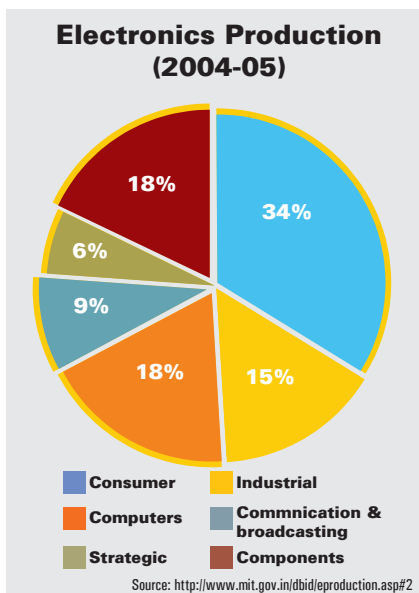


Electronics sector High Growth Market

The India Brand Equity Foundation collates, publishes and disseminates well-researched and comprehensive information on the Indian economy and industry. We present here a report on the Indian Electronics sector prepared by KPMG for IBEF

Market Overview

The global electronics industry is growing rapidly. From an estimated size of US\$950 billion in 2005, it is estimated to grow to nearly US\$2,100 billion by 2010. The market is dominated by Asian countries such as China, Taiwan, Singapore and South Korea. The industry is characterised by rapid innovation and speed to market, short product life cycle, highly automated manufacturing to give consistent quality at low cost, high volume production, continuous improvement in capabilities for reducing costs and profit accrual through volumes. India's electronics industry is nascent by global standards. Despite a population of over one billion, India has a relatively small electronics market. It is ranked twenty-sixth worldwide in terms of sales and twenty-ninth in terms of production. The total size of the industry in 2004-05 was US\$11 billion.



The Indian electronic industry is divided into six segments:

Consumer electronics, Industrial electronics, Computers, Strategic electronics, Communication and Broadcasting equipment and Electronic components. The consumer electronics sector dominates the industry with 33.8 per cent share and has benefited from a large and expanding market. The industrial electronics and computer sector each has a share of over 15 per cent.

Consumer electronics

Consumer electronics consists of products that are directly consumed by end-users, such as televisions, VCD/MP3 players, microwave ovens, etc. This segment has a large manufacturing base, and is quite competitive, with presence of several global players in India.

Industrial Electronics

The Industrial electronics segment includes products that are used by other industries, such as process control instrumentation, automation systems, Test and measuring (T&M) instruments and medical instruments.

Computers

This segment includes personal computers, servers, workstations, supercomputers, data processing equipment and peripherals such as monitors, keyboards, disk drives, printers, plotters, digitisers, SMPS, modems, networking products and add-on cards.

Strategic Electronics

The strategic electronics segment covers satellite base communications, navigation and surveillance, underwater electronics and infra red based detection, dis-

aster management and GPS based Vehicle tracking systems. The segment has a number of manufacturing units both in the public and private sectors.

Communication and Broadcasting Equipment

The communication and broadcasting equipment segment includes digital exchanges (EPABX, RAX, TAX and MAX), Transmission equipment such as HF/VHF/Microwave trans-receivers, satellite communication terminals, optical fibre communication equipment, troposcatter equipment, two-way radio communication equipment, etc.

Electronics Components

The electronics components segment caters to the requirements of consumer electronics, telecom, defense and information technology sectors. The components in production in India at present include TV picture tubes (black & white and colour), monitor tubes, diodes and transistors, power devices, ICs, hybrid microcircuits, resistors, capacitors (plastic film, electrolytic, tantalum, ceramic), connectors, switches, relays, magnetic heads, DC micro motors and tape deck mechanism, PCBs, crystals, loudspeakers and hard and soft ferrites. The consumer electronic sector in general and the colour television (CTV) industry in particular is the growth engine for electronic components.

The sector has been growing steadily across most segments

India's electronics industry has been growing at approximately 11 per cent CAGR over the past 5 years, and was worth US\$11 billion in 2004-05.

