less than 300 people. About 40 companies, accounting for 5% of the revenues are reported to employ more than 1000 persons; the three largest companies in India, WIPRO, INFOSYS and TCS, employ more than 5000 persons each.

Table IT 6 — Employee Trends in Indian software enterprises

Number of companies	Average no of employees
525	58
750	275
150	726
40	1000

Source: Dataquest, Oct 2001

Export Centric growth

Exports and the demand for software professionals in the US market have driven the growth of India's IT sector during the last ten years. The US accounts for more than 60% of India's IT exports, besides more than 95% of all outbound professionals on H1B visas (who do not bring export revenues to Indian companies). The rapid growth in Web-based, and e-commerce developments actually saw increased off take of Indian professionals by the US, until 2001.

Table IT 7 — US H1B Visa Quota Trends

Period	H1B Quota	Indian recipients
1997-98	65000	30000
1998-99	115000	45000
1999-00	115000	50000
2000-01*	195000	80000
2001-02*	195000	100000

*estimates

Source: The Week

1.3 Policy and Regulatory Environment

A positive policy framework and proactive government attitude have been major factors behind the consistently good performance of the InfoTech sector.

The resilient competitive performance of the InfoTech sector since 1991, the foreign exchange revenues it brings, the country's own needs as well as the prospect of attaining US$50 billion in export revenues by 2008, have encouraged government to pull out the stops and rally around private knowledge-based industries as one of the future engines of Indian economic growth. In fact, India's IT initiatives have been sweeping in comparison with other sectors, even drawing criticism from some circles in the light of the numerous regulatory hurdles affecting other sunrise sectors such as telecom, energy and food processing.

Government policy on the sector is likely to have been influenced positively by the following factors:

- Unlike several other sectors, the government and its public sector enterprises were virtually absent in the Infotech sector, which precluded any political influence on the sector's development
- Software brings substantial foreign exchange revenues to India, not counting the remittance flows of migrating Indian professionals, and has been the fastest growing export sector
- The sector's resilience amidst global competition was a sharp contrast against India's old economy sectors, which were reeling under a slump
- The future potential of the sector holds out mass employment opportunities in India although in lower-skill areas
- The government is becoming a major spender in the sector and has initiatives to bring IT to the masses

The experience in Infotech amply demonstrates the impact and hence the importance of government initiatives and facilitation measures in making business globally competitive.

The present status of government policies affecting the sector is as follows:

1. Tax incentives for exports: 100% export oriented units engaged in export of software and specified IT-enabled services have a complete income tax holiday until 2010. Software export units, including IT-enabled services such as medical transcription centres, remote back office services, international call centres, etc., and even onsite services (which bring more than 50% of all exports) are now eligible for these incentives.
2. Dividends remitted to foreign shareholders are exempt from tax in the recipient country under the relevant Double Taxation Avoidance Agreement (DTAA). India has signed DTAAs with all EU members. This enables foreign companies setting up export-oriented ventures in India book (high) tax-free profits in India and repatriate dividends (after paying a 10% dividend tax) to the parent company without further taxation in the home country, under double taxation treaties. This is even supported by the non-applicability of transfer-pricing guidelines to export-oriented units, being special entities under the Indian tax system. (Please refer to Chapter 5, which covers Indian income tax regulations, and Annexe , which lists India's DTTs).
3. Foreign investment: The government has liberalised foreign investment regulations in the sector and allows up to 100% foreign direct investment in the sector except in telecommunication services. Foreign investments up to 100% equity holdings are allowed in units set up under the Software Technology Parks scheme, subject to the following conditions:
   - An export of 150% of the value of hardware and software imports, to be met over four years; and
   - Annual exports of at least 150% the wage bill of the unit.
4. Investment norms for venture capital funds as well as overseas acquisitions by Indian companies have been simplified to attract private investment into the sector.
5. Indian companies have been allowed to invest overseas in subsidiaries/joint ventures, with very few restrictions.
6. Infrastructure support: In order to assist software developers in their export initiatives, the Govt. has established several Software Technology Parks (a list of India's principal software technology parks is included as Annexe), replete with ready to move in premises and international connectivity, besides other support and facilitation. The success of the STP model has led to the mushrooming of several such Infotech parks on the initiative of various state governments. STP units account for a substantial 68% of India's software exports.
7. Trade Policy: India has agreed to a phase-out of all import duties on 214 items of IT hardware, under the IT Agreement. Several items are already duty-exempt, while others attract tariffs of 5-20%, and have been instrumental to the rising penetration of IT goods and services in the domestic market.
8. National Backbone: Enabling a nation-wide network of high bandwidth holds the key to India's growth in the high potential IT-enabled services sector, and the government has put in the following initiatives:
   - National long distance telephony services have been opened to private sector players
   - International bandwidth connectivity has been demonopolised, and submarine OFC operators can negotiate direct (earlier through VSNL only) with Indian ISPs for bandwidth contracts
   - Leasing of satellite bandwidth from any international player including Ku band transponders (which were earlier used to carry only satellite broadcasting signals and not data)
   - ISPs can set up their own landing stations anywhere in India themselves or in collaboration with foreign partners
   - Foreign collaborations are allowed in telecom optic cable networks infrastructure services with substantial share-holding including up to 100%.
9. Employee Stock option Plans (ESOPs) : As a measure to reduce the high attrition levels and human resource migration, the government has put in place schemes for Employee Stock Option Plans and other financial incentives which apply to both Indian as well as overseas employees of software companies.
10. Venture Capital Funds: In order to catalyse entrepreneurship in a knowledge-driven sector, the government has created a framework for the entry of international venture capital funds into India's technology sectors, principally the IT sector. Venture capital can come from Indian as well as foreign venture capital companies/venture capital funds (a list of important venture capital firms operating in India is included in Annexe . 75% of the funds invested are to be in unlisted equity instruments. The minimum corpus of a fund is set at US$1 million, with a maximum of 25% of their corpus in a single venture capital undertaking. Venture capital funds enjoy a pass-through status, i.e., full income tax exemption on their capital gains upon exiting from an undertaking. However, if a fund distributes dividends to its investors, the same shall attract dividend tax as applicable.
11. Overseas acquisitions by Indian companies: Indian companies are allowed to make American Depository Receipts (ADR) or Global Depository Receipts (GDR) to fund overseas acquisitions up to US$ 500 million in knowledge sectors without any prior government approval. These measures have facilitated more than 40 acquisitions in the US, by medium-sized Indian companies, and the capabilities being acquired have tended to be marketing knowledge, technology/product know-how, domain expertise, service competence and management skills.
12. Issue of equity: Indian software companies or companies whose software turnover is at least 80% of their total revenues are allowed to issue ADR/GDR linked

stock option plans to their non-resident and resident permanent employees (including working directors). Non-resident employees are allowed up to US$ 50,000 in a block of five years to acquire such shares. Indian employees may also be given stock options in overseas subsidiaries of Indian companies, subject to a 5% ceiling in the paid up equity of the overseas entity.

13. Individual taxes on overseas income: The present Indian tax regulations do not tax overseas income earned by Indians who are resident abroad on employment or on business (stay more than 183 days out of India every year), nor do they compel or tax proceeds from repatriation of such earnings into India. Such a policy has enabled steady inflows of worker remittances and has become a main plank of India's foreign exchange policy.

Box 7 — Implications of WTO agreements

1. **GATS:** Software services come under the purview of the General Agreement on Trade in Services (GATS), and the provision of cross border services through body shopping is covered under mode 4, the category of 'movement of natural persons', where the service is provided in the destination, by natural persons moving in 'temporarily' from the supply country. In this regard, the current US policy of work permits and H1B visas to software professionals comes into serious review. It is usual for Indians on H1B visa to apply for 'green cards', sponsored by their employers, which eventually leads to US citizenship in three to five years.
2. **Trade Related Intellectual Property Rights (TRIPS):** International co-operation treaties now extend copyright protection to computer software and other proprietary materials more effectively in India than ever before. Therefore, the development of products in India not only reduces costs effectively, but also confers a global IPR advantage to players even though the labour component of these protected products may be substantially out-sourced to Indian enterprises.

