



## A SURVEY OF TECHNOLOGY INTENSIVE EXPORTS FROM INDIA

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### 1. Introduction

THE *World Investment Report 2002* (UNCTAD) has classified manufactured products as low technology, medium technology and high technology. Low technology products tend to have stable, well-diffused technologies largely embodied in capital equipment, with low R&D and skill requirements and low economies of scale. Textiles, garments, footwear, other leather products, toys, simple metal and plastic products, furniture and glassware fall under this category. Medium technology products tend to have complex but not fast-changing technologies, with moderate levels of R&D but advanced engineering and design skills and large scales of production. Labour costs tend to be a major element of cost in medium technology products. These are heavy industry products such as automobiles, machinery, standard electrical and electronics products. High technology products call for advanced manufacturing capabilities, large R&D investments, advanced technology infrastructures and close interactions between firms, universities and research institutions. These are complex electrical and electronics (including information and communication technologies) products, aerospace products, precision instruments, fine chemicals and pharmaceuticals. Classification of industry sectors in terms of low technology, medium-low technology, medium-high technology and high technology, by OECD is given in Table 1.

High technology exports are now the largest foreign exchange earners for the developing world. According to *World Investment Report 2002* (UNCTAD), high technology exports by developing countries amounted to US\$450 billion in 2000 – US\$54 billion more than primary exports, US\$45 billion more than low technology exports, US\$40 billion more than medium technology exports and US\$215 billion more than resource based exports. India is ranked 5th in the resource based exports while 16th in non resource manufactures among the top 20 export winners (by technology category during 1985-2000). However, India is ranked 9th in low technology manufactures and 7th in medium technology manufactures.

India's gross merchandise exports crossed US\$50 billion in 2002-03, registering a share of 0.7 per cent of world merchandise exports. Classification of India's

**TABLE 1**  
**TECHNOLOGICAL CLASSIFICATION OF**  
**MANUFACTURING INDUSTRY**

<i>Technology Category</i>	<i>Industry</i>
<b>Low technology</b>	1. Food, beverages & tobacco products 2. Textiles, leather & footwear 3. Wood, paper & paper products 4. Rubber & plastic products
<b>Medium-low technology</b>	5. Other non-metallic mineral products 6. Cement & glass 7. Basic metal & metal products 8. Chemicals excl. pharmaceuticals 9. Electrical machinery
<b>Medium-high technology</b>	10. Non-electrical machinery 11. Transport equipments
<b>High technology</b>	12. Pharmaceuticals 13. Electronics

**Note:** The above technological classification is based on OECD Science, Technology and Industry Scoreboard, 2001

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merchandise exports for last two years into resource based, low, medium and high technology exports is given in Table 2.

**TABLE 2**  
**INDIA'S GROSS MERCHANDISE EXPORTS BASED ON TECHNOLOGY INTENSITY**

(Rs million)			
Sector	2001-02	2002-03	% change in 2002-03 over 2001-02
Resource Based	178,348 (8.53)	210,767 (8.34)	18.18
Low Tech	1,235,754 (59.12)	1,417,166 (56.06)	14.68
Medium Tech	463,870 (22.19)	569,633 (22.53)	22.80
High Tech	156,104 (7.47)	177,953 (7.04)	14.00
<b>Total (incl. others)</b>	<b>2,090,180</b> <b>(100.00)</b>	<b>2,527,900</b> <b>(100.00)</b>	<b>20.94</b>

**Note:** Figures within brackets indicate percentage shares of the total.

**Source:** Compiled from *Foreign Trade Statistics of India – Principal Commodities and Countries*, DGCI&S, March 2003.

According to World Development Indicators 2001 compiled by the World Bank, India's high technology exports were US\$1.25 billion in 2000 (0.12% of world high technology exports) and US\$1.7 billion in 2001.

## 2. Technology Intensive Exports

Technology intensive exports are exports of such products/equipment/plants wherein value of technology input, R&D, knowledge, design, drawings and expert technical services is much higher than value of raw materials and capital inputs. In an endeavour to analyse technology intensive exports from country, which have been taken to be comprising exports of capital goods, computer software services, turnkey and construction projects, management and technical services, know-how, design & drawings, royalty payment receipts, and receipts from technology based joint ventures/wholly owned subsidiaries abroad. According to this criteria, Table 3 gives data of India's technology intensive exports from 1994-95 to 2002-03. Technological intensive exports, in absolute terms, have grown from Rs. 74,320 million in 1994-95 to Rs. 643,350 million in 2002-03, registering an eight-fold increase. In terms of percentage share of gross merchandise exports and miscellaneous services receipts cumulatively, the share of technology intensive exports has increased from 8.38 per cent in 1994-95 to 18.73 per cent in 2002-03.

According to World Development Indicators 2001, compiled by the World Bank, India's high technology exports were 6 per cent of its manufactured exports compared to 18 per cent in the case of Brazil, 20 per cent in the case of China, 25-26 per cent in the case of Israel & Japan and 57-60 per cent in the case of Malaysia and Singapore. World Bank Indicators, however look at only manufactured products exports and exclude services exports.

