

Growth of Electronics Industry in Karnataka

Introduction

Electronics Industry is slated to play a vital role in India mainly as a technological resource base for the accelerated industrialisation process envisaged during the current decade. Its impact would be felt on every segment of economic activity ranging from consumer items through technological products to service industries. This is more or less in tune with the world trends. The world electronics industry is expected to take a quantum jump — from \$368 billion to \$845 billion — during the current decade. In keeping with these developments, India too has planned a manifold increase in the electronics industry.

Electronics in the country

The Department of Electronics has set an ambitious target of production of electronics goods worth Rs. 10,860 crores in the terminal year of the 7th Five Year Plan, 1989-90. Special measures have been taken by the Government which has accelerated the growth of this industry in the few years. Liberalisation of the industry in terms of licensing including some segments of tele-communication industry thrown open to the Private Sector and the rationalisation of Customs and Excise Duty structure has given a major boost to the industry in the last few years. Exemption of electronic industry from the locational constraints which permits establishment of electronics industry in forward areas has given a big thrust to the faster development of the industry. It can be seen that the total electronics production in the Country has gone up from Rs. 1360 crores in 1983 to Rs. 1890 crores in 1984 and to Rs. 2660 crores in 1985 registering a growth rate of about 40%.

Electronics industry in Karnataka

Electronics Industry is a sophisticated industry which needs well developed industrial infrastructure, such as good precision light engineering industry, tool rooms, test centres, R & D facilities and so on. Bangalore is the best developed industrial city in the Country with all these infrastructural facilities for supporting the sophisticated electronics industry.

Till recently the Electronics Industry in the State was dominated by the Central Public Sector Undertakings. There has been a sea change in the last few years. Recognising the potential and attracted by the infrastructure of Bangalore, a number of electronic units are being set up in Karnataka in the Private and Joint Sectors. During the decade 1972-81, a total investment of around Rs. 18 crores only was made in this industry (Non-Central Public Sector). However, in the last 3 years a number of industries are coming up in the Private and Joint Sectors involving an investment of Rs. 170 crores. This shows a very steep growth in the Private Sector participation in the electronics industry in Karnataka. Further the production of electronic goods by the Private Sector Industries has gone up from Rs. 30 crores in 1982 to Rs. 200 crores in 1985, while during the

same period the production of electronic goods by the Central Public Sector rose from Rs. 268 crores to Rs. 390 crores. The Karnataka State Electronics Development Corporation Limited (KEONICS) acts as a catalyst in development of electronics industry in the State.

State Five Year Plan

Karnataka State is today the leading State in the Country contributing a major share of the electronics goods production. The State accounted for nearly Rs. 600 crores turnover during 1985, as compared to the national output of Rs. 2660 crores. KEONICS has drawn up a State Five Year Plan for development of Electronics industries to maintain and improve upon the present dominant position enjoyed by the State. The plan envisages a growth rate of about 50% (against the national average of 40%) and aims at a production of Rs. 1600-2000 crores by the end of the plan period 1989-90 giving rise to an employment potential of 1.6 lakhs. The plan envisages an investment of about Rs. 240 crores to achieve this aim in the Non-Central Public Sector. During the plan period it is expected that the Central Sector units in the State will have their natural growth and a significant contribution equalling the Central Public Sector Production is expected from the State Sector (Private and Joint) Units.

Spectrum of Electronics Industry in the State

Electronics Industries can be classified into the following categories — Components, Consumer Electronics, Communication, Computers & Peripherals and Control Instrumentations.