1.4 India's competitive position

The potent combination of four elements - a formidable, competitive resource base (India's educational system is much larger than those of most developing countries, and generates a large output of technical persons at competitive costs), market linkages with the world's largest destination of IT services, a well-timed development in respect of global market trends, and a highly supportive regulatory / policy environment- has contributed to India's impressive strides in Information technology..

Technical Skills and Capabilities

The ability to produce high quality products/services at relatively low costs distinguishes India from other competing suppliers especially China and Philippines, which are perceived to be lower-quality suppliers. India has the world's largest number of companies having the SEI level-5 certification, which represents the highest level of capabilities. Till date, 89 Indian companies have acquired SEI certifications, and another 136 are in the process of doing so

Cost differential

The killer advantage of India's IT resource is the attractive cost differential. At the heart of the advantage is the salary differential between software professionals working in the US and those working in India, which can be of the order of **five times**. The migration of Indian professionals to the US in on-site projects is driven by this enormous differential, despite the presence of several tiers of body-shopping intermediary service providers in the US.

Table IT 8 — Software salaries, US$ per annum, 1998

Category	US	India
Help-desk technician	25-35,000	5-7,000
Programmer	33-39,000	2-3,000
Network administrator	36-55,000	16-20,000
Programmer analyst	39-50,000	5-7,000
Systems analyst	46-58,000	8-10,000
Software developer	49-68,000	16-20,000
Database administrator	54-68,000	16-20,000

Source: INFAC.

However, economic recession and recent incidents in the US have caused severe turmoil in the software employment scenario, leading to rampant layoffs as well as a downslide in manpower rates (rates have collapsed from 1999 levels of US$ 40 to less than 10 per hour in September 2001). Revival of the US economy holds out a return to highly competitive Indian presence building up in the US software market.

Language

Besides lower costs of manpower, English conversancy has been a major advantage in harnessing India's software potential in the US. However, these conventional advantages are not permanent. The non-English speaking population of IT users will soon far outnumber English-speaking users, European languages accounting already for more than 18% of the world's Internet use.

Offshore Value Addition

Off sourcing is driven by skill scarcity in the major markets and wage differentials in other locations having large pool of skilled workers. Initially, large US players moved business to implementation partners in suiTable locations. But, as skills improve in these locations, a large number of service providers move business propositions direct to obtain a larger share of the customer's expenditure. Unknown offshore partners can become serious competitors to onshore service contractors.

Table IT 9 — India's Advantages in off sourcing

Success Factors	Advantages	Disadvantages
Skills	India's technical education	-
Staffing	Multidisciplinary skill resource	-
Quality Level	Level 4 and Level 5 SEI CMM	Security and Attrition Issues
Rapid development	Higher productivity, 24 hr projects	Potential social turmoil, disruptions
Cost Reduction	High volume of savings 50%	Rising labour, support communication costs

Source: excerpted from an article of Gartner Associates published in Dataquest

Location costs are attractive for the development of large-scale, global development facilities in India. Rentals in the premium InfoTech parks in Bangalore and Chennai, at US$13.04 per sq. m per month, are attractively low in comparison with developed markets, while providing reliable business infrastructure. Indian cities also hold out opportunities for private, including foreign, investors to locate large InfoTech campuses or mini-cities on their outskirts, with state of the art internal infrastructure, as is happening in Bangalore, Delhi and Chennai.

The availability of large tracts of real estate (albeit in an under developed state) in proximity to established business centres opens up the potential for global leaders to create their next world-class development centres in India. These cities have the potential to end up as global InfoTech poles replete with the infrastructure of any other developed economy, providing the best social amenities to their inhabitants, on the model of Palo Alto (CA) or Denver.

Box 8 — The rise of Indian infotech-humble origins

Brain drain, foreign remittances and host country socio-cultural aspects are the three major issues related to the software exodus out of India. The preeminence of Indians as the IT world's foot soldiers is a result of some accidental events over the past two decades that appear in retrospect to have created an opportunity. As to competitive advantage, technical skills and the English knowledge advantage was never a singularly Indian advantage and was equally well spread across Indians, Philippines, Ireland and Taiwanese.

1970s: The exodus of India's best brains to the US was in part due to absence of opportunities in India for applied research and specialised disciplines. Each year, the best technical universities in India sent out an increasing number of professional graduates to pursue higher studies in the US, semiconductors, microelectronics and computing languages being the most popular disciplines. While the 'brain drain' was officially criticised, an absence of high technology industry due to unfavourable investment conditions, caste-based reservation of education and employment opportunities, and the absence of adequate applied research facilities-tacitly allowed the brain drain of educated and skilled people to pursue career opportunities abroad.

1980s: When Infotech became the new, revolutionary knowledge-based industry in the US, Indians working in the cutting edge computer science and microelectronics sectors were at the forefront of the global IT revolution: the C language (the mother language of personal computers) and the microchip that led to Intel's product were both invented by Indians, who had left their home country for another land with just one hope- of opportunity based on merit and effort. Meanwhile, India's economic policies discouraged global leaders like IBM and others to do business with India, in response to mandatory technology transfer and indigenisation conditions. The era of the 'main frame' computer virtually bypassed India, while bringing the benefits of automated data processing to other progressive economies.

1990s: India's brain drain was paying back in the form of valuable dollar remittances. Annual worker remittances into India, presently $12 bn, dwarf India's entire software export revenues of US$5 bn. Two oceans away, in Silicon Valley, a homogeneous, high technology community of Indian-owned IT enterprises had gathered critical mass, and was deriving recognition and respect in the US's high technology industries and venture capitalists. Armed with business opportunities, a ready market and the requisite linkages, the techies went entrepreneurial, and turned for their technical manpower needs to the one ethnic resource they knew well and could share cultural and ethnic affinity easily. A new computer culture had arrived in India, riding on US career aspirations of Indian youth, learning the codes and languages of the information economy.

The Indian government's delay in enacting a domestic IT initiative saw India accidentally jump to the forefront of the technological evolution, skipping several transitory phases, and inducting the latest languages, platforms and skills at a time when the world market was booming. Personal computers that packed in several times the power of old mainframes, were now affordable, and were enabling young Indians to pursue the new, growing career and business opportunities in a high-tech arena.

By a quirk of fate, India found itself thrown into the centre-stage of a game where it was, until recently, merely a spectator.

2. Major players

Leadership trends are clearly demarcated in the various segments of the sector. While domestic companies lead in software services and in training, foreign players dominate the hardware segment and packaged software segments, and are

having a growing share of the IT-enabled services market. Government-owned service providers presently dominate the infrastructure side, but the market is gradually redistributing with the opening up of the telecommunication sector to private including foreign players.