*Thus, although the share of our technology intensive exports in gross exports is rising, we need to sustain and accelerate the growth of technology intensive exports to enhance their share to 40-50 per cent of gross exports in next five years to catch up with other countries.*

### 3. Survey on Technology Intensive Exports

Sustenance and acceleration of technology intensive exports necessitates firm level understanding and analysis of technology intensive exports. Thus, DSIR and IIFT decided to embark upon this survey on an annual basis in 1994-95. The survey involved data collection and compilation of information from technology intensive organisations through a well structured questionnaire, supplemented by one-to-one interactions during field visits. Table 4 gives number of organisations contacted and number of organisations that responded and whose information has been included in the publication.

It may be seen that the number of companies/organisations which were contacted during the annual survey has increased more than 10-fold in seven years. It may be mentioned here that from 1998-99 onwards, the responding organisations also significantly included

potential technology exporters. For example, in 2001-02, out of total 377 respondents, 248 were actual exporters and the remaining potential exporters. Technology intensive exports of these surveyed companies/organisations during 1994-95 and 2001-02 are given in Table 5. It may be seen that 34 organisations reported technology intensive exports to the tune of Rs. 9,000 million in 1994-95 as against Rs. 156,849 million in 2001-2002 by 248 companies/organisations engaged in technology intensive exports.

Table 5 also gives the break-up of technology intensive exports in terms of technology intensive products, know-how, computer software services, capital goods, turnkey projects and technical consultancy services. It is apparent that technology intensive products, with over 50 per cent contribution have been responsible for quantum jump in reported exports during 2000-01 and 2001-02. Other major contributors in reported exports have been turnkey project exports and computer software services exports at around

TABLE 3  
INDIA'S EXPORTS OF TECHNOLOGY INTENSIVE PRODUCTS/SERVICES

		(Rs million)								
Sl. No.	Sector	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03
1	Capital goods <sup>1</sup>	30,950	37,380	47,680	50,740	54,470	52,260	70,350	78,430	101,970
2	Computer software services	15,350	25,200	39,000	65,630	109,400	171,500	283,500	365,000	475,000
3	EXIM Bank export contracts									
	(a) Turnkey projects	4,640	7,120	8,610	12,400	17,600	17,310	15,350	30,510	31,220
	(b) Construction	8,180	2,530	7,630	480	7,150	12,820	520	1,340	16,960
	(c) Consultancy services	2,680	3,680	3,900	3,260	4,350	3,800	2,240	2,740	2,660
4	Management & technical services <sup>1</sup>	5,250	5,000	6,560	7,250	8,250	7,500	10,500	12,000	9,250
5	JVs & wholly owned subsidiaries	7,230	4,780	1,930	1,930	1,280	2,150	5,530	12,340	3,590
6	CSIR's earnings from contract research and consultancy (domestic & foreign)	1,370	1,670	1,900	2,090	2,040	2,520	2,450 <sup>2</sup>	2640 <sup>2</sup>	2,700 <sup>2</sup>
	CSIR's foreign exchange earnings	40	40	60	150	150	NA	NA	NA	NA
	<b>TOTAL (Technology Intensive exports)</b>	<b>74,320</b>	<b>85,730</b>	<b>115,730</b>	<b>141,840</b>	<b>202,650</b>	<b>267,340</b>	<b>387,990</b>	<b>502,360</b>	<b>643,350</b>
7	Merchandise exports (DGCI&S)	826,740 (26,330) <sup>3</sup>	1,063,530 (31,797) <sup>3</sup>	1,188,170 (33,470) <sup>3</sup>	1,301,010 (35,006) <sup>3</sup>	1,397,520 (33,218) <sup>3</sup>	1,595,610 (36,822) <sup>3</sup>	2,035,710 (44,560) <sup>3</sup>	2,090,170 (43,827) <sup>3</sup>	2,527,890 (52.2) <sup>4</sup>
8	Misc. services receipts of gross invisible receipts <sup>5</sup> (RBI)	60,030 (1,912) <sup>3</sup>	81,910 (2,430) <sup>3</sup>	83,630 (2,354) <sup>3</sup>	154,890 (4,163) <sup>3</sup>	313,500 (7,447) <sup>3</sup>	440,440 (10,135) <sup>3</sup>	591,700 (12,875) <sup>3</sup>	699,350 (14,671) <sup>3</sup>	906,160 (18,735) <sup>3</sup>
9	Technology intensive exports as a percentage of merchandise exports plus misc. receipts.	8.38	7.48	9.07	9.74	11.84	13.13	14.77	18.01	18.73

<sup>1</sup> These are part of total engineering exports: Rs. 149,760 million (96-97); Rs. 171,060 million (97-98); Rs. 171,900 million (98-99); Rs. 196,540 million (1999-2000); Rs. 276,270 million (2000-01); Rs. 284,970 million (2001-02); and Rs. 380,930 million (2002-03).

