

**Seminar of the Industriele Groote Club (IGC) India Table, Amsterdam, 12th
October 2010**

Keynote speech by Ambassador Mukherjee:

**"Laboratory to the world : India's growing strength in research and
development"**

General introduction and opinion on the value of the main theme

1. It is indeed a privilege & pleasure to be here with you today to participate at the "India Table" which had been launched on 2nd October 2009, the Birthday of Mahatma Gandhi, the Founder of the Indian Nation. We welcome the fact that "Industriele Groote Club" (IGC), one of the oldest business clubs in the Netherlands, has organised an India Table.

2. May I thank the Organisers for inviting me to participate at this event. I had a look at the Tata Nano which at a price of US\$ 2000/- is a testimony to the continuing leadership of Indian companies symbolised by Tata to innovate and move ahead - the great strength of India demonstrated by its 9.5 GDP growth rate as just published by IMF.

3. It was Carlos Ghosn, CEO, Renault Nissan, who wrote and I quote "There is a thirst for learning here which makes Indian engineers innovate and create a product frugally. Engineers in other parts of the world always need more resources to do the same thing". One must not forget why the Tata Nano came into being. It was the present CEO/Chairman of Tatas, Mr. Ratan Tata, who said that the Tata Nano would fulfil the aspirations of India's growing middle class for an affordable car so that Indian families would not be riding on a motor-bike or a scooter. They too would have their place of dignity in their own Indian car.

Factors underlying the increasing strength of Indian R&D

4. Few people in India, and even fewer outside, realise today that Pandit Jawaharlal Nehru, the first Prime Minister of free India, had taken a Natural Science Tripos degree with Chemistry, Geology and Botany as his subjects in Cambridge, England. It was during his frequent periods in prison during India's struggle for Independence that his political and social ideas were formed and crystallised into a socialistic pattern of society in which science was to play a major role. After Independence, Pandit Nehru laid the foundations for a scientific and technological revolution in India which few other ex-colonies ever achieved. This he called his 'Scientific Temper'. He headed the Council of Scientific and Industrial

Research (CSIR), and he remained its Chairman during his whole term as Prime Minister. He also appointed the iconic Dr. Homi Bhabha, to be responsible for the development of atomic energy in India. Another vital contribution was the establishment of National Laboratories in a wide variety of scientific and industrial subjects.

Now I come to the 'why' part.

5. An important factor in India's favour is demography. India is a young country. More than 50% of its population is below the age of 25 and more than 65% is below the age of 35. Nandan Nilekani, a former software mogul, who heads a very important Government project to give every Indian an identity number, recently told Economist: "An ageing world needs workers: a young country has workers". India's working age population will increase by 136 million by 2020.

6. Education and knowledge have traditionally been considered to be the most important elements required for success in India. In ancient India, during the Vedic period in 1500 B.C India developed the 'gurukul' system of education i.e. an institutionalised system of education. Subsequently, a number of urban learning centres became increasingly visible, the important famous being Taxila and Nalanda (oldest university system of education in the world) among others. These institutions systematically imparted knowledge and attracted a number of foreign students from all over Asia, to study diverse topics such as logic, grammar, medicine, metaphysics, arts and crafts.

7. This tradition is part of our national psyche. India developed its tertiary education, despite every challenge, since Independence. We have more than 17,000 colleges, 400 universities and 13 institutes of national importance including Institutes of Technology and Management across India. The country is producing half a million engineers annually.

R&D Infrastructure

8. India is one of the top-ranking countries in the field of basic research. Indian Science has come to be regarded as one of the most powerful instruments of growth and development. The Department of Science & Technology, Government of India, plays an important role in promotion of science & technology in the country.

9. The strong public R&D system in India is supported by a skilled workforce. Premier institutes such as the CSIR conduct research activities in various areas including agriculture, space, science and technology.

After the infrastructure, come the costs.

10. Let me underline at this stage the important role played by Indian companies to invest more and more on R&D and to access world markets. For example, NRDC has a major programme to prepare surveys for foreign clients. It is not widely known that many of the products commonly used in India and even abroad use Indian technology in their manufacture. NRDC has developed such technologies.