Components: Karnataka has a strong base for Electronic Components Industries. Bharat Electronics Limited (BEL) is the leading Public Sector Unit in the State and accounts for a major portion of the semiconductors, ceramic and TV Picture Tubes production in the Country. BEL also produces critical components required by the Defence and Space agencies at its Bangalore Complex. In the State Sector KEONICS has manufacturing activities in the area of High Voltage Components including Focus Controls for CTV. KEONICS has also promoted a number of Joint Venture Units for manufacture of components such as TV picture tubes (Kalyan-Keonics Limited), Integrated Circuits (Keonics Shanthi Micro Electronics Limited), Hybrid Micro Circuits (Minicircuits Limited), Printed Circuit Boards (Reseltronics Limited), Aluminium Electrolytic Capacitors (Som-Hom Electronics Limited), etc. Private Sector also has contributed significantly in this area. Components such as Plastic Film Capacitors (by Orrcee Electronics), Carbon and Metal Film Resistors (by Ace Components), Relays including Solid State Relays, Connectors, Printed Circuit Boards (by Micro pack), and Switches, Electrolytic Capacitors, Audio Magnetic Tapes, TV Tuners and Deflection Components are manufactured in the State. Among the new Units coming up are Saha Components Limited, to manufacture components like Dipped Tantalum and Mica Capacitors, precision potentiometers, Low Loss Polypropylene Capacitors, etc.

Consumer Electronics: In the Central Public Sector, HMT is manufacturing Electronics Watches in this area. However,

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Television manufacture is the main activity in the field of Consumer Electronics. Bangalore is one of the largest TV manufacturing Centres in the Country today, next only to Delhi. KEONICS manufactures both Colour and Black and White TV Receivers in the State Sector. In the Private Sector, leading manufacturers are BPL-India, Bush, etc. BPL also manufactures VCRs. Earlier there were only a few Units manufacturing Two-in-ones, Tape Recorders in the State with a very small contribution to the total production. TV manufacture has given a boost to this sector in the State as it has in the national scene. A further thrust is expected in this Sector when VCR licences are issued under the new policy of the Government of India. KEONICS is expecting a letter of intent to manufacture 250,000 VCRs and 500,000 VCR Decks with Philips Technology. Total investment in this project is expected to be around Rs. 50 crores.

Communications: State has a very strong base in the field of Communications. Two Public Sector giants — Bharat Electronics Limited and Indian Telephone Industries are operating in this area. The Bangalore Complex of BEL accounts for about 60% of the total professional communication equipments production. BEL manufactures Defence Communication Equipments, Broadcasting Equipments, etc. The Indian Telephone Industries is the premier organisation in the Country in the field of Telecommunications. ITI manufactures Telephone Exchanges, Telephone Instruments, Transmission Equipments, Microwave Equipments, Telemetry and Telecontrol Systems, etc. ITI is modernising its operations by going into new technology for manufacture of Electronic Telephones and Electronics Switching Systems (ESS). The new ESS II factory is being established at Bangalore. With the technical assistance and

support of these Public Sector Units, a large number of small scale industries have come up in the State with specialised technical capabilities. The Centre for Development of Telematics (C-DOT) is another asset to Karnataka. C-DOT is playing a key role in the development of Electronics Switching Systems and modernisation of the Telecommunications industry.

KEONICS manufacture VHF wireless Communication Equipments with the collaboration of well-known Marconi of the UK. These communication equipments are widely used by the Police, Forest and Excise Departments as well as Road Transport Corporations and Electricity Boards. KEONICS along with NGEF has established a joint venture company — Karnataka Telecom Limited — for manufacture of Telecommunication items such as Pulse Code Modulation Equipment, Power Line Carrier Communication Equipment, Electronics PABX, etc. Another Joint Venture of KEONICS — Swede (India) Teletronics Limited — will manufacture Electronic Push Button Telephones with Swedish collaboration.

In the Private Sector Tatas have been manufacturing Video Mappers, Tactical Display Units/Consoles, etc. L&T has set up a Plant in Mysore for manufacture of EPABX. BPL-India also has proposed to put up some telecommunication projects. Apart from these, a number of Units are going to manufacture EPABX with the indigenously developed C-DOT technology. Among them are the Bharat Heavy Electricals; Bangalore, Hindustan Brown Boveri Limited, Mysore, etc.

