Role of KEONICS in Development of Electronic Industries in Karnataka

I. ROLE OF KEONICS

The Role of Keonics is to promote and develop electronics industries in Karnataka and to implement Government Policies relating to electronics industries. Before formulating strategies for development of electronics in Karnataka, it was recognised that the growth of electronics would depend mainly on faster growth of the Private Sector. In 1982-83, the private sector base in Karnataka, with a production of Rs. 30 crores, was very small and contributed only 13% to the State's production. Hence the basis of the policy for growth is to promote industries in the private/joint sectors. THE STRATEGIES ADOPTED BY KEONICS TO PROMOTE ELECTRONICS WERE, THEREFORE, AIMED AT THE FASTER GROWTH OF THE PRIVATE SECTOR and these are:-

i) **Infrastructural Facilities:**

Provision of infrastructural facilities to large medium and small scale industries in *integrated electronics complexes* especially set up for electronics industries. The 'Electronics City' in Bangalore, the first of its type in the country, to be followed by similar complexes in Mysore and Dharwar, are the outcome of this strategy.

ii) **Creation of Production Base :**

a) Through Joint Ventures : Promote joint ventures in certain thrust areas of electronics where faster development is planned. Examples are Yokogawa Keonics Limited (in the field of Control Instrumentation and Industrial Electronics), Swede India Limited (for manufacture of Telephone Instruments), Krone Communications Limited (for electronics components), Keonics Penta Semiconductors Limited (for electronics components), Keonics Magnavision Computers Limited (for Computers) etc. Keonics will continue to promote industries in thrust sectors and current products of electronics where a boost is required.

b) Through own manufacturing activities.

iii) **Assistance to SSIS:**

Assisting small scale electronics units in marketing, technical advice and material bank services.

iv) **Industry Co-ordination :**

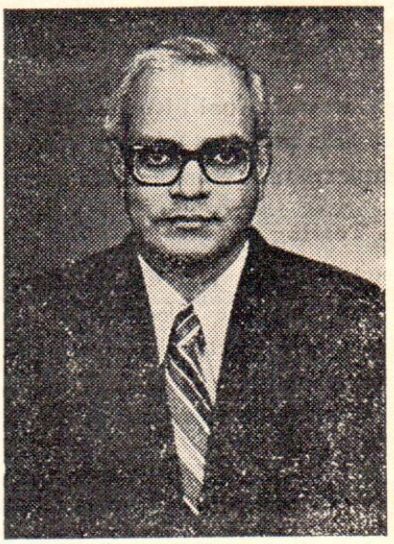
Bringing large and small scale electronics industries together resulting in mutual co-operation and to complement each other.

II. BUILDING UP INFRASTRUCTURAL FACILITIES

Provision of infrastructural facilities for electronics industries located in an electronics complex is relatively easier than to provide these to the same industries which are dispersed. These include provision of water, clean power and communications. These infrastructural facilities are vital for growth and effective performance of electronics industries. This ensures that industries located in the Electronics Complexes are on a sound footing.

a) Power

Though electronics industries are not power intensive, they need continous supply of 'clean' power as voltage and frequency fluctuations dislocate operations in electronics industries more than in other industries. Keonics has submitted proposals for providing 'clean' and continous power from EHT lines, to the 'Electronics City' at Bangalore. The proposals for the electronics complexes in Mysore and Dharwar include Diesel Generating sets to make them independent in this regard.