<sup>2</sup> Estimated; <sup>2</sup>includes earnings from other sources besides Contract Research and Consultancy

<sup>3</sup> US\$ million.

<sup>4</sup> US\$ billion.

<sup>5</sup> Major components of miscellaneous services receipts are: Software Services, Management Services, Communication Services, Royalties, License Fees, etc.

**Note:** \*Capital Goods exports are part of DGCI&S merchandise exports.

Exports under Sl. No. 2 to 6 are part of RBI's data on miscellaneous receipts.

**Source:** Annual Reports of the Ministry of Commerce, Exim Bank, EEPC, CSIR, RBI and Economic Survey.



other segments, R&D expenditure as a percentage of annual turnover varies from 1.57 per cent, in case of capital goods exporting organisations to 1.69 per cent, in case of technology intensive products exporting organisations to 2.12 per cent, in case of technology know-how exporting organisations. *This demonstrates that more the R&D intensity, higher is the technological/knowledge content of exports.*

Of the 248 companies/organisations captured by the survey, 93 organisations had foreign collaborations. Total exports of these 93 organisations during 2000-01 and 2001-02 were Rs. 38,040 million and Rs. 61,930 million respectively. Average exports of these 93 organisations for the year 2001-02 were Rs. 666 million compared to average exports of Rs. 632 million for all the 248

organisations. *Since average exports of organisations remain unaffected, foreign collaborations does not seem to have any impact on the export intensity of organisations.* This finding is contrary to the common expectation and needs to be corroborated.

## 5. Technology Intensive Exports Potential

The target is to enhance India's gross merchandise exports from the present level of 0.7 per cent of world exports to 1 per cent in the next 3-5 years. Some of the areas where India is making impact are computer software, automobiles and auto components and pharmaceuticals. India's high technology exports, which according to World Bank were 0.12 per cent of world high technology exports in 2000 have the potential to be enhanced to at least 0.5 per cent of world high technology exports in view of India being viewed as the global destination for R&D, engineering design and prototype development, and a manufacturing hub for high technology products. The companies in the country are integrating technology strategies with business strategies and are well poised to strengthen their position in the domestic as well as international markets. According to the Georgia Tech (USA), high tech indicators, compiled for 33 countries, India's present high tech production capability (on a scale of 10 to 50, 10 implying no capability and 50 implying capable of producing technically advanced state of the art products) is 31 and is likely to be 44 after 15 years. Thus, there lies ahead a great opportunity to make a dent in the global technology trade market, provided a healthy government – industry partnership is established where industry plays a pro-active role, ably supported by conducive government policies.

**TABLE 6**

### SECTORWISE EXPORTS OF THE RESPONDING COMPANIES/ ORGANISATIONS BASED ON THE TECHNOLOGY LEVELS

Sector	No. of Exporters	(Rs. million)		
		2000-01	2001-02	% change in 2001-02 over 2000-01
High-Tech (HT)	31	48,775 (43.76)	70,852 (45.17)	45.26
Medium-Tech (MT)	76	41,101 (36.87)	57,553 (36.69)	40.03
Low-Tech (LT)	141	21,585 (19.37)	28,444 (18.13)	31.78
<b>Total</b>	<b>248</b>	<b>111,461 (100.00)</b>	<b>156,849 (100.00)</b>	<b>40.72</b>

**Note:** Figures within brackets indicate percentage share of the total.

**Source:** Field Survey

**TABLE 7**

### CHARACTERISTIC FEATURES OF RESPONDING COMPANIES CLASSIFIED ACCORDING TO NATURE OF EXPORTS

Sector	No. of Cos.	Manpower Employed		R&D Expenditure (Rs mn.)		Annual Turnover (Rs mn.)		Exports (Rs mn.)		R&D Expenditure as %age of Turnover (2001-02)
		Total	S&T	2000-01	2001-02	2000-01	2001-02	2000-01	2001-02	
		Consultancy Services	11	4,417	1,785	74	82	5,616	6,125	
Turnkey & Project Exports	25	44,234	3,545	309	301	144,493	157,198	23,018	30,508	0.19
Computer Software & Hardware Services	4	18,300	10,258	18	13	3,650	30,537	21,968	29,471	0.04
Technology Know-how	26	27,578	9,561	520	613	30,008	28,900	1,491	2,488	2.12
Capital Goods	35	96,119	16,238	1,973	1,989	113,010	127,027	4,363	11,869	1.57
Technology Intensive Products	147	1,57,541	10,056	3,469	6,149	334	364,372	58,558	80,985	1.69
<b>Total</b>	<b>248</b>	<b>3,48,189</b>	<b>51,443</b>	<b>6,363</b>	<b>9,148</b>	<b>601,227</b>	<b>714,159</b>	<b>111,461</b>	<b>156,849</b>	<b>1.28</b>

### AUTO EXPORTS

#### Auto Components Exports Touch \$1 bn

Indian auto sector is on an overdrive. After achieving one million passenger vehicles sales annually, the export of auto components touched \$1 billion during 2003-04, registering 32 per cent growth over the last year's figure valued at \$760 million. The Auto Component Manufacturers' Association (ACMA) has set an ambitious export target of \$2.5 billion by 2010.