2.1. Domestic players

Software Services: Tata Consultancy Services, Wipro, and Infosys Technologies, HCL Infotech
Training: NIIT, Aptech, IIS, Websyn Technologies
Hardware: TVS Electronics, Lipi Data Printers, Moser Baer (peripherals)
ISP/e-commerce: Satyam Infoway, Rediff.com, VSNL, Bharti Televentures, Tata nova.com
Infrastructure: VSNL, Reliance, Bharti-Singtel,

Table IT 10 — India's largest companies (by sales revenue)

Rank	Company	Principal business	Revenue, Rs billion		Growth %
			2000-01	1999-00	
1	TCS	Software solutions	31.42	20.34	55
2	Wipro	Software solutions	29.47	20.36	45
3	Infosys	Software Solutions	19.01	8.82	115
4	Compaq India	Hardware (OEM)	17.61	10.85	62
5	Tech Pacific	Hardware trading	17.27	11.71	47
6	IBM	Hardware and solutions	16.62	11.82	41
7	HP India	Hardware (OEM	15.40	11.38	35
8	NIIT	Training	13.75	10.96	25
9	Redington	Hardware trading	13.45	7.49	80
10	HCL Tech	Hardware solutions	13.22	9.26	43
11	HCL Info	Software Solutions	12.76	10.79	18
12	Satyam Comp.	Software Solutions	12.20	6.73	81
13	Ingram Micro	Hardware trading	9.30	4.86	91
14	Samsung	Hardware (OEM)	8.81	5.01	76
15	Celtron	Hardware trading	8.36	3.48	140
16	Aptech	Training	7.66	5.11	50
17	CISCO	Hardware Solutions	7.65	3.60	113
18	Cognizant	Hardware Solutions	7.04	4.14	70
19	Microsoft*	Software Solutions	6.60	4.66	42
20	Pentasoft	Software Solutions	5.83	4.04	44

Source: CIOL, 2001

2.2. Foreign players

Packaged Software: Microsoft, SAP, Oracle, Baan, Computer Associates
Services: Hughes, GE, British Airways, Agilent, ST Micro Electronics, TMI (Telecom Italia)
Training: Silicon Graphics
Hardware: IBM, HP, Compaq, Acer, Sony, Epson, Canon, Samsung, Siemens, Digital
Infrastructure: AT&T, Lucent Technologies, Sprint, MCI, Hughes

At present, there are very few EU companies in India in the software solutions sector. However, major EU players having an investment presence in India include: ST Micro Electronics (ICs), British Airways (back office), Baan and SAP (ERP solutions). Groupe Bull and Olivetti, which had joint ventures in India for hardware products, have divested their holdings, ostensibly due to the limited prospects in indigenisation of hardware components in India.

Foreign companies have a dominant share of IT and communications hardware products and proprietary software products including high-end ERP solutions in India, most of which are sourced from overseas. However, investments are on the rise in India in software development activities, back office processing, contact-centres, and other IT-enabled service segments, several being in the form of export-oriented units. Foreign investment has been facilitated by government initiatives in setting up several ready-to-move-in Software Technology Parks, in various parts of the country. STPs bring in more than 20% of the entire export revenue of the sector.

2.3. Foreign investment trends

The sector has attracted foreign investment inflows of US$601 million since 1991, of which more than 85% came from the US. Microsoft, IBM, HP, GE and several other world leaders have subsidiaries in India, for activities ranging from software development, installation services, back office operations, hardware manufacturing, and marketing of imported IT products in the local market.

2.4 EU experiences

The Indian IT industry has largely been US-centred, with the Silicon Valley being the nucleus of activity. Although several EU businesses- notably airlines, banks and financial services providers- had begun using India as a centre for non-critical 'back-office' processing activities, the first

large-scale cultural exposure in the form of onsite projects, and enterprise consulting solutions came about in the form of Y2K conversion and increasingly Euro conversion projects. These opportunities generated substantial opportunities between Indian and EU companies in critical area applications and longer-term project identification.

However, replicating the US model has not been feasible for the EU for several reasons: cultural, linguistic and market conditions- especially the continuing demand for professionals in the US. For these reasons, there has been poor response to EU work permits: out of 10,000 visas proffered by Germany, only 450 were taken up in 6 months since the scheme opened.

However, the recession in the US, the bottoming out of the technology stocks boom and events such as the Sept 11 disaster, have seriously affected the US market, and Indian businesses are believed to be seriously considering the emerging opportunities in Europe.

On the other hand, the future model in IT appears to be based on off-sourcing- and European companies increasingly have to consider the advantages of India-based business models, with all the location and fiscal benefits available in the medium term.

Call centres, remote processing and transcription based activities, supported by international connectivity and data transmission networks will drive the future of India's IT advantages for Europe and other destinations.

3. Opportunities

3.1 Future growth drivers

Information technology and activities extensively built around information technology account for a large share of economic activity in developed countries. India's infotech sector must be analysed in this context. Infotech accounts for just 3% of India's GDP, compared to 40% in the US, and 47% in Singapore, both of which have globally competitive services sectors with extensive use of information technology. Despite being a competitive exporter of manpower-based services, India lags behind in principal indicators of information technology such as PC penetration teleconnectivity Internet usage and data transmission capability, and must invest seriously to enlarge the user base (at least 5 times by 2008) to maintain its competitive position.

While the past ten years have done much to put India on the global software map, the task has just begun, if India must retain its position as a leading supplier of solutions to the information technology business space.

The future landscape will be shaped by the collective influence of five distinct factors:

1. Aspirations of knowledge workers to seek the best opportunities for their skills
2. Social implications of business measures in destination markets, principally the US and EU, where the onsite contracting model has socio-cultural implications
3. Increasing spends in information technology initiatives in other countries, principally the EU and Japan, India's next biggest export markets after the US
4. India's fiscal incentives in the IT sector, principally, the import tariff structures on hardware, foreign direct investment facilitation measures, and export-related tax incentives
5. Influence of multilateral Agreements, principally the GATS and the Information Technology Agreement (ITA)

Market diversification

Excessive dependence on the US market is not desirable for India in the long run. Recession trends, immigration policies, and sheer business logic make market diversification a priority for Indian companies. With Internet platforms dominating the future of enterprise computing and information needs, opportunities are increasing outside the US. With China taking aggressive steps to unleash 5 million knowledge workers every year, market share retention is a major challenge for India. The Japanese share of India's exports fell from 6% in 1997 to 2.5% in 1999-00. Therefore, Indian businesses need to diversify geographically and establish geographical proximity centres in other markets as well

Of late, European states like Germany, France, Netherlands and Italy have become more active in marketing themselves as attractive IT destinations for Indian companies to locate business and project offices, and for Indian software professionals to work in EU companies, on work- permits. Indian companies too, have been increasing their attention to the European market with a strategy to broad base their markets. Meanwhile, successful business experiences of EU companies in areas like Y2K, Euro conversion, and back office operations (insurance companies and airlines) have resulted in increasing EU interest in engaging Indian software professionals in onsite contracts as well.

Marketing

Marketing is the critical weakness in the sector. Indian companies tend to be dependent on direct marketing to end-users, or operating sweatshops for firms well established in the destination markets. India's market networking is confined to the US, which makes it a potentially vulnerable player.

Moving up the value chain necessarily requires dis-intermediation, shedding old contracts and even old clients in favour of the new, and moving into higher billing streams. In that

Table IT 11 — Marketing channel shares (% by company revenue class)

Channel Share	Revenue < Rs. 10 Mn	10-50 Mn	Revenue >50 Mn
End user	23	52	43
End user through principal	28	31	38
Associate	56	38	52
Principal	46	69	33
Own Office	8	46	78

Source: CIOL.

respect, Indian companies need to intensify their efforts in marketing and brand building, and shed their traditional image as subcontractors. Following liberalisation of overseas investment guidelines for Indian companies, several larger players have followed the route of acquiring companies overseas or setting up joint ventures/offices in the principal markets. However, smaller companies continue to face the challenge of marketing their capabilities to end users in the destination markets.

The traditional weakness in marketing can be exacerbated by language barriers, and Indian companies will find it imperative to identify and work with local partners in European and Japanese markets. In this regard, front-end partnerships with IT solution marketers will become an important business model for Indian companies, especially SMEs, as indeed had happened in the US in the 1990s. Europe's business regulations will also play a role in the evolution of marketing partnerships between Indian and European SMEs, for on-site as well as remote processing activities.

Hardware capabilities

While there are formidable advantages in human resource skill levels, which can be readily deployed in software services, India has a complete absence of hardware production capabilities, resulting in an increasing annual import of more than Rs 100 billion, accounting for almost 38% of foreign exchange earnings from exports. Hardware imports are slated to grow sharply, driven by capital-intensive IT-enabled service businesses, government spending in IT education for the masses, e-governance initiatives and increased IT penetration in the SOHO segment, besides replacement demand. These segments are essentially not export-oriented, although they may become enables of low-value exports such as IT enabled services.