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b) Communications

The telecommunication facilities at the 'Electronics City' Bangalore, are not adequate as the telephones which are now provided do not meet the demand. Data Communication facilities do not exist. Setting up of an integrated System Digital Network (ISDN) of a large capacity incorporating fibre optics through the Department of Telecommunications is under way. There is provision for overseas communication facilities to be linked.

c) Training

Anticipating the need for highly skilled manpower, Keonics has been instrumental in getting the Nettur Technical and Training Foundation (NTTF) to establish a Modern Electronics Training Centre at Bangalore City. Similar centres are planned to be set up at Mysore and Dharwar Complexes. Keonics' proposals to set up an Entrepreunial Electronics Training Centre at Bangalore have been approved in principle by the

Government of India. This will undertake prototype development, development programmes for entrepreneurs and will have tool-room facilities also.

d) Tool Room Facilities

Integral Tool Room facilities have been proposed for the electronics complexes in Mysore and Dharwar.

e) Testing

A material Test Centre has been located in the Electronics City, Bangalore. Electronics Testing and Development Centres (ETDCs) will be set up in the Mysore and Dharwar Complexes.

f) Accomodation

Large and Medium electronics industries require the support of SSIs to take up their ancillary and feeder work. So it is necessary that various types of SSIs are located in the Integrated Electronics Complex. This will reduce cost and delays and hence will be mutually beneficial. Recognising this need, flatted accomodation has been built by the KSSIDC in the Bangalore 'Electronics City' which will eventually accomodate about 600 SSIs. At present ready made flatted accomodation for 126 units have been made in 'Electronics', primarily for Small Scale Industries. Provision of ready made accomodation is planned in the proposed 'Electronics City' at Mysore.

The above infrastructural facilities in the Electronics City, Bangalore have attracted 60 large and medium electronics industries together with a large number of SSIs involving an investment of Rs. 300 crores leading to a turnover of Rs. 1000 crores and an employment potential of 12,000. HENCE THIS STRATEGY HAS PROVED EFFECTIVE IN ATTRACTING A LARGE INVESTMENT IN A SHORT PERIOD OF TIME.

About 50% of the units planned to be located in the Electronics City are in production, 25% are operating in temporary premises and the rest have undertaken civil construction. An illustrative list of the companies and products is given at Table–1.

III. CREATING PRODUCTION BASE

a) Creating a Production base through Joint Ventures

Karnataka had a large Electronics base but this was predominantly in the Central Public Sector. Though this large presence of Central Public Sector Electronics Units was responsible for establishing a large base and infrastructure, this did not result in a proportionate growth of the Private Sector. In 1982-83, the share of the Private Sector in the Country's electronics production was 60% whereas in Karnataka it was only 13%. Since 1982-83, as a result of the strategies adopted by the Government to pro-

Table-1

An illustrative list of companies at the 'Electronics City'

NAME OF COMPANY	PRODUCT RANGE
Amphetronix Ltd.	Relays, Switches and Connectors
Birla 3M	Electronic Connectors
Indian Telephone Industries	Communication Equipment
Nettur Technical Training Foundation (NTTF)	Electronics Training Centre
Tata Electronic Development Services	Video Mappers, Technical Display Consoles
Bifora Watch Company Ltd.	Watches & Watch Components
KEONICS Magnavision Computers Ltd.	Mini Computers and Microprocessor based systems
Namtech Systems Pvt Ltd.	Microprocessor based Instruments.
Motwane Pvt Ltd.	Amplifiers. Intercoms, etc.
Dalmia Cements Bharat Ltd.	Ceramic Chip Capacitors
Pieco Electronics & Electrical Ltd.	Key board. Printers, Floppy drives
Karnataka Telecom Ltd.	Pulse Code Modulating Equipment
Yokogawa-KEONICS Ltd.	Process Control Instruments
Krone Communications Ltd.	Connectors
Shreetronics Enterprises	Carbon Film Resistors
Khatua Engineering Services	R F Multimeters, Q Meters Voltage Stabilisers, etc.
Sushruta Elcoma Pvt. Ltd.	SMPs, Transformers
Syscon Instruments	Vibration Centres Analysers, etc.
Cosmic Materials Test Centre Pvt, Ltd.	Testing of Materials
Thakral Computers Pvt. Ltd.	Mini Computers
Sonata	Computers
Jalex Connectors Systems Ltd.	Connectors
Bradma India Pvt. Ltd.	Facsimile, Cash Registers
Macmillan Computers	Mini Computers
Moog Controls Ltd.	Servo Control Units