As per the ACMA estimates, the exports in rupee terms went up by 29 per cent to touch Rs. 4,500 crore. The production of auto components jumped by 20 per cent to a staggering Rs. 30,540 crore in 2003-04. A major share of the exports was made to countries in West Asia, Africa, Europe and the USA.

The number of manufacturers in the auto components sector in India was estimated at 416 in 2002-03, employing around 250,000 people.

According to auto analysts, the growth in the auto components sector is likely to continue in the coming years since international auto majors are cutting costs to improve their profitability. This has driven them to cheaper destinations like India, China, Mexico and Brazil.

Input costs for component makers, which had increased significantly in 2003-04, are now likely to fall following a cut in peak customs duty rate from 25 per cent to 20 per cent and a reduction in the special additional duty of 4 per cent on customs duty.

The manufacturing costs of Indian component manufactures is on an average 20-30 per cent lower than that of their American counterparts, despite the fact that the productivity in India is lower by 50-75 per cent than the international standards.

At present, many international auto companies, including Ford, General Motors, DaimlerChrysler, Fiat, Volkswagon and Toyota have set up procurement offices in India. □

#### TVS Motor Seeks to Patent New Engine Technology

TVS Motor Company has sought a patent for the technology it has developed for its latest vehicle, the TVS Centra. The engine technology, which the company calls 'VTi' (for variable timing intelligent), has three components

in it — friction reduction, better combustion and lesser fuel wastage.

TVS Motor's R&D team has figured out two methods for making the fuel burn better inside the cylinder. These include (i) a spark plug that sparks twice in quick succession, and (ii) a device that warms up the engine quickly. A cold engine drinks more fuel than a warm one.

The new technology would reduce fuel wastage. This is how it works: air that comes through the air filter, and petrol from the tank are mixed in the carburettor. The engine sucks in this mixture. When the motorcycle slows down, the engine sucks in less air and correspondingly more fuel. In the TVS Centra, a valve senses the vehicle's deceleration and lets air directly into the engine, bypassing the carburettor. The unnecessary sucking of fuel is eliminated.

With these features, the new 100 cc, 4-stroke Centra consumes less fuel. Under ideal test conditions, the vehicle can drive 100 km on a litre of petrol. □

#### Punjab Tractors Bullish on Exports: Eyes US Market

Punjab Tractors Ltd (PTL), in which the Punjab Government had divested its 23.5 per cent stake in favour of CDC Capital Partners in 2003-04, is at present drawing upon an aggressive export strategy for the current fiscal.

The company is believed to be developing a range of products particularly for the US market.

The company already has approvals for two products (in the 40 HP and 55 HP range) for the US market. Two more tractors, in the 35 HP range, are presently in the development stage.

PTL is also believed to be weighing options to start assembling its tractors in the US. Along with the US, PTL is also studying markets in Africa for exports.

The company sold 25,600 tractors in 2003-04 as against 24,000 tractors in 2002-03.

The year 2003-04 saw the tractor industry grow by a sizeable 10.5 per cent to end with sales of about 1.9 lakh units, as compared to about 1.7 lakh units in the previous year.

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In fact, the 2003-04 fiscal saw the tractor industry recording its first year of positive growth after four continuous years of negative growth. □

## **Kinetic Plans Bike Unit in Thailand**

The Pune-based Kinetic group is all set to ride its range of motorcycles into the East Asian markets by this year-end. The firm has zeroed down on Thailand and Indonesia as the destinations for setting up a greenfield manufacturing base in a joint venture with local partners.

The venture, when operational, will become the manufacturing hub for motorcycles for the entire Asian region.

The company has been holding talks with local companies for an equity participation. The local laws, it says, favour assembly operations in these countries. □

## **Sundram Fasteners Sets Up Base in China**

Sundram Fasteners Ltd (SFL), a TVS group company, opened its first offshore facility in Haiyan county of China.

Sundram Fasteners, belonging to the TVS group, has formed a wholly owned subsidiary named Sundram Fasteners (Zhejiang) Ltd. Sundram Fasteners has so far invested close to \$5 million (around Rs 230 million) and plans to invest up to \$12.5 million (around Rs 570 million).

The Sundram Fasteners is the first company in the engineering industry from India to set up a manufacturing unit in China. While the company had been regularly exporting from India, this greenfield site would mark its entry into the list of global players.