Computers: Some of the leading Computer companies in the Country are established in the State. They are Wipro at Mysore, PSI Data Systems, EIKO and Sunray Computers at Bangalore. The total production from these Companies during 1985 was around Rs. 40 crores (out of the total Country's production of Rs. 150 crores). New Units coming up are KEONICS Magnavision Computers Limited (a joint venture of KEONICS), Kirloskar Company (Fortune Computers), Hindustan Computers (Digital Equipment Corporation), Blue Star (Hewlett Packard), Macmillan Computers, etc. With all these Units going into operation, Karnataka will have a major share of the Country's production in this area.

Computer Peripherals: A number of new Units are coming up in the State for manufacture of Computer Peripherals such as key boards, floppy disc drives, video terminals, printers, etc. Large industrial houses like Philips, L&T, Tandon and Sundaram Clayton (TVS) are entering the field. KEONICS has planned a Joint Venture Unit to manufacture Video Terminals, Laser Printers, Key Boards and Optical Memory Disc Drives.

Software: Software production has got a very good potential in Bangalore because of availability of trained and experienced manpower. Recognising this potential M/s. Texas Instruments of USA have decided to set up a software centre at Bangalore for 100% export. According to the new policy of the Government of India 100% foreign companies will be allowed to set up Software export projects in the Country. In the private sector M/s. Infosys has been very successful in exporting software to USA. They are the largest exporters of Software in the South. M/s. PSI Data Systems have successfully exported Software (special purpose) to Japan. Indian Organic Company (Computer Point) are planning to have software development centre for exports at Bangalore. With the recent changes in the Government policy, a good spurt in Software industry is expected in the State as Bangalore is perhaps the best centre in the Country which has the required infrastructure for the purpose.

Control and Instrumentation: M/s. Bharat Heavy Electricals Limited (BHEL) has established its Control Equipments Divi-

sion at Bangalore. In the State Sector KEONICS will be establishing a Joint Venture with Star for the manufacture of Process Control Instrumentation with the technical collaboration and financial participation of the leading Japanese Company YOKOGAWA Electric Works. In the Private Sector M/s. Bells Control with Foxborough Collaboration, M/s ASEA with Swedish Collaboration are active in the field today. A new unit coming up in this area is being set up by Hindustan Brown Boveri. M/s. Khatau Engineering with Japanese collaboration have set up a Unit for manufacture of Test and Measuring Instruments.

Electronics City: To attract electronic industries to Karnataka by providing specialised infrastructural facilities, a large integrated electronics Complex — ELECTRONICS CITY — has been set up by KEONICS near Bangalore. A large number of industries have come forward either to launch new projects or expansion of their existing projects here. The activities range from production of components to manufacturing end products. Also an export Zone will come up to offer common bonding for 100% export oriented units. This is going to be City which will be self-contained in every sense including common facilities for communication, trade, commerce, banking and the like. The range of products to be turned out in the Electronics City including Communication Equipments, Computer Peripherals, Control Instrumentations, Test & Measuring Instruments, Electronic Components and Consumer Electronics. As a supporting activity to industries coming up in the

complex is Nettur Technical Training Foundation (NTTF), a charitable trust assisted by Swiss Foundation, running an electronics technician training centre.

While the big Units in the Electronics City will have their own premises, the small ones will be housed in the Multistoreyed industrial buildings being constructed by the Karnataka State Small Industries Development Corporation (KSSIDC) to help small Units act as feeder Units to their big brothers.

The new Units mentioned earlier in various sectors are under different stages of implementation. Most of them go into production by 1987-1988. An investment of Rs. 170 crores has already been envisaged and of Rs. 240 crores for the 7th Five Year Plan in the first year itself. This is much higher than what was expected in 1984 when the State Five Year Plan for electronics was drawn up. With this, the turnover expected from Electronics goods in Karnataka by 1990 will be about Rs. 2000 crores out of which nearly 50% will be the contribution from non-Central Public Sector. Thus Karnataka will not only maintain the lead but improve its lion's share of the electronics output in the Country.

The new scenario of Electronics Industry emerging in Karnataka leads to the logical conclusion that the State can take a big step towards exports. The spectrum of industries coming up in Karnataka gives tremendous confidence to realise this hope. No wonder, if in the not too distant future Karnataka will be another world electronics centre like Singapore and Hong Kong.