Under these conditions, the extreme dependence on imported hardware sets net foreign exchange from the InfoTech sector on a downward slide, especially as software exports are beginning to slow, or move away from high-end software application development to lower value services.

Enabling Infrastructure

Immediate connectivity, high up-time standards (24*7*365) and high levels of redundancy is essential in the IT-enabled service businesses in all customer service and other mission-critical applications, in order to ensure reliable services. That requires the setting up of 100% standby power back ups, mirror data centres, and high bandwidth availability from service locations. Down time in India's domestic telecom networks, varies from 3 to 15%, as against the international benchmark of 0.1%. Even on India's international circuits, the downtime is 2%, as against the global standard of 0.3%.

Bandwidth

While connectivity has been expanded considerably, bandwidth for data transmission remains a serious bottleneck. Against 10 Gbps of current demand, , only 725 Mbps of International Internet bandwidth is presently available through gateways of the state owned carrier VSNL. According to a survey by NASSCOM, the industry body representing India's information technology sector, India's bandwidth requirement is expected to reach 300 Gbps by 2005. The main demand of bandwidth will come from software exports, education, IT enabled services, banking & finance, B2B and B2C e-commerce, communications, and entertainment services

Table IT 12 — Bandwidth needs in new generation applications

Application	Bandwidth
Small-group online games	64 kbps
Basic animation services	100 kbps
Video conferencing	128 kbps- 3 Mbps
MPEG video	1.5-20 Mbps
Shared high-resolution imaging	8-100 Mbps
Virtual reality	10 Mbps-1 Gbps

Source: NASSCOM.

The capital and physical resources needed to harness the available bandwidth require enormous investments in domestic bandwidth.

Bandwidth costs

Competitive bandwidth costs is as important as bandwidth availability, for sustaining the pace of growth. India's bandwidth costs have been several times higher than free market rates prevailing in other market, largely a result of monopoly of long distance telecom services. Adequate long distance bandwidth at competitive costs is critical to the growth of IT-enabled services. India needs to rationalise its tariff structures for bandwidth, in line with international trends.

Poor implementation of the right standards of infrastructure could in fact result in a loss of US$ 21 bn of investment to other competing countries in Asia, and this is a major threat to the realisation of India's projected IT vision for 2008.

Realising the importance of the issue, the government has enacted regulations for the induction of private sector participation, and allows even foreign companies to invest upto 100% in infrastructure for end-to- end connectivity. With the roll-out of private data transmission networks, bandwidth availability is set to increase significantly. There are considerable opportunities for international partnerships, including sharing of available capacities in satellite and submarine bandwidth. However, these opportunities remain largely in the realm of big telecom players.

Skill development in IT-enabled services

Transcription and other enabled services require a 24-hour turnaround time and high quality of service, and require the deployment of sufficiently trained staff with good transcription skills and conversancy with medical technical terminology.

Front-end services like contact centres, for Customer Relationship Management (CRM) and telemarketing services, demand high service standards, and place more emphasis on efficiency, response standards and customer satisfaction

than personnel costs. Responsiveness, pleasant telephone manners and poise are necessary personal qualifications, as important as language conservancy. The available experience in call centres manned by Indians reveals a mixed picture: while the costs of serving customers is indeed lower, customer satisfaction levels have tended to be rather low in call centres as well as medical transcription services. Language comprehension tends to be a major disadvantage in operating voice-interactive services out of India, which is the largest market segment in IT-enabled services today.

With IT-enabled services emerging as the next big opportunity in the sector, the development of world –class front end skills is a major factor in the success of IT-enabled service segment in India. Current international trends are to use contact centres as captive cost-centres, rather than as profit centres. The biggest applications in use today are customer support services, complaints- servicing and interactive information systems.

One of the major consequences of India's increasing integration into the global economy is the increasing cross-border trade in goods and services, which place a new demand on areas like marketing information services, sales and distribution, and customer care. In most cases, especially in consumer durables, leisure and financial products, this requires establishment of enabling facilities matching the core standards of the parent company, whether managed as company-owned or out-sourced facilities. There is an increasing use of information technology in all these aspects.

While there are undeniable location advantages of India, substantial investments are required in skill development and training, which potentially requires international partnerships in language and conversational skills, technical training, certification and customised applications development. In this regard, setting up contact centres for European companies hold out opportunities for partnerships and collaborations between Indian and European SMEs in areas such as staffing , training and certification, besides out-sourced facilities.

Talent retention

With the rising exposure of Indian companies to overseas markets, they are increasingly suffering a shortage of skilled workers as well as lower margins as smaller companies enter the arena at lower costs. This is also resulting in several US based enterprises encroaching on the talent base by setting up businesses right in India, and offering attractive employment benefits comparable with that in the US. Under such conditions, leading Indian companies are innovating to retain their talent pool, including giving employees dollar-based stock options, while tapping global markets for their overseas investment needs. To some extent, these have a negative impact on the cost competitiveness of Indian professionals, especially in the lower- end activities.

3.2 Future growth potential

Given its searing growth rate (more than 50% pa in the past ten years), software is projected to become India's largest sector, contributing 28% of GDP by 2020. By 2008, the size of the sector is expected to reach US$ 80 billion, of which, the major share will be from IT Services (US$ 38.5 bn), IT enabled services (US$ 19.5 bn) and e-commerce (US$ 10bn). Exports are expected to touch US$ 50 billion, and attaining the vision requires an investment of US$ 23 billion in infrastructure and systems, besides generating at least 2.5 million trained professionals each year.

The basis of these projections is the estimate of the global market in three areas: IT services, IT-enabled services and e-commerce.

IT services

IT services can be broadly divided into three groups:

- Broad line services, popularly known as transaction processing services such as banking and financial transactions, which account for about 23% of the market;
- E-business services, which focus on systems integration, application platforms, data management services, accounting for more than 61% of the market; and
- Consulting: e-business strategies, training and change management, accounting for the remaining 16%

The global IT services market stood at US$349 billion in 1999, and is expected to touch US$584 billion by 2004. Product Support Services, Development and Integration, and Business Management are emerging as the most prominent market segments. Systems Development and Integration is the fastest-growing segment, given the opportunities from the Internet and WAP technologies. India's share at US$5.7 billion, is close to 1.6% of the world market, but is expected to touch US$40 billion by year 2008, making it the fastest-growing country in the global IT services market.

New computing technologies allow businesses to benefit from efficient cross-enterprise interaction and end-to-end interaction through the seamless flow of information and knowledge. As businesses graduate from older, legacy device-specific and procedure-based applications to object oriented, modular designs, flexible and interactive client/server applications and, of late, device-neutral open platform (Internet) applications, conversion and re-architecturing projects are emerging as major business opportunities. The bulk of India's IT services projects relate to the conversion and re-architecture of older applications to support Internet and WAP technologies.

Table IT 13 — System platforms trends (%)

	Single User	Client/Server	Host-Centric
1997-98	14.8	42.9	42.3
1998-99	5.9	51.1	43.0
1999-00	3.9	85.6	10.4

Source: CIOL.

Vendors with long standing relationships and understanding of the client's legacy systems stand to gain most from re-configuring/re-engineering the computing infrastructure. Therefore, while the overall opportunity is tremendous, it will be narrowly distributed among few leading Indian companies having advantages of their long presence in the US market and their work with Fortune 500 companies, which form the bulk of the new e-business revenues.

IT-enabled services

IT-enabled services include customer interaction services, back office operations relating to finance and accounting, transaction process assistance, data conversion, HR (?) services, transcription services, content development and other services that can be delivered from remote locations (education/ training, research and consulting, etc.).