Sundram Fasteners signed an agreement with Haiyan County on 1st, March 2003. The initial capacity of the plant is 6,000. Besides catering to the Chinese domestic market, the Zhejiang plant will also export fasteners to nearby Asian and other overseas markets. □

## **Apollo to Open Clinic in Qatar**

Healthcare major Apollo Hospitals is opening its first clinic in Doha (Qatar) in association with the Abdullah Bin Qasim Al-Thani group, a diversified group that also has a chain of pharmacies in that country. The decision is part of the Chennai-based Apollo's plan to open 250

clinics over the next five years, including 40 in countries like Bangladesh, Pakistan, Saudi Arabia and South Africa the company said. □

## **Information Technology: 54.3% of Production Exported in 2002-2003**

India exported 54.3 per cent of its total production of electronics hardware goods and computer software and services to 181 countries in 2002-03, according to the Electronics and Computer Software Promotion Council. During 2002-03, 10 destinations accounted for 88.27 per cent of India's total exports of electronics and computer software and services exports against 89.11 per cent in the previous year. The top IT item of export from India during 2002-03 was computer software and services at Rs 46,500 crore. □

## **Punj Lloyd Bags Two Contracts in Kazakhstan**

Construction company Punj Lloyd has bagged two contracts worth about \$73 million in Kazakhstan for oil refinery related works. One project involves construction of a sulphur recovery unit at a refinery for \$38 million. The other project involves construction of large and small bore pipeline project for \$35 million. The projects would be executed on behalf of a consortium of UK-based Parson Fluor Daniel and Tengizchevroil. The project will be coming up in Tengiz region of the Caspian Sea.

The company, which has the experience of laying 4,000 km hydrocarbon pipelines, is looking at the CIS region for expanding its business. It made a debut in Kazakhstan with a \$16 million Kam crude pipeline project. It has a separate outfit called Punj Lloyd Kazakhstan LLP for taking care of its business in that country. □

## **BHEL Commissions Gas Turbine in Oman**

Bharat Heavy Electricals Ltd (BHEL) has achieved a new milestone in the overseas markets with the commissioning of its first new 70 MW gas turbine-based generating unit in the Sultanate of Oman. It is the first "Advanced Class" gas turbine ever to be exported from India.

The unit, commissioned for Petroleum Development Oman (PDO) – a joint venture of the

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Government of Oman, Shell International, Total and Partex – is located at its Qarn Alam project, about 400 km from Muscat. BHEL is currently in the process of installing the second unit of the same rating at this project.

BHEL had achieved a breakthrough in bagging this EPC (engineering, procurement and construction) export order for setting up a 140-MW gas turbine-based turnkey power plant from PDO. The order envisaged supply, installation and civil construction of two Frame 6FA ‘Advanced Class’ gas turbines (70 MW each at ISO condition) at its project at Qarn Alam. □

### **KEC Completes Iraq Project**

Power transmission and engineering contracts company KEC International completed its first project in Iraq in March 2004. The project was part of the reconstruction projects underway in Iraq.

KEC, part of the RPG-group, completed reconstruction of a 130-km 400 kV transmission line project worth Rs 195 crore.

The company has secured new projects worth Rs 75 crore in Iraq, following this assignment. It will set up a 23-km 400 kV single circuit transmission line from Bayji to Baghdad West and a 30-km 132 kV double circuit transmission lines in northern Iraq apart from a 400 kV transmission line for the Nassariyan power project and Khor Al-Zubayer power plant. □

### **L&T Bags \$24mn Order from China**

The Larsen & Toubro (L&T) has bagged a \$24-million order for coal gasfitters from China. The order was significant once it showed the confidence in the Indian company from the entry which was an acclaimed manufacturing hub. L&T is looking at acquiring an engineering company in the USA and Europe in the hydrocarbons sector. The company has allocated Rs 500 crore for this purpose.

### **TI to Pump up Cycle Exports**

The Chennai-based TI Cycles has earned Rs 5 crore by selling over 30,000 cycles to Africa and West Asia in 2003-04. The company exports standard variety cycles to West Asia and Africa. The latter is also supplied with “specials”, which include the mountain terrain bikes. The export target for 2004-05 is one lakh cycles, which will translate into a revenue of Rs 15-20 crore. □

### **IOC Bids for Refinery Revamp in Iran, Oman**

Oil marketing major IOC has tied up with L&T and EIL to bid for pipeline and refinery revamp projects in Iran, Oman and Sudan. IOC has recently been pre-qualified for taking up a refinery revamp project in Tehran. EIL, a leading engineering consultant has joined hands with IOC and formed a consortium to take up a product upgradation project in Tehran and Tabriz refineries in Iran.

The project also includes entering into a crude oil (Caspian Oil) swap agreement for five years. The total project cost is estimated to be around US\$1,000 million.

IOC has also submitted two separate engineering procurement construction and commissioning bids in consortium with L&T for projects in Oman and Sudan. While one bid is for a 260 Km long Mina Al Fahal-Sohar crude oil pipeline in Oman, involving an investment of \$100 million. The other pipeline project for which the IOC-L&T consortium has bid is an export pipeline for the Melut Basin Oil Development project in Sudan. This project involves a capital outlay of \$300 million. This apart, IOC has tied up with Petroleum India International and has submitted a bid for a turnaround job in the Port Harcourt refinery of Nigerian National Petroleum Corporation. □

### **Voltas Bags Two New Contracts in Gulf**

Voltas, which has registered a 50 per cent growth in business in the Gulf region in the fiscal ending March 2004, has bagged two new contracts in the UAE recently and is eyeing further growth in the region this year.