mote and develop private sector electronics industries and promotion of joint ventures companies, the Private Sector in Karnataka has grown from an output of Rs. 30 crores in 1982–83 to Rs. 727 crores in 1988–89 or a 24 fold increase resulting in an average growth rate of 69% per year over the six year period compared to the All India figures of 35%. This growth rate of 69% in the Private Sector in Karnataka is the highest for any state in India. The liberalisation policy of the Government has also helped in faster development of the Private Sector. The above growth rate has been made possible, apart from providing infrastructural facilities, through the promotion of joint ventures in thrust areas of electronics such as control, industrial electronics, computers, communication and components which require to be accelerated. Such selected products are also current in range and a good market demand exist for such products. The list of joint ventures with their products and production values is at Table–2.

Table–2

KEONICS JOINT VENTURES AND PRODUCTION 1987 TO 1990

(Rs. in lakhs)

Sl. No.	Name of the Company	Product	Turnover details 1987–88	1988–89	1989–90**
1.	Minicircuits Ltd.	Hybrid Micro Circuits	185.00	300.00	500.00
2.	Keonics Magnavision Computers Ltd.	Mini Computers Microprocessor bassed systems	350.00	390.00	900.00
3.	Karnataka Telecom Ltd.	PCM Equipments	83.00	361.65	900.00
4.	Raseltronics Ltd.*	Printed Circuit Boards	—	—	—
5.	Kalyan Keonics Ltd.*	Picture Tubes	—	—	—
6.	Swede (India) Teltronics Ltd.	Telephone Instruments	290.00	695.00	1500.00
7.	Yokogawa Keonics Ltd.	Process Control Instruments	71.38	404.87	1800.00
8.	Krone Communication Ltd *	Telephone Connectors	—	—	500.00
9.	Keonics Penta Semi Conductors Ltd *	Discrete Semi Conductor Devices	—	—	—
			979.38	2151.77	6100.00

*Commercial Production will commence in 1989-90
**Projected

The investment in the 9 joint ventures promoted by Keonics is Rs.62 crores. The production from the joint ventures was Rs. 21.5 crores in 1988-89 and is expected to be over Rs. 60 crores in 1989-90 and over Rs.100 crores in 1990-91.

This strategy of creating a production base of this size would not have been possible in a short period without the promotion of Joint Ventures.

(b) Creating a production base through own manufacturing activities

Keonics has its own manufacturing facilities for manufacturing Colour and B&W TVs, VHF Communication equipment etc. The main products are a range of communication eduipments in technical collaboration with M/s. Marconi of United Kingdom. The range includes VHF. UHF and HF Transreceivers. Keonics has designed networks for Eastern Railway, Southern Railway, Upper Krishna Project, ONGC, Defence etc., using Keonics equipment. The value of this work over the last 3 years is more than Rs. 5 crores. Keonics is now also making Long Distance Public Telephones in association with Department of Telecommunications for Rural Communication, Planning to make Cordless Telephones, UHF 10 Channel Equipment and 2/15 Radio Shared Systems in the near future is in hand.

IV. ASSISTANCE TO SMALL SCALE INDUSTRIES

(a) Marketing

Keonics is helping selected SSIs in marketing certain identified products such as Computers, Plain paper Copiers, EPABX, EPAXs, Electronic Telex Machine, Calculators, Power Electronic products etc.

(b) Technical Assistance

SSIs are given technical advice whenever required. This service will be put on a firm footing when the proposed entrepreneurial Training and Prototype Centre is established. Assistance includes promotion of rural women's co-operatives and training their employees.

(c) Material Bank Facilities

SSIs face a problem when procuring imported material. Because of the formalities and minimum order quantities, SSIs are not in a position to import the material in small batches to suit their production requirements. Keonics helps to finance bulk procurement and releases the materials to SSIs in small batches on a nominal service fee.