The global IT-enabled services market is currently estimated to be US$10 billon, projected to be a $140 bn market by 2008. Though IT-enabled services rely on lesser skills than hard-core software programming, they are being seen as a major opportunity for India. India has a business potential of US$ 20 billion by 2008, representing a 12% share of the global market, generating additional employment for 1.1 million people. IT-enabled services have the capacity to attract investment in infrastructure in India, and are a counterweight to the on-site service model that dominates exports.

Table IT 14 — IT-enabled services market trends in 2008, US$ billion

	2000		2008	
Services	Persons	Revenue	Persons	Revenue
Customer Interaction services including all centres	8600	0.08	270000	4.35
Bank office operations, revenue accounting, data entry, data conversion (including finance and accountancy) and HR services	15000	0.20	30000	4.56
Transcription and transaction services	5000	0.03	50000	0.87
Content development and animation	15000	0.18	300000	5.43
Other services-remote education, data research, GIS, market research and network consultancy	1400	0.02	180000	2.39
Total	45000	0.51	1100000	17.6

Source: NASSCOM estimates.

The major attraction of IT- enabled services stems from the potential to provide business/customer support from remote locations at lower cost. Because personnel costs account for 40% of service overheads, the business is an attractive proposition for countries that offer staff (tele-workers) with medium-level skills at a reasonable price. The business model is easily scaleable and offers high revenue growth opportunities as well.

E-commerce

Global e-commerce revenues were estimated to be US$10 billion in 1999, representing 0.05% of the global economy. However, e-commerce is growing exponentially, and is projected to touch US$200 billion by 2002, with the Internet already attaining critical mass to allow e-commerce to flourish.

India’s e-commerce market is still quite small, with total revenues of Rs 4.5 billion in 2000, most of it originating in the form of B2B commerce. However, increased corporate spending on e-commerce initiatives, government computerisation in billing and payment services, plus sharp growth in the SOHO segment augur well for India’s e-commerce services future. India’s e-commerce revenues are projected to touch US$ 10 billion business by 2008. In addition to infrastructure, India needs to create a favourable environment for e-commerce transactions through foolproof, secure, payment gateways, and suiTable tax and commercial laws covering cyber transactions.

The current business regulatory framework and fiscal incentives indeed support both business models, with a company’s choice determined purely by its domain expertise. In that regard, equal opportunities exist for companies engaged in software development and e-commerce, as well as infrastructure service providers. These opportunities are expected to increase when India fully deregulates its telecom sector - international long distance and voice markets – in the period 2002-04, opening up to global players as committed under the GATS.

3.3 Opportunities for EU companies

European companies must consider the opportunity offered by India’s information technology resources, keeping in view the essential differences in the synergy between US and Indian companies that have been responsible for the sector’s growth in the last decade, and identify new areas where there could be synergy between EU companies and Indian companies.

Unlike in the US, encouraging professional migration does not seem to be working for Europe, as revealed by the experiences with work permits. The reasons for this lie in the perceptions of Indian professionals, which lean heavily in favour of the US.

The US is likely to be the preferred destination for Indian IT professionals for these reasons:

- The Silicon Valley is the cutting edge of the IT industry, and the US is likely to give the most advanced opportunities at the higher end of the spectrum.
- Indians dominate Silicon Valley and there is already a critical mass of Indians who provide business opportunity on a large scale. Indian firms accounted for 3.6bn of the valley’s total revenues of 16.8bn. It is a self-sustaining cause that is growing enormously and dividing viciously.
- Indians find it easier to adjust to living in the US, which is not only an English speaking country, but also has an Asian Indian population of 2.5 million people, all in the upper income classes
- Work regulations in the US allow professional employees to switch jobs without any financial repercussions, which is a huge benefit as it offers personal advancement opportunities.
- Indians view the US as the ultimate land of opportunity and believe they can make it big in the US…the start up support is great in the US even for foreigners. Racial fears do not exist in the US unlike in some EU states, where ethnic and racial tensions have been reported of late.

Offshore Development

Even in the US, the migration model is reaching saturation levels, due to the increasing wage levels of Indian professionals, and introduction of minimum wage regulations, which seek to bridge the gaps in salaries of immigrant and national workers in knowledge industries.

With the limits of the work permit approach coming into sight, offshore development is emerging as a major business model, and is expected to take away increasing shares of business from body shopping and onsite contracts in the medium term. The increasing pace of foreign investments in India, in software technology parks and in other forms of enterprises, is evidence of the new business model.

The major requirements for an offshore development model are: good working conditions, state of the art infrastructure (software technology parks), reliable connectivity through international data links, employee benefits and incentives such as ESOPs. All these areas are being addressed in India's IT policies, to facilitate India as an offshore location for IT activities.

Harnessing offshore location advantages is easier for international players than for Indian software companies for two reasons:

- ✓ given the former established market linkages, offshore investments can receive steady flow of work at remunerative prices, made possible through disintermediation, and
- ✓ International players have much better and prospects of leveraging (ESOPs) of the parent company, to expand operations in India, while keeping cash pays-outs lower. For instance, almost 50% of Microsoft's employee remuneration is in the form of ESOPs, which may eventually be extended to global employees, including at Microsoft India.

Box 9 — EU's counterweight to Silicon Valley

For Europe, it is also important to pursue an India-centric investment approach, and build critical mass in offshore models, given the generation lead and the enormous pull the Silicon Valley has built with Indian professionals over two decades. The example of Silicon Valley is very relevant for European SMEs considering India as an IT destination for investments, because the real lead of Silicon Valley over all other technology clusters in the world, was in the cementing of business and technical ties (over 20 years) among Silicon Valley companies themselves and also between Silicon Valley and Indian enterprises (please see box 1'Humble origins').

European SMEs can learn important lessons from the Silicon Valley example. SMEs from Europe must consider forming enterprise clusters in India to develop business processes and solutions by sharing or farming out work to one another, and build a critical mass of solution providers in India, well integrated with EU-based enterprises, having strong links with front-end and prospecting companies in EU, developing products and services specific to the needs of European businesses. This would involve sharing of language- conversant professionals, sharing investment in IT enabled services, sharing investment costs in a reliable data transmission infrastructure, etc. as well as other forms of integration.

European businesses stand a good chance of succeeding in creating captive resource clusters in India, due to the availability of reliable, real time, long-distance communication networks, which were not available in the 1980s to the Silicon Valley. Focusing on building an industrial cluster in India rather than in the EU also does away with the potential socio-cultural issues associated with a work-permit-based approach.

Establishing a European information technology hub in India may seem visionary, but is feasible, achievable under the present conducive investment conditions in India, and is perhaps the most practical way of harnessing India's resource potential to suit the growing European market needs in information technology.

Structurally, a European IT hub in India can have three or more tiers, each characterised by a certain level of capital and complexity and therefore suiTable to a certain profile of investor. However, there are several opportunities in such a structure, from the small to the gigantic.

Typically, these tiers can be described as follows:

Solution providers: small enterprises specialising in certain types of business processes- accounting, Enterprise Resource Planning, IT-enabled services (payroll administration, transcription, contact centres, etc.), and software development centres working for EU clients. Such ventures have low entry barriers, and are highly scaleable, as they primarily depend on multiplying the skill base by adding more personnel to match growing business requirements. Such models potentially suit SMEs, and offer low-risk opportunities to enter the Indian market.

For instance, a French marketing company wished to set up a customer relations call centre to serve its clients in South East and West Asian markets (in English language) .It found that the set up costs for a 120-station call centre in Pune, India were in the region of US$ 400,000 including the space and dedicated leased-line costs. The company felt it could offer the telemarketing facilities at a flat rate of US$ 3 per man-hour, or US$ 600 per month per telemarketing agent, which included a tax-free profit for the enterprise.

The direct benefits perceived by at least one client of the centre were:

- Immediate availability of 120 telemarketing staff to promote its new Christmas launch products in important Asian marketing territories (without any recruitment delay)
- Availability of people who could speak English (difficult to find in its own country)
- No direct recruitment liabilities- a savings of US$ 20,000 per person in social security payments alone
- Contracts could be awarded on a half-yearly basis, amended upwards or downwards as to the number of agents attached to the assignment

Similar benefits could accrue in case of in-bound contact centres, i.e. centres in India operating in the home country language (French, German or Italian), assuming the availability of requisite language skills.