Voltas has bagged a Dh 126 million joint venture contract to carry out the complete electro-mechanical works for the upcoming Souq Al Nakheel (Mall of the Emirates) in Dubai. The contract is being carried out as a joint venture with the Dubai based International Electromechanical Company. Work on the project has just begun and will be completed in 18 months.

The Indian major has also bagged a Dh 50 million contract in Abu Dhabi to carry out the electro-mechanical works for the expansion project in the city’s upscale Marina Mall located on the Corniche.

The company’s focus in the coming period is on bidding for more projects like airports, malls and commercial complexes, particularly in Dubai, where a lot



of construction activity is underway on a number of mega ventures. Among the several projects it is looking at, Voltas is bidding for the Jumeirah Beach Residence project and the major expansion planned at the Dubai International Airport.

Voltas' capabilities in successfully completing complex jobs on a fast track basis has enabled it to obtain a firm foothold in the construction sector in the Gulf, particularly the UAE and Qatar. The firm will also be eyeing more upcoming projects in Qatar. It had earlier secured a Dh 170 million (approx) defence contract for expansion work at the Al Udied airbase. At present, close to 1,000 personnel are working on Voltas' joint venture contracts in the Gulf. Voltas is also involved in some important projects in Singapore, Hong Kong and China. □

### **India Moves 16 Notches Up on World Competitiveness List**

**A**CCORDING to the *World Competitiveness Yearbook 2004* of the International Institute of Management Development (IMD) – a leading Swiss business school, India has turned more competitive. India has been ranked 34th among the 60 nations studied in the Report, up 16 notches from 50th last year. This is India's best ranking in the last five years. Its ranking has slipped sharply from 41 in 2002 to 50 in 2003. It has overtaken Greece, Czech Republic Slovenia and South Africa.

As in the last four years, the USA topped the IMD list in 2004 also. It is followed by Singapore, Canada, Australia, Iceland and Luxembourg.

China too has improved its ranking from 29 in 2003 to 24 in 2004.

Apart from the World Economic Forum's *Global Competitiveness Report*, IMD's *Yearbook* is considered as the most authentic ranking of countries in terms of their global competitiveness.

## **RECENT POLICY INITIATIVES**

### **Service Firms Can Import All Capital Goods Duty-Free**

According to a recent notification issued by the Directorate General of Foreign Trade (DGFT), the Government has removed all restrictions on duty-free imports of capital goods by the service sector. This export-promotion measure was under a cloud as the Revenue Department in the Finance Ministry had stipulated that import of capital goods other than professional equipment or office equipment would not be allowed under the duty-free certificate scheme. The earlier view that such equipment should be imported under the Export Promotion Capital Goods (EPCG) Scheme, under which 5 per cent import duty is imposed, has been reversed, following consultations between the Commerce and Revenue Departments.

Apart from payment of 5 per cent duty, imports under the EPCG scheme also involve fulfilling the export obligation. There is no such obligation under the duty-free certificate scheme which provides for duty-free import entitlement on the basis of export performance in the previous year, subject to a minimum turnover during the last three years. □

### **Project Applications Flood in Following Relaxation in Norms under Section 10 (23G)**

Companies in power, telecom, port, road and hospitality sectors are planning big investments in the current fiscal year as a result of the Finance Ministry's decision to ease norms for granting tax breaks under Section 10 (23G) to financial institutions and banks extending long-term finance for these projects. The Ministry is now giving a one-time approval for such projects instead of the earlier practice of an approval for three years.

Under Section 10 (23G), companies and funds that make long-term capital available to infrastructure projects are exempt from paying income tax on dividends and interest income arising from such investments.

Following this relaxation in the norms, the Ministry has received a spate of applications for projects lined up by NTPC, Reliance Infocomm and a host of others. In the hospitality sector projects, the tax benefit of Section 10 (23G) is given to companies and funds that advance long-term finance to hotels in the three star category and above.

The order of investments range from Rs. 100 crore to over Rs. 600 crore depending on the sector. Approvals under Section 10 (23G) were given to 36 projects in the last fiscal. These included, among others, projects to be commissioned by Bharti Telecom. With the government keen to giving a big push to infrastructure projects, the number of approvals are set to witness a quantum jump this fiscal.

FIs extending long-term finance or investing in shares floated by companies undertaking infrastructure projects are eligible for tax breaks under Section 10 (23G) of the Income Tax Act. Under this provision any income accruing as dividends, interest or long-term capital gains to the FIs on investments in shares or long-term finance in any infrastructure undertaking is exempt from tax. Companies undertaking infrastructure projects stand to gain as project financing costs come down.