11. The total number of patents granted in India under the Patent Cooperation Treaty (PCT) during 2008 were 18,230. In the period 2004-2007, patent grants in India increased by 87.7% and in 2007-08 the number of granted patents grew by 19%. In 2009, 65.5% of all patent applications in India were from the business sector. 65% of PCT applications filed from India had foreign owners - an indication of the increased role of India as an R&D destination for foreign companies.

12. The large Indian market also provides opportunities for companies to test new products in the market at low costs due to the very large consumer base.

13. India is still one of the main drivers for outsourcing of the software industry. Microsoft is currently investing heavily in India setting up R&D and technical support facilities for more than Euros 1.3 Billion in Bangalore, while Intel, Cisco and Google have been setting up R&D centres in India. These R&D centres are all serviced by Indian IT professionals.

14. The outsourcing from Europe to India also goes the other way. Many Western companies now hire entire R&D teams in India to manage R&D of products that the companies do not want to allocate to their own in-house engineers. More than 30% of Fortune 500 companies today have R&D activity in India.

Innovative strength of Indian Corporates

15. It is now widely acknowledged that Indian firms are increasingly global and world class. Arcelor Mittal based in Luxembourg is the world's largest steel firm while Bharti Airtel, a mobile phone firm with 140 million subscribers in India is rapidly expanding. I had also highlighted the dynamism and innovation of the Tata Group which has extended its global footprint, just as it has enhanced its performance and competitiveness. One of the key drivers of this critical transition has been innovation. It is important to recall that apart from the Tata Nano, Tata Motors also owns Jaguar and Land Rover, two luxury brands. The Tata Group invests in building outstanding research facilities and forging partnerships with academic and research organisations in order to encourage creative thinking and find innovative solutions that improve our quality of life.

16. Tata Nano – the world's first US\$ 2,000 car, is a first-in-class vehicle in the small car segment in the Indian automobile industry, and is targeted at the huge Indian middle class. The car's fuel efficiency, at 23.6 km per litre, is the highest among petrol cars in India and it has the lowest CO₂ emission in the country due to its high fuel efficiency. The Tata Nano was developed at a fraction of the cost it takes for such development by the established global automotive companies.

India's original role as a country for IT Outsourcing

17. India's role as a country for IT Outsourcing and a destination of choice for IT and other services offering quality services at minimum cost was stated earlier. Let me give some highlights:

18. The Indian IT/BPO Industry (including hardware) is estimated to aggregate revenues of US\$ 73.1 Billion in the financial year 2010, a growth of 5.4 % over the financial year 2009.

- Software and Services Export Revenue are estimated to grow over 5.5 % to reach US\$ 49.7 Billion in 2010.
- The industry has played a critical enabler for industry growth in other countries including Netherlands. It currently has 450 delivery centres in 60 countries round the world.

19. India topped the A.T. Kearney Global Services Location Index 2009, beating 49 other countries of the world, emerging to be the destination of choice as an off-shoring location of global IT/ITeS powerhouses.

Possibilities for cooperation with strong R&D intense sectors in the Netherlands

20. Allow me to give a profile of some areas in which there are opportunities for cooperation in R&D intense sectors in the Netherlands.

21. The first area is that of Life Sciences. For example, the Indian healthcare sector currently estimated at about US\$ 38 billion is expected to grow at a compound annual growth rate (CAGR) of 15 per cent for the next 15 years to touch US\$ 77 billion by 2013. Healthcare expenditure in India is expected to contribute 6.1 per cent of GDP in 2012.

22. The WTO has improved access of developing countries to patented medicines. India with its expertise in producing cheap medicines has been able to assist LDCs

and developing countries with medicines to combat diseases such as AIDS, Malaria and Tuberculosis.

23. The Indian pharmaceutical market is expected to triple to US\$ 20 billion by 2015 from US\$ 7.1 billion in 2007 at a compound annual growth rate (CAGR) of 12.3 per cent, and establish its niche among the world's leading 10 markets.

