

Address at the inaugural session of the National Seminar on "Knowledge Technology & Knowledge Industry: Kerala's Development Potentialities

Knowledge Products for Non-Linear Growth

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"Small aim is a crime"

I am indeed delighted to contribute a paper in the seminar on Knowmatics, Knowledge Technology and Knowledge Industry. I wish all success for the seminar and its follow-up actions. I greet the leaders from the IT industries, major users of ICT, scientists, Technologists, distinguished guests and also the silent professionals. I congratulate the Indian IT industry for their significant contribution in bringing the country's software industry to the global arena.

The growth in IT business is directly related to how much innovations and research results we continuously inject to invigorate the industry. IT industry equally contributes for the national development through electronic connectivity such as telemedicine, tele-education and e-governance. I greet all the members who have assembled here.

Growth of Knowledge Society

Economic growth for India is fundamentally tied to societal transformation in the knowledge products and service sector. Of course this in turn strengthens agriculture and manufacturing through innovation and value addition. We have to move upwards to an information and knowledge society involving explicit knowledge through knowledge intensive products and have manufacturing sector and high value agriculture based on new knowledge and skill. Information, knowledge and communication technology have to be widely deployed in our transformation strategy along with newer technologies like biotechnology, nano-technology, advanced materials in addition to new approached of clean technologies.

Changing Pattern of Society

When the world was moving from the industrial to information and knowledge era we witnessed a changing pattern in the sectoral chair of GDP and the number of people employed in each sector. The share of Gross Domestic Products (GDP) percentage has undergone a considerable change. Contribution of agriculture to India's GDP has reduced from 39% to 29% during the period of 1979 to 2004. During the same period contribution of manufacturing sector has moved from 24% to 27% and where as the contribution from the service sector has increased from 37% to 51 %, it include ICT sector. There has been

considerable change in the employment pattern also. This trend has to continue and by 2020 our employment pattern should aim at 44% in agriculture 21 % in manufacturing and 35% in service sectors.

Our growth focus is in the ICT sector. Today the software industry in India is merely 28 billion dollars (USD 18 billion export and USD 10 billion domestic market) contributing to nearly 24% of nations exports. This is through IT services and ITESBPO sector, which accounts for around 3.5% of the global market. India's core competence is in the area of IT services; IT enabled services (ITES)-Business Processing Out-Sourcing (BPO). Our first aim should be to capture at least 15% of the global business volume in these two sectors, which is expected to be around 1.2 Trillion dollars by 2008. The market share of the Indian software industry in IT services, ITES and BPO along should be around 200 billion dollars by 2008.

I consider this as doable, since our university system is contributing over two million graduates including engineering graduate every year. This is a vital resource needed for growth in the IT services, ITES and BPO. Now what are needed are the infrastructural establishments such as IT parks including call centers in large numbers for providing the services which can be established by our cash rich IT companies and the State Governments. We should aim at increasing the knowledge pool to 5 million Indian youth by the year 2008, which will enhance the existing efficiency by the factor of 2. This should be the collective concern of the entire software industry, NASSCOM, user industry associations such asCII, FICCI, Government and Nongovernment organizations.

Technology Interfaces

Technology is the non-linear tool available to humanity, which can affect fundamental changes in the ground rules of economic competitiveness. Science is linked to technology through applications. Technology is linked to economy and environment through manufacture of knowledge products. Economy and environment are linked to technology, which promotes prosperity to the society. We have to use innovation of knowledge products to generate high value added information technology products for becoming a global player. That means the per capita yield of Indian knowledge *worker* is one fourteenth of a similar *worker* in the developed nation. I suggest that the governments, Industry and the academia to work together to develop and market intellectual property products which alone can increase the per capita revenue non-linearly for the Indian Software Industries. Hence our software industry has to move up the value chain and come up with innovative products that will have an order of magnitude commercial impact in the international market. I am confident that the Indian IT Industry is capable of undertaking such mega missions.

May God Bless You.