The following sections discuss the

growth and current status of each of the six segments comprising the sector.

Consumer electronics

The Consumer electronics industry contributes about 33.80 per cent of the total electronics production in India. The total production of consumer electronics was US\$3.74 billion in 2004-05, registering a growth of 13 per cent over production in the previous year. The growth has been primarily powered by colour televisions (CTV), which grew from 8.9 million units in 2003-04 to over 10 million in 2004-05. CTV growth in turn is driven by growth in Flat Screen TVs (FST) that is estimated to constitute nearly 20 per cent of the CTV market. Other growth segments in consumer electronics include microwave ovens and VCD/MP3 players -

the microwave oven industry is estimated to be growing at the rate of 25-30 per cent.

These trends are a reflection of increasing consumption and aspiration levels among Indian consumers, driven by demographic and lifestyle changes. As these trends are positive for the future, the outlook for consumer electronics segment is quite positive.

Industrial Electronics

The production of industrial electronics in 2004-05 was US\$1,716 million as compared to US\$1,327 million in 2003-04, a growth of 29 per cent. Growth in industrial production and focus by industry on better controls, processes and systems are expected to drive growth in this segment in the future.

Computers

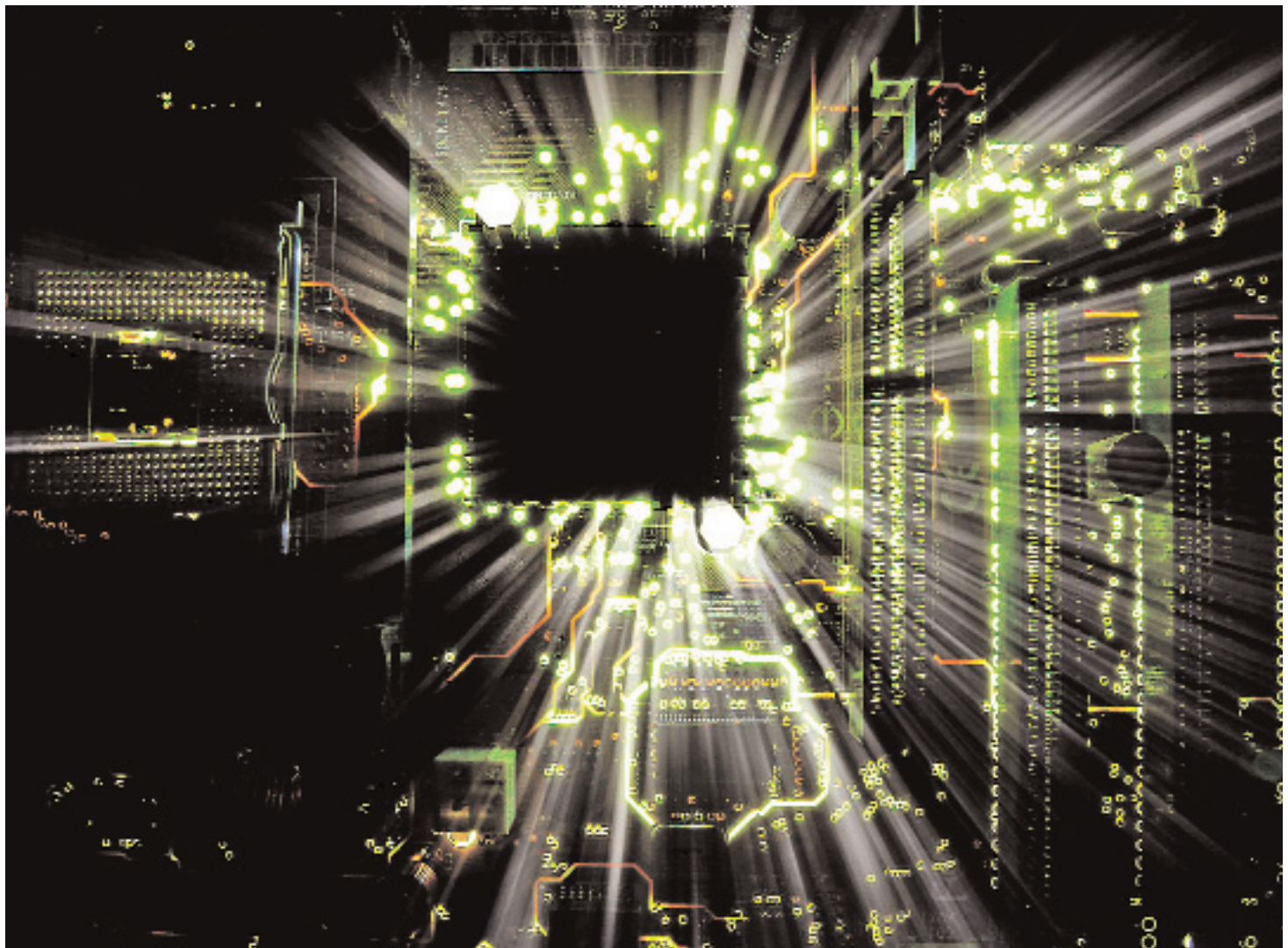
The production in computers segment was US\$1,961 million during 2004-05 as compared to US\$1,479 million during 2003-04, a growth of 33 per cent.