Non-English Language Platforms

From the European viewpoint of out-sourcing IT-enabled services, language is a major handicap in India, compared to Spanish- and French-speaking locations in South America and Africa. This is a cause for serious concern to India, even as it relies extensively on the US market for future growth. Therefore, India must seriously evaluate the barriers to extending its human resource potential to non-English environments and initiate suiTable measures in order to sustain its growth in an increasingly competitive IT services market world-wide.

However, non-English languages (French 4%, Spanish 5%, German 6% and Italian 3.2%) are growing much faster than English in online usage. By 2005, Internet usage is targeted to be equally distributed across English, non-English European languages, and Asian languages, predominantly Chinese and Japanese. Which means that world-wide, the non-English speaking population of IT users shall far outnumber English-speaking users.

Table IT 15 — Linguistic trends in net usage

Language	Access in 2000 Mn	%	Access in 2005 Mn	%
English	189.6	49.6	225	32.3
Non English	194.2	50.4	475	6708
European non-English languages	**113.8**	**29.8**	**223**	**32.2**
Asian Languages	78.6	20.6	250	35.6

Source: Internet

Institutions to generate critical mass of conversancy in important non-English languages to support IT enabled services globally, as non-English European languages are poised to overtake English in Internet usage as well as PC connectivity across the world.

The boom in the IT sector offers a virgin opportunity for the establishment of European Language proficiency centres, in all the important cities of India. At present, foreign languages are taught only in a few schools and colleges as part of the curriculum, or at a few language centres affiliated with Embassies and consulates. Less than 3000 students enrol annually for foreign languages, all over India.

The emerging opportunities for Indian and European companies hinge on the ability to churn out technical persons conversant with local languages of the important European markets for IT services. Based on projections that Europe will account for 25% of India's IT services business, there is an annual demand for 20,000 or more seats per annum for language proficiency centres, to cash in on European demand.

Language centres have enormous potential for European SMEs. Although they must follow a proper certification and franchise- based model and match home country standards for similar institutions. Like computer training institutes, language centres involve low capital, especially on the model of franchising that has been responsible for the nation-wide penetration of computer education in India. European companies that wish to introduce language –cum computer education under certification programmes can even tap existing franchisees thereby shortening lead times considerably.

Box 10 — Computer training and language learning costs in India

Franchise model for computer training centres:
Space Needs: 150-200 sqm suiTable commercial space
Franchise fee: Rs 0.5 million
Average fee: Rs 35–50,000 per year
Students: 50-75 per batch

Foreign language studies:
French (Alliance Francais): Rs. 4,000 per term; 100-120 students per batch
German (Max Mueller): Rs. 5,000 per term, 50 students
Japanese: Rs. 5,000 per term, 25 students

✓ **Archival Services and digitisation:**

Conversion of old technical documents, engineering drawings, records and other archives into digital archives, is a high-volume-low-value addition service that several Indian firms offer by way of IT-enabled services. For clients, the primary advantage of such jobs is the space savings (automotive companies like Ford have warehouses full of millions of documents) and the instant access of old records and conversion into digital drawings for use in engineering software such as Auto CAD.

Indian outage rates for archiving of engineering drawings are currently in the range of US$ 0.06 per A4 sheet, with minimum volumes of 1 million pages per contract. The current practice is to despatch teams of 3 or 4 persons, along with high-resolution scanners, to the client sites, and complete the scanning as fast as possible, then bring the unedited materials to India for conversion into suiTable formats. The end product is in the form of CDs or other forms specified by the client.

Document conversion and archival services can be interesting for the European market as well, with its large engineering base. However, digitisation is an onsite business given the practical difficulties in exporting the raw material, some of which can be sensitive and proprietary material. Business development for such services this would require intensive marketing and credibility building, which can be facilitated through local marketing offices, agents, or even partnerships with SMEs in Europe.

✓ **Composing and type setting:**

At the lower end, locating pre-publishing services in India is emerging as yet another important business opportunity for foreign companies. International publishers like Macmillan, and even large consultancy firms (McKinsey) have outsourced a substantial part of their global printing/ pre-press activities such as composing and proofing to their Indian operations. Besides offering substantial cost advantages, these operations gain from export incentives (tax exemption) under Indian laws, which makes India an attractive location for these services.

While such advantages are presently available only in the English language, in due course, similar advantages can accrue for publishers in other languages as well.

Investment in IT infrastructure

There is an enormous need to build a reliable infrastructure-data transmission gateways, submarine and national backbone optic fibre cabling, ready-built software technology parks and IT training campuses- to support the IT sector growth needs. This generates opportunities for EU companies to invest in world class IT enabling infrastructure, for which India offers significant fiscal incentives and up to 100% foreign ownership facilities.

The most interesting opportunities are visible in the following:

- Storage Area Networks and Data Centres
- Gateway / earth stations
- World-class intelligent buildings and related physical facilities
- IT townships or campuses (Euro Towns), consisting of language-cum- IT training with certification affiliated with EU recognised universities, software development centres, teleworking centres, IT-enabled service facilities, linked closely with EU companies
- End-to-end connectivity networks (submarine and satellite bandwidth, national Internet backbones, last mile connectivity, etc.)

Data Centres and Storage Area Networks

While there is a continuous development of data storage technologies, it is impractical and expensive for business enterprises to keep upgrading their data storage systems frequently. At the same time, data security and storage are becoming specialised businesses, and require new skills, which may not be the competence areas of a business enterprise. As a result, outsourcing of data storage – storage area networks and data centres- is becoming a major business opportunity. While these involve high capital costs, data storage networks offer customers an innovative way for foolproof and efficient storage of their data without compromising on data security. Banking and financial services, utilities, and manufacturing industries with large customer base are becoming important customers for data storage services.

Storage Area Networks (SANs) and data centres can also be established in partnerships with large equipment manufacturers and data transmission service providers. Opportunities exist for SMEs in facilities leasing, connectivity, maintenance and management, or total solutions.

Gateway earth stations

With the laying of high-speed optic fibre networks on the national backbone, the second tier of connectivity requires earth stations, linking to the main hubs through satellite or microwave links. Earth station gateways, capable of serving 40-165 Mbps data transmission, are feasible options for industrial complexes, industrial parks and export-oriented zones, where several industrial users (or software solution providers) are located in close proximity, and require dedicated data transmission links.

Under current Indian conditions, earth stations involve total capital costs of US$ 5-6 million per location, and can break-even in three years, on lease bookings at the level of 50 Mbps, which can be attained with 20-25 corporate users.

Information Technology Parks/ Intelligent Buildings

A major factor in the growth of India's IT exports in recent years has been the concept of Software Technology Parks, which offer ready-to-move-in built up space, high speed data links, and administrative assistance in the form of investment clearances and export certification. While the first software technology parks were set up by the Department of Electronics, the high demand for similar facilities has seen local governments in several states, and even private enterprises set up similar facilities, or even campuses replete with social amenities for people working in the location.

The TIDEL Park in Chennai, and the HITEC City in Hyderabad, are examples of world-class intelligent buildings (also classified as software technology parks), which offer large spaces for IT companies within or in close proximity of a city. Costs of industrial land are in the region of US$ 5 per sqm in areas close to the prime cities, and rentals in the premium IT parks (e.g. TIDEL Park Chennai) are in the region of US$ 30 per sqm per month, for spaces of 1,000-5,000 sq m floor area. With more than 1 million sqm of IT space being created in these parks, the rental business itself is estimated to be more than US$ 300 million per annum, which is a market opportunity for specialised real estate developers interested in offering Intelligent Buildings or Technology Parks.

While government regulations do not permit foreign investment in real estate dealings, they allow investment in industrial parks, which are included in the definition of infrastructure projects.