Until recently, approvals under Section 10 (23G) were given for three years. Companies undertaking these projects were required to renew their applications after three years. But from January 2004, the Finance Ministry dispensed with this norm. It decided to grant a one-time approval for applications cleared after 12 January 2004 or with prospective effect. □

## Finmin Sets Investment Cap for Mid-Size Cos.

For long, small and medium scale enterprises were clubbed together loosely, with no clear definition of what constituted medium scale units.

The Government has now provided clarity on this issues for the first time. After the setting up of the Small and Medium Enterprises (SME) Fund in April 2004, which will have a corpus of Rs 10,000 crore, the Government has now approved the definition of medium scale enterprises to cover investment in plant and machinery in an industrial undertaking up to Rs 10 crore.

Commercial banks and financial institutions are now expected to follow this new definition approved by the Ministry of Finance and the Ministry of Small Scale Industries.

Currently, the Ministry of Small Scale Industries defines only a small scale enterprise, although banks have their own internal assessment of such medium scale enterprises.

Investment up to Rs 1 crore in fixed assets like plant and machinery, excluding land and buildings in

an industrial undertaking fits the definition of a small scale undertaking.

The clarity on this issue will help provide a boost to the Small Industries Development Bank of India (SIDBI) to enhance lending to the medium enterprises. SIDBI has been mandated by the Government to operationalise the Rs 10,000 crore SME Fund.

The SME Fund is technically operational. The fund corpus will be built through a combination of resources provided by SIDBI in the form of deposits from foreign banks in lieu of priority sector loans besides lines of credit from multilateral institutions. The Government has said that Rs 10,000 crore will be disbursed in two years to SMEs.

Close to Rs 5,000 crore will be raised through internal resources and deposits of foreign banks lying with it while the rest will be raised from the World Bank which is providing a loan of over \$120 million, the Asian Development Bank will provide \$250 million and KfW, Germany will chip in \$40 million.

SIDBI is planning to lend to small and medium enterprises at 9.5 per cent, which will be 200 base point below the prime lending rate. The loan will be for long tenures. For good quality state financed corporations, SIDBI is planning to lend at 7.5 per cent. □

### TECHNOLOGY PROMOTION DEVELOPMENT AND UTILIZATION PROGRAMME

*(For details visit website: [dsir.nic.in/dsir.gov.in](http://dsir.nic.in/dsir.gov.in))*

*Project Proposals may be sent to:*

**Department of Scientific &  
Industrial Research  
Technology Bhawan,  
New Mehrauli Road  
New Delhi-110016**

**Ph: 91-11-26516078, 26866123 • Fax: 91-11-26960629  
• E-mail: [alh@alpha.nic.in](mailto:alh@alpha.nic.in)/[ashwani@alpha.nic.in](mailto:ashwani@alpha.nic.in)**

### **Kali Steel to Set Up Manufacturing Base in Mauritius**

Kitchenware and appliance maker Kali Steel and Engineering is firming up a joint venture with another Indian company to set up a manufacturing base and sourcing centre in Mauritius. The proposed facility with 5-lakh piece capacity is expected to roll out products by July-August 2004, primarily for the African market. The plant would produce kitchenware, serveware and medium appliances.

The joint venture expects to gain from payment guarantees and other benefits accrued through South African Development Community (SADA) and Common Market of Eastern and Southern Africa (COMESA). Further, in the long run, Kali plans to localise the Indian unit and mark the proposed facility as an export hub. At present, Kali Steel exports about 50 per cent of its production. □

### **Rane Brake Linings in Product Licensing Pact with Jordanian Company**

Rane Brake Linings (RBL) has entered into a product licensing agreement (PLA) with a leading brake lining manufacturer in Jordan. This is a technical collaboration wherein RBL will supply the product mix to the Jordanian company, which in turn would manufacture the linings and market them. The product mix supplied to the Jordanian company is a special formulation indigenously developed by RBL. The brake lining would be marketed in Jordan as the Jordanian company's special grade brake lining. The letter of intent (LoI) for the licensing agreement has been signed and the supplies would begin very shortly. □

### **Alembic Goes to Nigeria**

Alembic Ltd., the Baroda-based pharmaceutical firm, has signed an MoU with Xechem International Inc, a US-based research company, to set up a joint venture manufacturing facility in Nigeria. The Nigerian facility will manufacture and distribute a product for blood disorder, Sickle Cell Disease (SCD).

As per the terms of the MoU, Alembic will invest over \$3.6 million in Xechem Nigeria, a subsidiary of Xechem, through a combination of equity and debt. With the equity investment, Alembic will acquire 15 per cent equity in the

subsidiary, which will be responsible for the production of the product to be initially sold in African markets.

Alembic will be entitled to receive royalty on sales of the product apart from interest and/or dividend on its investments. The company will provide technical support to Xechem for setting up a project at Nigeria. Besides, it will also market the products in Nigeria. Gradually, it will roll out the product in other African countries. □

### **IICT, Toyota Arm Team Up For Nanotech R&D**

Aisin Cosmos, a subsidiary of Japanese auto major Toyota Automobiles, has entered into a joint venture with the Indian Institute of Chemical Technology (IICT) to undertake joint research in the area of nanomaterials for the automotive sector. It includes manufacture of auto spare parts using nanomaterials which reduce pollution besides increasing the quality and the life of automobiles.