The industry, in the area of PCBs, connectors, diskettes and CDs, experienced a positive growth.

High corporate consumption and buoyancy in small towns is driving sales of Personal Computers. The market for PCs is estimated to have touched 3.4 million units in fiscal 2004-05, taking the total PC penetration to 14 million in the country.

Strategic Electronics

The production in the strategic electronics sector was US\$680 million in 2004-05 compared to US\$588 million in



2003-04, a growth of 16 per cent. With the opening of strategic electronics to the private sector, there has been an emphasis on attracting private sector organisations for indigenisation of a variety of products and technologies. This is expected to fuel growth in this segment.

Communication & Broadcasting Equipment

The production in the communication and broadcasting equipment sector was US\$1,025 million during 2004-05.

Growth in this segment has been almost stagnant over the past 5 years.

Electronics Components

Electronics components contributed 18 per cent to the overall electronics production. Production in this sector was US\$ 1,961 million during 2004-05 compared to US\$ 1,719.3 million in 2003-04; a growth of 14 per cent. The key product groups that have driven growth in components include CTV picture tubes, optical discs, PCBs, connectors, ferrites, etc. Growth in this segment has been primarily due to growth in the user segments, viz, CTVs, PCs, etc. As such, the outlook remains positive.

Exports

Most of the consumer electronics produced in India is consumed by the domestic market, with exports forming only 5 per cent of the production.



However, exports of electronic goods from India have been growing consistently and constituted about 2.64 per cent of India's overall exports in 2003-04. For the year ending March 2005, the export of electronic goods from India increased by 16 per cent to US\$1,950 million as compared to US\$1,675 million in the year ending March 2004.

Segment-wise Exports

Electronic components segment contributes the highest towards the total electronics exports. The major export items include passive components, such

as capacitors and resistors; wound components; CD-ROMs; connectors; color picture tubes and computer components/assemblies, such as head stacks; memory modules and RFID products. In 2003-04 India exported US\$ 817 million worth of electronics components, which formed 48 per cent of the total electronics export.

Other key segments that contributed to exports include industrial electronics, computers and consumer electronics, with exports of US\$329 million, US\$ 313 million, and US\$179 million respectively in 2003-04. The main destinations for India's exports are the European Union, ASEAN countries and the United States. The major export opportunities are in the area of innovative new products, contract manufacturing (OEM and ODM) and design services. It is estimated that India will export OEM (Original Equipment Manufacturer) and ODM (Original Design Manufacturing) worth US\$11billion by 2010.

Competitive Advantages

While the Electronics sector in India is currently small, there are several advantages that India offers that can be effectively leveraged to achieve higher growth. These can be categorised under four heads:

- o Manpower
- o Market Demand
- o Supporting institutions and
- o Policy and Regulatory Support



AUTOMATIC FDI APPROVAL



foreign equity investment for units manufacturing items reserved for small scale industries; and (iii) all items which require an Industrial Licence in terms of the locational policy notified by government under the New Industrial Policy of 1991.