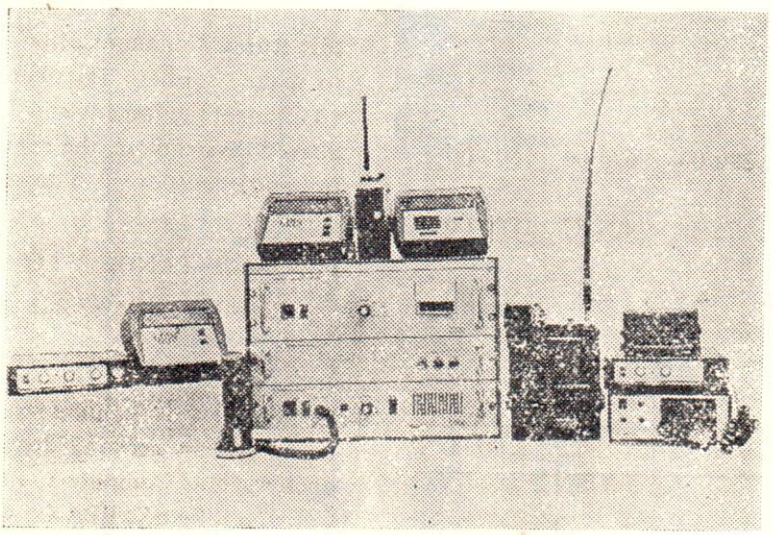
KEONICS PC PLUS

V. CO-ORDINATION BETWEEN LARGF, MEDIUM & SMALL SCALE INDUSTRIES

Many large and medium electronics industries in Karnataka are not aware of the SSIs who can take up ancillary/assembly work for them and vice-versa. In order to promote a better understanding between the various types of industries a directory of Electronics Industries in Karnataka has been prepared. Buyer-Seller Meets are organised from time to time to bring the representatives of the various industries face-to-face. Individual queries from industries regarding prospective vendors and sub-contractors are also attended to.

VI. SUMMARY

The policy adopted by Karnataka Government in accelerating development of electronics primarily through promoting private Sector Industries has paid rich dividends. From a very small base, which was mainly of an ancillary type, the Private Sector in Karnataka has grown from Rs. 30 crores in 1982–83 to Rs. 727 crores in 1988–89 or a 24 fold increase (Please refer graphs). THIS HAS RESULTED IN A COMPOUNDED ANNUAL RATE OF GROWTH OF 69% IN THE PRIVATE SECTOR, WHICH IS THE HIGHEST FOR THE PRIVATE SECTOR IN INDIA. The private sector production in Karnataka has already overtaken the public sector production and is anticipated to constitute 65% of the State Electronics Production in the next two years. The above growth has been possible through the concerted effort of the various agencies of the Government of Karnataka such as KEONICS, KIADB, KSIIDC, KSSIDC, KSFC etc. Keonics has co-ordinated the promotion of private sector electronics industries and participated in 9 joint ventures which has resulted in an investment of over Rs. 62 crores and created a significant production base in thrust sectors. This is in addition to its own manufacturing activities.



KEONICS COMMUNICATION EQUIPMENT

As for the future, the main strategies which will be adopted will be provision of infrastructural facilities and participation in joint ventures. Proposals for the Electronics City at Mysore and Dharwar are already under consideration by the Government. As a measure of promotion of Medium and Large Scale Electronic Industries 25 products have been identified which could be taken up by medium and large scale electronic industries in the Private Sector or by joint ventures. The list of products is at Table-3. (See Next Page)