24. Until 1998, India had no medicine exports to regulated markets. Today, over 40% of its \$8 billion exports is to North America and Western Europe alone.

25. Another important segment in the healthcare sector is that of clinical trials. The clinical trials market in India, currently valued at about US\$ 250-275 million, is expected to grow at annually at 30 per cent over the next few years, at nearly double the global average. The clinical trial industry is valued to go up to \$1 - 1.5 billion in the next five years.

26. India is ranked third — after the US and China — in terms of attractiveness as a clinical trial destination.

27. The science of tailor-made medicines — suiting each patient's genetic make-up — is the next frontier. Studies in Pharmacogenomics are taking place in India and it is expected that there will be use of genetic analysis in the drug development process.

28. In 2008-09, the Indian biotech industry recorded revenues worth US\$ 2.67 billion, registering annual growth of 18 per cent from 2007-08.

29. The Swiss firm Lonza is planning to set up a manufacturing base in India at an investment of US\$ 150 million. Major Indian pharmaceutical companies that have entered the bio-pharma segment include Ranbaxy, Cadila Healthcare, Lupin, Wockhardt and Dr Reddy's.

Automotives

30. The Indian automotive industry is expected to be the world's seventh-largest automobile market by 2016 and the third largest by 2030, only behind China and the US. The industry is expected to grow to US\$ 40 billion by 2016.

31. As all the leading global brands in the car and spare parts industry have entered or are in the process of entering the Indian market, R&D in this sector is also bound to increase further. The Pune-based Automotive Research Association of India (ARAI) and DSM of the Netherlands have entered into an alliance to develop new lighter materials that could substitute metals in the automotive industry, and help auto components shed weight.

Telecommunication

32. India is one of the biggest telecom markets in the world with over 617.5 million subscribers as in June, 2010, with an overall teledensity of roughly 57%. We have the third-largest telecom network in the world and second-largest among the emerging economies. The Indian telecom industry generated revenues of approximately US\$ 32 billion in 2007-08 with a growth rate of 60 per cent over 2006-07.

33. Companies like Nokia, Intel, AMD have set up their research centres in India and a number of new technologies are being developed in these centres.

34. Comparisons have often been made between India and other emerging economies. These comparisons are often stereotyped and unfair and do not take into account the key strengths of Indian business including their ability for grass root innovation and innovative business model. The recent negative publicity in the media about India hosting the Commonwealth Games where India has been totally vindicated by the outstanding success of these Games, in fact demonstrates the strength of India and the unfairness of comparisons. As the world's largest democracy based on rule of law and pluralism and a dynamic and critical media, it is easy to criticise India where such criticism is usually available in 24 hour Indian news channels. Personally, criticism is not harmful if it doesn't reinforce a stereotype. The reality is India now has a world class airport terminal which compares very favourably with Schiphol Airport. One of the most innovative metro systems in the world has been built in Delhi. A recent Economist headline showed India as a rising tiger. India is moving fast and those who wish to move with us

should do so quickly, otherwise they will be left behind. Chairman of Tata Group, Mr. Ratan Tata said in the "Leaders Magazine" in Oct/Dec 09, and I quote "Doing business in India presents unique challenges so it pays to be patient". But there are also great opportunities. At the recent NIBM Business Meet here in Amsterdam last month, the annual award was given to a Dutch Indian collaboration: "Vision Express", which in three years has opened 70 Stores all over India and is expected to cross the 100th mark next year.

35. The Korean Head of LG Electronics Indian subsidiary recently said: "India is the last frontier". India's continuing growth pattern will change the world. Our thriving vibrant multi-party democracy offers the best guarantee of stability that all businesses require. Our role as the Indian Embassy and the Ambassador is to promote, nurture and strengthen this win-win situation. A famous English poet said:
"There is a tide in the affairs of men,
which taken at the tide,
leads on to fortune."

India and Netherlands together can ride this tide for mutual benefit.

Thank you.