In pursuance of government's commitment to early implementation of the second phase of the economic reforms and with a view to further liberalising the FDI regime, all items and activities are placed under the automatic route for FDI/NRI and OCB investment except:

- o All proposals that require an Industrial License include (i) items requiring an Industrial Licence under the Industries (Development and Regulation) Act, 1951; (ii) more than 24 per cent for-

- o All proposals relating to acquisition of shares in an existing Indian company in favour of a Foreign/ NRI/ OCB investor.

- o All proposals falling outside notified sectoral policy/caps or sectors for which FDI is not permitted and/or whenever any investor chooses to make an application to the FIPB and not to avail of the automatic route.

Availability of skilled human resources in India at competitive cost is a key advantage for the electronics sector. India's human resources advantage derives from three key features - availability in terms of numbers, capability in terms of the right skills and low costs.

India has the potential to ensure adequate availability of manpower to support the electronics industry well into the future.

India's population is predominantly young - in 2001, nearly 54 per cent of the population was less than 25 years of age. By 2013, nearly 200 million more people will join the nation's productive age bracket representing a quantum growth in the consumption class. This implies that India will have a large pool of productive manpower well into the future.

India's manpower is trained and has a good mix of capabilities.

India produces over 500 PhDs, 200,000 engineers, 300,000 non-engineering postgraduates and 2,100,000 other graduates each year. The Indian Institutes of Technology (IITs) and the Indian Institutes of Management (IIMs)

produce graduates and post graduates with best-in-class skills and capabilities in technical and management fields. India's capabilities in IT and engineering make it an attractive location for sourcing engineering services such as R&D and design.

Labour costs in India are extremely competitive when compared to other developing countries.

India's cost of skilled labour is among the lowest in the world. For example, average labour rate per employee in the electronics sector is about \$3,000 per year. Labour cost as a percentage of value added is only 21 per cent in India as compared to 23 per cent in China and 30 per cent in Taiwan. Taking advantage of this many MNCs have set up manufacturing bases in India for domestic consumption as well as exports. Many multinational companies in the electronics sector have leveraged India's manpower advantage to grow in the domestic market, as well as source products and services from India.

The Indian market provides favourable demand conditions for the electronics

sector to grow.

India has been experiencing a strong growth in the demand of consumer products and durables in recent years, driven by consumer demographic trends. This has facilitated growth in the electronics sector both directly and indirectly. Growth in demand of consumer durables such as CTVs, VCDs / MP3 players and PCs directly benefits the sector.

Foreign Investment Policy FDI

Foreign investment up to 100 per cent is allowed in Indian electronics industry set up exclusively for exports. The units set up under these programmes are bonded factories eligible to import, free of duty, their entire requirements of capital goods, raw materials and components, spares and consumables, office equipment etc. Deemed export benefits are available to suppliers of these goods from the Domestic Tariff Area (DTA). A part of the production from such units is permitted to be sold in the DTA depending upon the level of the value addition achieved.

The FDI approval for electrical equipment (including computer software and electronics) from January 1991 to March 2004 was US\$ 7.29 billion, which was 9.94 per cent of the total foreign direct investment (FDI) approved. During the same period the FDI inflow for electrical equipment (including computer software and electronics) was US\$ 3.32 billion.

India will be a high growth market in the electronics sector in the medium term. India's entire electronics market, worth \$11.5 billion in 2004, is expected to become one of the fast growing electronics markets worldwide over the next several years. This market is expected to grow to \$40 billion by 2010 at an annual rate of over 20 per cent. This growth will be assisted by trends such as increase in contract manufacturing and increase in EMS and ODM.

Contract manufacturing, an emerging trend, not only helps hardware product companies de-risk their business model but also achieve full utilisation of production facilities. The market for EMS is projected to be US \$163 billion by the year 2008, while the market for ODMs is projected to be US\$144 billion. Many key players in the sector have definite plans for their Indian operations. 