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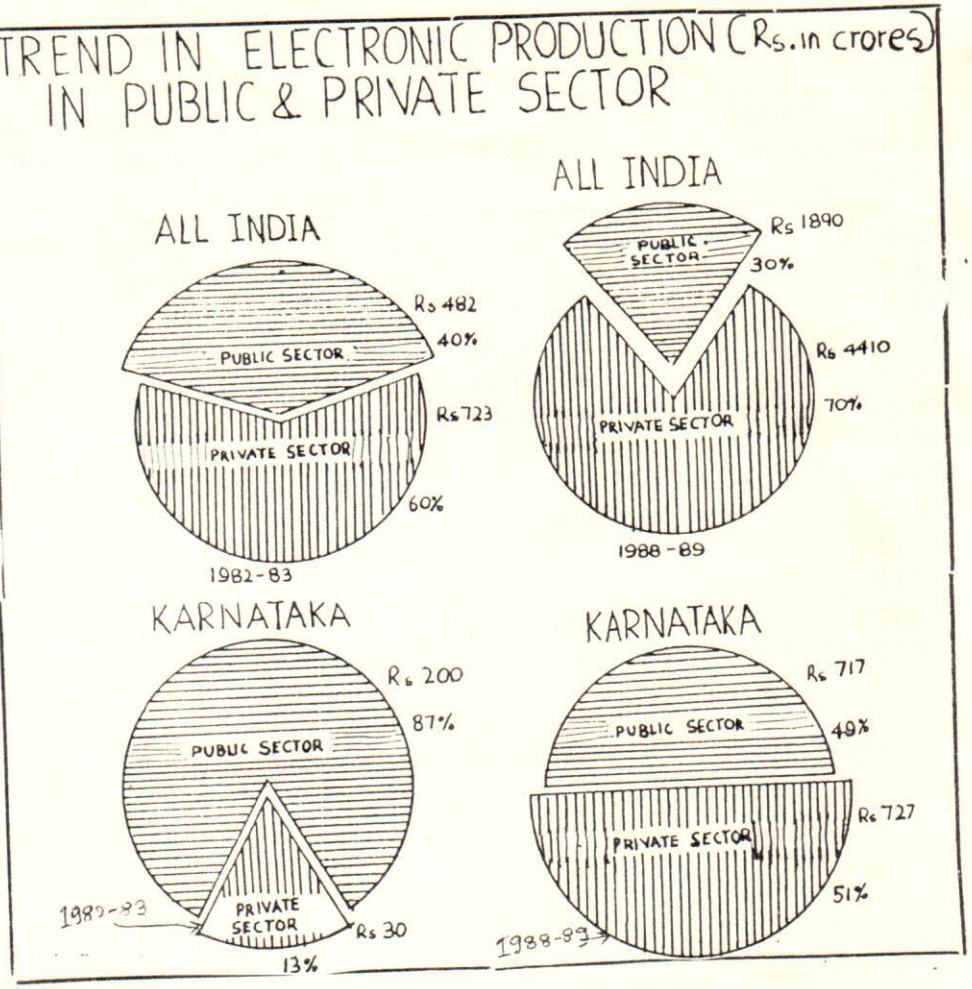