Euro Campuses and Euro Towns

The government encourages private including foreign investments in software technology parks, and provides a tax holiday for five years, on the lines of other industrial infrastructure ventures. This potentially enables foreign investors to set up closed-group townships comprising intelligent buildings with teleworking facilities for developers and service companies, apartment units, training centres, and other facilities that may be of specific relevance to the users (such as European food kitchen, videoconferencing centres linking Europe, crèches, exhibition and business centres for visiting EU software executives, etc.), entities that may come to be called Euro Towns (on the lines of China Towns) Such complexes can be developed in partnership with the local government, considering the substantial land requirements involved in such ventures. The concept of Euro Towns may seem far- fetched, but may prove to be a compulsory ingredient to the building of critical mass for the long term development of Indo-European ties in information technology.

India may well have sufficient land near all the principal cities to make such a concept feasible as satellite towns, without getting into grass roots development. The recent decision of the Tamil Nadu government to develop an IT corridor along the coast of Chennai, is an interesting example of leveraging proximity to an urban area to fuel foreign investments in high-tech industrial parks.

Internet Backbones

At the upper end, opportunities exist for the creation of end-to end connectivity among Indian cities as well as with international nodes. Investments in a national Internet backbone for a 1-terabit capacity can involve capital outlays in the range of US$ 3-4 billion, while setting up a submarine cable link to the Far East, can entail up to US$ 2 bn of investment. Up to 100% foreign ownership is allowed in infrastructure projects providing end-to-end connectivity.

Overall, India offers ample opportunities across the spectrum of IT activities, for small as well as large international players. A large resource base, favourable investment policies and facilitating role of the government await to be customised by European business persons, while interventions need to be made to bridge the language and cultural barriers that currently limit Europe's use of India's intrinsic advantages in the sector.

EU companies must therefore look at an investment approach to India both from a strategic as well as economic perspective in the long term, stressing less on the work permit route, and focusing on building critical mass in a new breed of IT professionals that is well-versed in European languages, understands the AEU's business and social cultural aspects and sensibilities, and works with European enterprises, at Indian/Asian cost levels.

4. Recommendations

The US example

US relations with India have been built steadily through a 20-year immigration of high skilled professionals. One solution for Europe would be through the creation of more long-term schemes, particularly since language appears as an additional gulf to be bridged.

For Europe, the work permit route is unlikely to replicate a US type success, especially as cost advantages are likely to erode over time, while new socio-cultural issues may emerge and come to the fore.

Already, the limits of the immigration model have begun to emerge in the US, which is inherently unsustainable at present levels. At some stage, the focus will converge on India-centric offshore business models, where the EU will compete for Indian personnel, physical space and infrastructure with other destination markets principally the US and Japan.

Thus, the EU may find greater value in terms of investment opportunities in a model that is, in a sense, an inverse of the Silicon Valley model. Where the Silicon Valley success came from migration of the human resource to the destination market, catalysed by ethnic affinity and immigration hopes, success in the new model will come from bringing European market opportunities to India's human resource pool, supported by linguistic conversancy and an accepTable quality of life in India.

To achieve this model, Europe must manage to create Euro-centric industry-academic partnerships, including language proficiency and cultural conversancy as well as large-scale physical premises of an international standard to support manpower-intensive development.

Investing in *Finishing Universities* that combine IT proficiency with European language and cross-cultural training may a plausible step toward this end. There might for example be four regional nodes of excellence - supplying 5,000 'European'-speaking software professionals per year, carrying out projects for European companies to meet 'European' needs, besides training for mainstream software services as well as IT-enabled services.

Certificate courses to support CRM needs in non-English European languages will help meet the same needs, improving proficiency in European languages. One way of creating and sustaining the new resource base is to create an umbrella Indo-EU InfoTech Initiative, seeded by industrial enterprises, EU language universities, Indian IT centres of Excellence, and venture funds. The easy availability of education loans-up to US$ 20,000- can support the enrolment of graduates in specialised educational programmes for the Initiative, in partnership with leading institutions in India.

Operations and opportunities

To support the development of commercial relations between India and Europe, it would be necessary to identify one or more geographical zones in the EU as a melting pot for Indo-EU enterprise that can eventually grow into the European answer to Silicon Valley, nucleating India-centric projects sponsored by EU government and industry. Important elements of such a software zone would include: Business Proximity Centres, with highly trained Indian and other professionals conversant in European languages, focused on front-end, client-relationship activities, infrastructure to support online connectivity with the Offshore Development Centres in India, and family campuses for expatriate developers.

Such a *software complex* spanning two continents, would enable leading EU companies to locate business or move development activities into these zone companies, besides having a direct link to one or more remote processing complexes in India to handle their real-time as well as project development needs, at competitive costs, with greater linguistic and cultural affinities than with any other resource base in the world.

Within India, this would attract Indian citizens, especially women, who are less enthusiastic about the prospects of migrating overseas, and would prefer to serve world markets from their home base, while strategically expanding the stock of competitive IT professionals conversant with non-English media. Further, such a non-migratory resource base would be sustainable and tailored to the well-evaluated long-term needs for IT services originating in the destination markets.

The road forward will see Europe increase its investments in captive offshore facilities in India as the node to service important business applications including mission critical activities, under the supervision and control of European technical and business personnel, while creating a resource pool that is increasingly bilingual, addressing English and other language markets outside India and the EU as well as serves domestic market needs.

Investment in IT-related telecom service infrastructure, to allow growth through offshore-driven revenue streams, while taking advantage of tax breaks related to Infrastructure projects, is also crucial to the development of any other activity in India.

The training and employment of greater numbers of women, to mitigate professional migration outside India, may a solution for European linked businesses.

Finally, creating tax-exempt venture capital funds specifically to incubate software ventures, including business partnerships with budding Indian entrepreneurs working overseas, would greatly stimulate

APPENDIX 1

PROFILES OF THE TOP TEN PLAYERS

TATA CONSULTANCY SERVICES
Products & services: Consultancy, systems integration, custom software development, packaged software
Collaborations: Lotus IBM, oracle, Sun, Solaris, IBM Tivoli, UGS, Symantec, Netscape, Microsoft, IBM
Revenues: Rs. 314 billion
Segment wise break-up – 91.3% exports, 6.9% domestic, 1.8% packaged software
Commissioned the latest 64 – bit Server from IBM at an investment of Rs 250 Mn.
13 centres assessed at SEI CMM level 5 (7 in the previous year)

WIPRO
Products & services: IT products & software solutions and services
Revenues: Rs. 130 billion
Segment-wise break-up: 60% exports, 5.3% domestic, 1.5% workstations, 11.5% desktops, 5.8% networking, 9.4% services, 6.5% others
Expansion into Europe, especially Germany
Europe's share in revenue up from 24% to 29%

INFOSYS TECHNOLOGIES
Products & services: Customised software services and banking products
Revenues: Rs. 19 billion
Segment –wise break-up: 86.6% services 13.4% others.
Most high-profile Indian IT solutions company, with high brand equity with customers.
Partnership with Microsoft for next generation product development

COMPAQ INDIA
Products & services: computer hardware, solutions and services
Revenues: Rs. 17.60 billion
Segment – wise break up: 48.6% desktops, 12.7% services, 2.7% workstations, 112.7% Unix services, 9% PorTables, 14.3% PC servers
Topped desktops, PC servers

IBM INDIA
Products & services: sales and marketing of IBM services, PCs and software products and services (SI consulting, ITES, software developments)
Revenues: Rs. 16.62 billion
Segment-wise break – up: 30.3% exports, 16.3% domestic, 4.9% packaged s/w, 8.3% Unix servers, 7.6% PC servers, 20.9% desktops, 8.8% other systems, 2.9% others
Major outsourcing deals and solutions
Systems growth 36%; top vendor of notebooks

