

India R&D 2006 : Mind to Market

Speech by

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His Excellency the President of India Dr. A. P. J. Abdul Kalam Ji, His Excellency the Sudanese Minister for Science & Technology Mr. El Zubeir Beshir Taha, Mr. Saroj Kumar Podar, President, FICCI, Secretary, DIPP, Government of India, distinguished delegates participating in this conference, excellencies, my friends in the media, ladies and gentlemen :

The mind, unless so attuned, is far removed from the market, just as basic science is far removed from applied science. We in the 21st century, in the context of the emerging needs of the global economy, will have to innovate and reinvent ourselves. We need to provide synergies between the mind and the market; synergies which will ensure that basic science and applied science is a two way traffic. The enormities of our global challenges compels us to find solutions which are not just marketable, but affordable and accessible to ordinary folk. The global economy has ensured that the market too is global. Centres for R&D are not just oasis in a vast desert, isolated and far removed from the realities of everyday life. These centres of excellence are hotbeds of research which through time will challenge the way we think, act and deal with each other.

The ICT revolution created the mirage of a world that is flat; mirage because connectivity is the privilege of just a few, in the context

of our global population. We need to make the ICT revolution a reality for all. The biotech revolution is destined to use to its advantage the information technology revolution to help understand ourselves and provide solutions in both the agri & health biotech sectors. Agriculture for food security and health for maintaining physical integrity and the next generation revolution, through nanotechnology will provide us solutions to meet the challenges of the 21st century. Building on the ICT and the biotech revolution: from telecommunications to biological sciences to nano-materials is an exciting journey of the mind. For the markets too, it is equally exciting. The mind pollinates and the market delivers the products. Yet the journey from mind to market is complicated, hazardous and challenging. This conference will dwell on this journey and make sure that all stakeholders develop understanding, create the necessary environment and build appropriate capacities to deliver to consumers in the market.

The mind is constantly endeavouring to discover both the world within and the external world. Apart from virgin concepts and a new way of thinking, the mind allows us to carve out new pathways to undertake the same journey for perhaps speedier, less expensive, more efficacious and accessible solutions. The challenges before the global community are daunting and the consumer situated anywhere in the world is desirous of the best possible product at the cheapest

possible price. No consumer, if he or she can afford it, is willing to compromise on quality. The market is constantly endeavouring to seek solutions to fulfill the desire of the consumer and at the heart of a dynamic market is competition. And competition is the result of new ways of thinking. The market is intrinsically linked with the mind that may not be fully attuned to both the demands and the concerns of the market.

Even today, the United States of America is the breeding ground of new innovations and ideas. The reason is simple. The American entrepreneur serves the global market and innovations help him to serve it better. At the heart of innovation is a market economy in which competing interests wish to access the same market. The quicker the journey from the mind to the market, the more successful the entrepreneur, as he is ahead of everyone else. This was the position, and to some extent remains the same, till the arrival of the knowledge economy and its global impact.

The ICT revolution allows the mind to both generate and communicate ideas anywhere around the globe. Consumption and communication are intrinsically linked in a globalized world. When an idea is translated into a product, the markets may be limited depending on the nature of the product, its price and many other factors, which

impact on the market. The germination of an idea can take place anywhere in the world, but its translation into a product in a globalized economy takes place and should take place where such product can be produced at the cheapest possible price. It is for this reason that pharma companies are coming to India for contract research because of the quality human resource available in India in the context of a low cost economy. India will be the breeding ground for new drugs for the same reason. Recently a French company decided to shift its manufacturing base to India for vaccine development for its worldwide operations. Similarly, in the automobile industry, a large section of the industry is manufacturing products in India. China and India together represent more than one third of the world's market. All innovations therefore, seek to access these markets.

The journey from mind to the market is exceptionally complex. From an idea to its germination and reaching proof of concept stage requires a legal regime, which encourages innovation and new thinking. Industry should be encouraged by providing an appropriate environment to help it invest in finding solutions which are both accessible and affordable. Solutions for cheap housing, access to clean drinking water, sanitation, providing literacy, health care at affordable prices are the challenges of tomorrow and the mind anywhere in the world must recognize those challenges and find market solutions. How

do you ensure that farmers don't commit suicide, buried under a debt burden? How do you ensure that farmers get a better price for their produce, better seeds for crops and GM technologies dealing with biotic and abiotic stresses? Scientific minds tantalized by issues concerning basic science need to use science for translational solutions to improve everyday life. Science must ensure that a tsunami does not destroy people's lives overnight. Science must also ensure that the agriculturalist gets timely information about the onset of the monsoon, the nature of the soil in which he grows his crops and the extent of water available and the amount to be used. This is where both basic science and applied science must walk hand in hand. The mind must be attuned to the market and the market must depend upon the mind. The real challenge before the global community is for the market to recognize that solutions for products which are marketable, must not be predicated on the existing buying capacity of the market. The market can in-fact create new market through innovative solutions and move beyond existing buying capacities. In turn, the market can access the mind for innovative marketing solutions to increase capacities.

The 21st century will be a century where the mind and the market will function together not at the cost of each other, but for mutual benefit. The mind will rely on the market and the market will look to the mind for support. Collaboration is key. This conference will discuss how

the mind and the market can collaborate, how the investment in the university system will help create a market for the mind, how market forces will collaborate with the university system to forge results that impact on the lives of ordinary folk. How we must incentivize the academic community to have a share in what they create. Sometimes, the mind can conceive a market that does not exist and the market looks for a mind that must be accessed.

I congratulate FICCI for bringing to the fore at this conference, the significance of the synergies between the mind and the market. ***“You can chain me, you can torture me, you can even destroy this body, but you will never imprison my mind”***. Mahatma Gandhi once said. The time has come to liberate the mind from the shackles of unnecessary controls, allow the university system and the academic community to discover and allow incentives; the markets to rely upon knowledge as an asset. Then alone can we deliver goods to the global poor. It is time to think globally and find global solutions by marrying mind to the market.