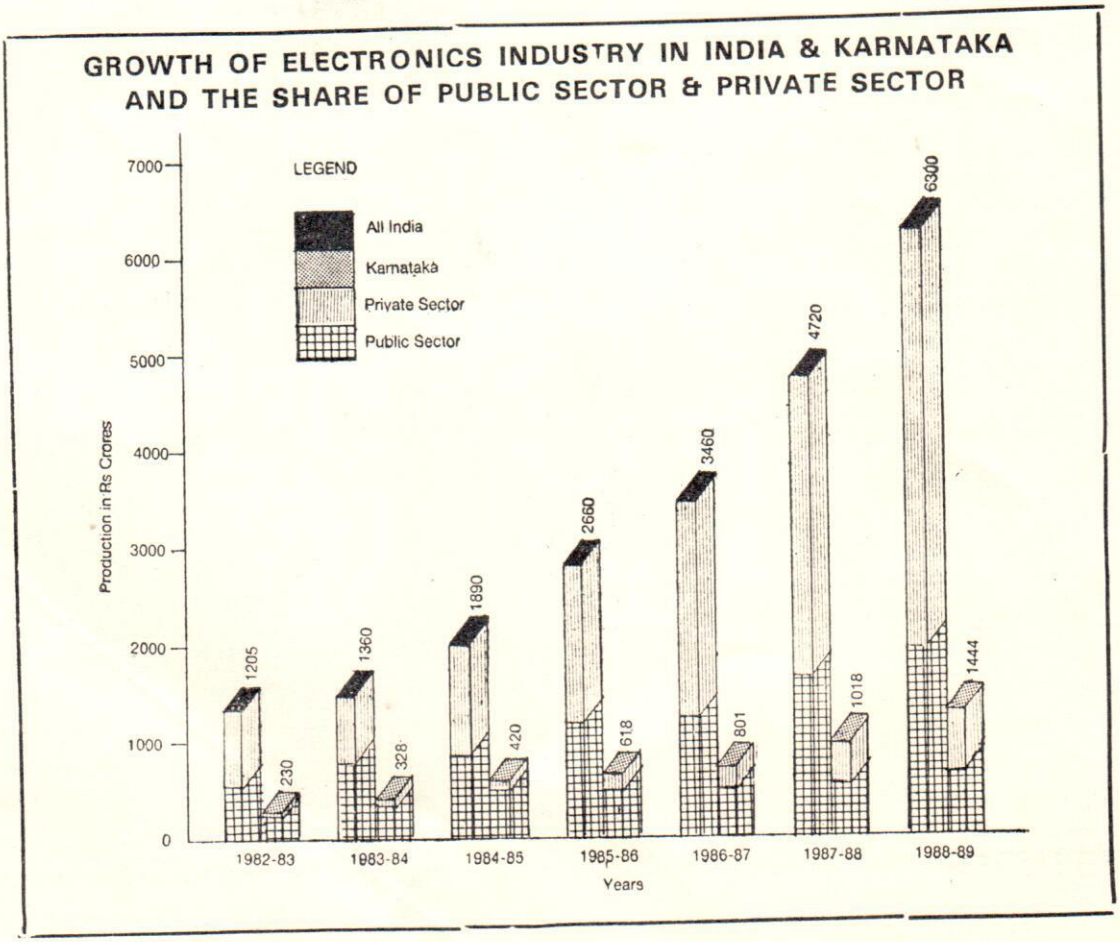

Table-3

List' of Products Identified for Promotion by Private Sector or Joint Ventures

Sl. No.	Projects	Approx. cost of Project (Rs. in millions)	Sl. No.	Projects	Approx. cost of Project (Rs. in millions)
1.	Integrated Circuits	120.00	13.	Multilayer Ceramic Capacitors	20.00
2.	Professional grade Microswitches	85.00	14.	Ferrite Cores	35.00
3.	Light Emitting Diodes (LED's)	12.00	15.	Semi-conductor Diodes/Transistors	50.00
4.	Thermistors & Varistors	15.00	16.	Mercury Wetted Relays	6.00
5.	Power Electronic Items (Inverters, UPS, Converters etc.)	13.00	17.	Opto Electronic Devices	30.00
6.	Liquid Crystal Displays (LCD's)	20.00	18.	Digital Audio Tape Recorders	15.00
7.	Floppy Diskettes	15.00	19.	SAW Fitters	12.00
8.	Microwave Ovens	7.50	20.	Advanced MODEMS	6.00
9.	Professional Motors	17.50	21.	Telephone Transducer Capsules	60.00
10.	Microwave Components & equipments	10.00	22.	LOS Antenna	30.00
11.	Quartz Crystals	12.00	23.	Surge Arresters	15.00
12.	Printed Circuit Boards	20.00	24.	Nickel Cadmium Batteries	17.50
			25.	Connectors (BNC, TNC, VHF etc.)	30.00