China: Perspective of leading the R&D world environment

The United States of America have been ahead of all international competition in terms of annual Research and Development expenditure; this, for as long as we can remember. The U.S bare an image of leading world statistics on many various domains, but by taking a step back we can speculate on one new R&D leading player in the next couple of years.

According to OECD projections, based on most recent trends, China's R&D investments would have exceeded Japan's in 2007, reaching 136 billion USD, opposed to Japan's 130 billion USD forecast. This puts China in the second R&D investments position, still far behind U.S 's astronomical 330 billion. However, it is interesting to note that, China's engineers and scientists usually make between one-sixth and one-tenth of what Americans do, which means that the wide gaps in economical terms do not necessarily result in equally wide gaps in manpower or results.

"The rapid rise of China in both money spent and researchers employed is stunning." Dirk Pilat, Head of the OECD's Science and Technology Policy division.

When looking in depths at the manpower available, China again meets the second place after the U.S. Nevertheless, in China, the number of researchers increased by 77% between 1995 and 2004, and China now benefits from the work of 926,000 researchers, when the U.S employ 1.3 million. Indorsing these figure, U.S production of engineers and researchers is growing at a sluggish pace, when every year China's universities and schools form 325,000 engineers in average per year, which is five times as many as the U.S.

Not to mention China's R&D intensity (R&D/GDP ratio), which has more than doubled from 0.6% of GDP in 1995 to just over 1.2% in 2004. This represents an increase from just over 17 billion USD in 1995 to 94 billion USD in 2004.

This has a very positive impact on both science and high-technology sectors. China has launched a few very competitive products, and has registered quality patents, in a 10-year-old world emerging biotech industry. In a one billion potential patients market, 15 Chinese biotech products for health are already on the market, with another 60 still developing.

This points out the potential of China in advanced technology, and it highlights the fact that China is not only a country excelling in textile, toy factories and other simple production facilities, but it is a major player on skilled sectors such as R&D. One dreadfully expensive challenge still lies ahead for China: developing costly and state of the art research centers and scientific

infrastructure, generating a higher quality and more numerous scientific investigations.