A Centre for Nanoscience and Technology will be set up at IICT premises. The project will receive funding of \$200,000 from Toyota Automobiles and will initially be for a period of two years.

This long-term project on nanomaterials is the first of its kind in the country. It is primarily aimed at collaborating research activities in the areas of nanomaterials for the automotive sector. The research efforts will provide novel industrial standards for the auto segment thereby assisting in reduced recycle effort and sustainable fabrication processes.

Using of nanomaterials in the automotive sector will pave way for development of eco-friendly machines, light stiff chassis, windows, easy-to-clean materials both interior and exterior, among other automobile accessories. □

### **Tata Motors Forays into Russia**

Close on the heels of acquiring Daewoo Commercial Vehicle Co. in Korea, Tata Motors has signed an agreement with S.K. Prom of Russia to assemble 5,000 trucks annually at the Urals plant in Russia. The plant plans to assemble 400 Tata-407 and Tata-613 trucks before the end of 2004. □

## Ongoing Studies Being Conducted by the CITT

The Centre for International Trade in Technology (CITT), IIFT, is presently engaged in conducting the following studies:

### (i) Exportable R&D Services in the CSIR System

The Study is being carried out with the support of Department of Scientific and Industrial Research. The main objectives of the Study are to (i) assess the present Indian position with respect to R&D services under General Agreement on Trade in Services (GATS), (ii) identify exportable R&D services available in the CSIR system, (iii) evolve appropriate strategies for marketing our R&D services globally, and (iv) suggest measures to market the exportable R&D services abroad. The Study Report is expected to (i) focus on various R&D services available from the CSIR system laboratory-wise in different sectors, (ii) identify constraints, and (iii) make suggestions and recommendations to promote export of R&D services. The study would be implemented with the support and collaboration of CSIR under the overall coordination with DSIR.

### (ii) Impact of TBT on Exports, Sector-wise

The Study is being conducted against the backdrop of recommendations made at the One-day National Workshop on "Implications of WTO Agreement related to Technical Barriers to Trade on Exports" on 7th January 2003 at IIFT, New Delhi. The main objective of the present study is to analyse the TBT notifications, product-wise as well as country-wise and subsequently disseminate this information widely to concerned exporters/manufacturers, towards their preparedness and enhancing international competitiveness. The Study also proposes to analyse the TBT notifications in major sectors of our exports, e.g. Textiles, Dyes & Chemicals, Automotive Components, Leather & Leather Goods, etc. Interactions of exporters with R&D institutions to meet TBT requirements, would be facilitated. Awareness workshops are also proposed to be organised at different places in India. This programme is being implemented with the active support of DSIR, and in association with BIS, FIEO, etc.

Comments and suggestions on these studies, if any, may please be sent to Mr. Rajeshwar Dayal at his e-mail address: rdayal@iift.ac.in

## TECHNOGLOBALISM

While delivering the Convocation Address on 13 April 2004 at the Indian Institute of Foreign Trade (IIFT), Dr. R.A. Mashelkar, Director General, Council of Scientific & Industrial Research and Secretary to the Govt. of India, Department of Scientific & Industrial Research, said that globalisation of trade is taking place at a rapid pace and globalisation of research and technology is happening simultaneously. Reference was made to a new term 'Technoglobalism' to describe this phenomenon. The term 'Technoglobalism' means a strong interaction between the internationalisation of technology and the globalisation of the economy. Technoglobalism has created a widening of cross-border interdependence between individual technology based firms and economic sectors. It provides both challenges and opportunities to India.

The winds of technoglobalism are bringing in a silent revolution in India. India is fast becoming a global R&D hub. More than one hundred companies around the world have set up their R&D centres in India only during the last five years. The biggest would be the R&D centre of General Electric (GE) at Bangalore. Its current size of 1,600 employees will increase to around 2,400 making it the second largest R&D centre in the world. This is a part of the grand plan of many leading enterprises around the world to build the innovation platform through multi-sourcing of innovations.

The high-technology goods have doubled their share of world merchandise in the last twenty years while at the same time dropping the share of primary products by half. More than half of the GDP in major OECD countries is attributed to the production and distribution of knowledge.

The impact of technoglobalism in India so far indicates that access to highly talented human capital is going to be the most important factor. The challenge is how to continuously tap the incredible dynamism of global R&D so that Indian institutions and companies can assume the leadership in creating high-wage jobs and building new industries. This will require a sustained commitment to investment in science and technology to strengthen research infrastructure, development of capabilities and means to rapidly integrate new knowledge and technologies into products and gain access to growing global sources of innovation, development of technology centres and government incentives and protection, in particular protection of intellectual property extended to science based high-technology inventions. Government, he said, will have to play an increasing role to influence the turn of events, both positively and proactively.