HP INDIA
Products & services: printers, servers, workstations, PCs and services
Revenues: Rs. 15.40 billion
Hardware break-up: 30.2% desktop, 14.3% Unix servers, 0.8% porTables, 13% lasers, 16.9% inkjets, 6.2% PC servers, 3.9% workstations, 14.8% others
Sharp fall in growth, still undisputed printer leader
Major UNIX server and PC seller to banks

NIIT
Products & services: IT education & training, software solutions, knowledge solution
Collaborations: Microsoft, Sylvan Prometric, Netg, Red Hat and Oracle
Revenues: Rs. 13.75 billion
Services break-up: 50.3% learning solutions 49.7 s/w solutions
Retained its leadership in education and training
Half of the revenues came from learning solutions

HCL TECHNOLOGIES
Products and services: technology development, networking, software product engineering and applications engineering
Revenues: Rs. 13.32 billion
Segment – wise break-up: 42.9% tech devp service, 17.2% s/w product Eng. services, 25.5% application services, 11.3 networking, 3.2% others
Order book position from alliance partners swelled to $ 600 Mn

HCL INFOSYSTEMS
Products and services: desktops, servers, notebooks, networking and services
Revenues: Rs. 12.76 billion
Segment-wise break-up: 47.7% desktops, 4.9% porTables, 15.6% servers, 20% services, 11.8% others
Services division made strong inroads into the international market
Exports, primarily from professional services, jumped from the earlier 4.7% to over 12%

SATYAM COMPUTER SERVICES
Products and services: software and services
Revenues: Rs. 12.20 billion
Segment-wise break-up: 93.7% services, 6.3% packaged s/w
Increased overseas presence in APAC, West Asia
Net, e-com applications generate 26% of revenue

APPENDIX 2

IMPORTANT EUROPEAN COMPANIES IN INDIA

Moser-Baer Software Ltd.
63, Ring Road, Lajpat Nagar-III, New Delhi – 110 024
Tel: 011-6832762
Fax: 6838238
SCI Software India Pvt. Ltd.
9-D, Pocket-C, Sidhartha Extension, New Delhi
Tel: 011-6834428
Fax: 7477877

Rebus Software Pvt. Ltd.
701, Udyog Vihar, Phase V, Gurgaon (Haryana)
Tel: 916343021, 91343022
Fax: 91343024
E-mail: Henry.D'Souza@RebusGroup.com

ST Micro-Electronixs (India) Pvt. Ltd.
Plot No. 2 & 3A, Sector 16A, Institutional Area, Noida-201 301 (UP)
Tel: 0091-0124-515262, 515264
Fax: 0091-0124-515306, 515267

Alcatel Modi Network Systems Ltd.
13th Floor
Hemkunt Towers, Nehru Place
New Delhi – 110 019
Tel: 91-11-643 4544
Fax: 91-11-642 2211
www.alcatel.com

CG MAERSK Information Technologies Ltd.
Alexander Square, III Floore
34/35 Sardar Patel Raod, Guindy
Chennai – 600 032
Tel: 91-44-230 0050
Fax: 91-44-235 4017
maacgmbd@maersk.com

DDE ORG Systems Ltd.
Dr. Vikram Sarabhai Marg
Wadi wadi
Baroda 390 007
Gujarat
Tel: 91-265 –391 334 (9 lines)
Fax: 91-265- 382 029
www.ddeorg.com

Deutsche Software (India) Limited
Raheja Towers, MG Road
Bangalore – 560 001
Tel: 91-80-559 6314
Fax: 91-80- 559 7439
srinivasan.nagarajan@db.com

Philips Software Centre Pvt. Ltd.
1, Murphy Raod, Ulsoor
Bangalore – 560 008
Tel : 91-80-557 9000
Fax:91-80-556 0580
http://www.philipssoftwarecentre.com

SAP India Pvt. Ltd.
Thapar Niketan
7/4 Brunton Road
Bangalore-560 025
India
Phone: +91/80/509-5056
Fax: +91/80/509-5055
k.p.vinod@sap-ag.de

Siemens Communication Software (SCS)
giridhar.patankar@blr.spenl.in
Siemens Information Systems Ltd.
130, Pandurang Budhkar Marg
Worli, Mumbai - 400 018
Tel: 00 91 22 498 7000-02
Fax: 00 91 22 493 8941
www.sislindia.com

Astral Tele*Foundation Pvt. Ltd.
E-215, East of Kailash,
New Delhi - 110065
Phone: 6475595; Fax: 6451625
www.astraltel.com

APPENDIX 3

SELECT EUROPEAN INVESTORS IN INDIA'S IT SECTOR

Moser-Baer Software Ltd.
63, Ring Road, Lajpat Nagar-III, New Delhi – 110 024
Tel: 011-6832762
Fax: 6838238

SCI Software India Pvt. Ltd.
9-D, Pocket-C, Sidhartha Extension, New Delhi
Tel: 011-6834428
Fax: 7477877

Rebus Software Pvt. Ltd.
701, Udyog Vihar, Phase V, Gurgaon (Haryana)
Tel: 916343021, 91343022
Fax: 91343024
E-mail: Henry.D'Souza@RebusGroup.com

ST Micro-Electronixs (India) Pvt. Ltd.
Plot No. 2 & 3A, Sector 16A, Institutional Area, Noida-201 301 (UP)
Tel: 0091-0124-515262, 515264
Fax: 0091-0124-515306, 515267

Alcatel Modi Network Systems Ltd.
www.alcatel.com

CG MAERSK Information Technologies Ltd.
maacgmbd@maersk.com

DDE ORG Systems Ltd.
www.ddeorg.com

Deutsche Software (India) Limited
srinivasan.nagarajan@db.com

Intergraph (India) Ltd.
www.intergraph.com/india

MacNeal Schwendler
mmprasad.macsch@smg.sprintrpg.vsnl.net.in

Philips Software Centre Pvt. Ltd.
www.philips.com

Robert Bosch India Limited
rbin.marketing@in.bosch.com

SAP India Pvt. Ltd.
k.p.vinod@sap-ag.de

Siemens Communication Software (SCS)
giridhar.patankar@blr.spenl.in

Siemens Information Systems Ltd.
www.sislindia.com

Astral Tele*Foundation Pvt. Ltd.
www.astraltel.com

Churchill India (P) Limited
amit@churchill.co.uk

APPENDIX 4

LIST OF USEFUL ORGANISATIONS IT SECTOR

Ministry of Information Technology
Electronics Bhavan
6, CGO Complex, Lodi Road
New Delhi – 110 003
Tel : 91-11- 436 4041
Fax: 91-11- 4363134
http://www.mit.gov.in/

National Association of Software Service Companies (NASSCOM)
Teen Murti Marg
Chanakyapuri
New Delhi – 110021
Phone: 91 11 3010199
Fax: 91 11 301 5452
www.nasscom.org

Electronic and Computer Software Export Promotion Council
PHD House, 3rd Floor,
Ramkrishna Dalmia Wing, Opp Asiad Village,
New Delhi 110016
Phones: +91-11-6510632,6965103,6964463
Fax: +91-11-6853412
http://www.indiansources.com

Manufacturers Association of Information Technology (MAIT)
4th Floor, PHD House
Opp. Asian Games Village
New Delhi 110 016
Tel# 6855487/6866976
Fax# 6851321
http://www.mait.com

Electronic Components Industries Association
ELCINA House, 422 Okhla Industrial Estate, New Delhi, INDIA-110020
Tel : +91 (011) 6924597, 6928053 Fax : 6923440
http://www.elcina.com

The Cellular Operator's Association of India (COAI)
14, Bhai Veer Singh Marg,
New Delhi 110 001
Tel: + 91 11 334 9184/9275
Fax: + 91 11 334 9276/77
http://coai.com/

European Commission

Guidebook for European Investors in India

Luxembourg: Office for Official Publications of the European Communities

2001 — 190 pp. — 21 x 29.7 cm

ISBN 92-894-4141-0