Newspaper Clips

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India will be 2nd biggest economy in 2050: PwC

Ashis Ray | TNN

London: The Indian economy will register the second fastest growth between now and 2050 and emerge as the second biggest economy in the world by the middle of this century, according to a forecast by the consultancy group, PriceWaterhouseCoopers, released on Friday.

In terms of GDP at purchasing power parity (PPP), India is said to be on track to overtake Japan this year.

The author of the report, PWC's chief economist, John Hawksworth, speaking exclusively to TOI, said, "India has the potential to be one of the three great economies of the 21st century, together with China and the US."

But he warned it would require significant improvement in "India's energy and transport infrastructure, less red tape, increased education levels in rural areas, particularly for women, and the continuation of the open attitude to trade and investment seen over the past 20 years".

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No Limits To Knowledge

Can Chinese scientific innovation exist alongside restriction of speech? Not for long

Rana Mitter

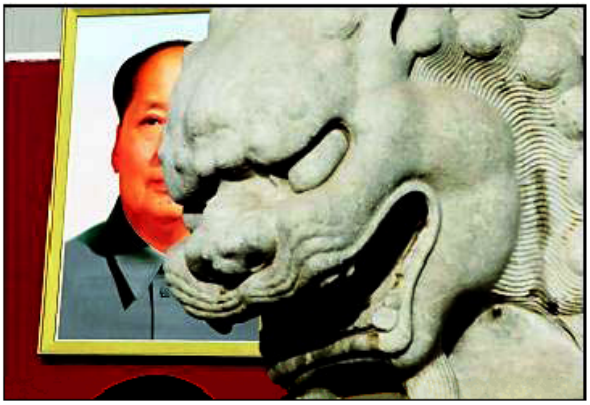
On May 4, 1919, 3,000 students marched through the centre of Beijing to protest against the weakness of their country, an iconic event still known today as the "May Fourth Movement". Many of those students were enrolled at Peking University, the Chinese capital's finest seat of learning, whose president was a scholar named Cai Yuanpei. Cai was wedded to the idea of a university as a place that provided "education for a worldview": not just instruction, but a whole new way of seeing and being.

More than nine decades later, that same university, along with its great counterparts such as Tsinghua (the MIT or indeed IIT of China), is central to the worldview of the Chinese Communist Party. But the party's view is very different from that of Cai Yuanpei. For the party's plan is that universities should be powerhouses in their strategy for China to move from a country that imitates to one that innovates in science and technology. Much of the "software" is already there: China already graduates some two million engineers and scientists a year.

Authoritarian societies can produce high quality science. In the 1950s, the USSR gave the Americans a real fright when they launched Sputnik, sent the first man into space, and showed that Soviet technology had the potential to beat the West. Today, as funding for science in the West falls victim to budget cuts and government spending restraints, the Chinese are now at the cutting edge of technology in many areas. Chinese work on solar energy is widely regarded as world-beating. The Chinese space programme has already produced its first astronauts, and few would be surprised if China were to place a man or woman on the moon within the next decade.

Furthermore, the Chinese are placing their (considerable) financial reserves where their rhetoric is. While the British government, for instance, has cut total university spending this year, Chinese annual spending on research and development in universities and other institutions exceeds that of Japan and is beaten only by the EU and US. The authorities have also sought to clean up the nature of Chinese academic culture. Many journals which publish shoddy or plagiarised work will be shut down. Many other journals have begun to publish in English, on the grounds that this is the only significant international scientific language. For the next few years, then, there is no reason that Chinese scientific research should not forge ahead even while freedom of discussion on political matters remains restricted.

> To recruit and retain scientists, China must offer not only money, but an environment for research and thought that will have credibility with the research community around the world



Tiananmen Gate, Beijing: Where the mind is not without fear

However, the lessons of the USSR and other non-democratic societies are not so favourable to China when it comes to a longer-term attempt to create a world-leading scientific culture at the same time as maintaining severe restrictions on freedom of speech. Academic debate does not exist in a different universe from the wider social conversation. The best illustration of this is another Soviet example, the biologist Trofim Lysenko, who was favoured by Stalin and given a stranglehold over the field of genetics in the USSR of the 1950s, forcing colleagues and competitors to publish work that was scientifically spurious simply because it fitted Lysenko's political beliefs. The Soviets may have forged ahead in space, but political repression hobbled them for decades in genetics.

Of course, China today is much freer than the USSR of the 1950s. But there are large areas of academic discussion that remain simply out of contention for debate. Departments of political science outside the Chinese mainland debate whether there will be an end to the dominance of the Communist Party rule in China, or the reasons for the uprising and deaths at Tiananmen Square in 1989. Such topics are forbidden for their colleagues in China itself. Nor can their colleagues in history departments give the full details of events such as the Great Leap Forward famine of 1958-61, which killed some 20 million people. And in the longer term, it will be hard for the party to allow free research into hard sciences while restricting social science research into areas that are politically embarrassing.

For scientists know that they do not operate in a vacuum. To work in an institution which is known for restricting freedom of academic expression will, ultimately, be problematic for a scholar's standing. Few scientists of repute, after all, would choose to work at a US college run by fundamentalists who deny evolution, however significant the funding they are offered. And science knows no boundaries; the best laboratories recruit their staff from around the world. The party will need to realise that to recruit and retain scientists at the highest international level, it must offer not only money, but an environment for research and thought that will have credibility with the research community around the world. And this will mean that, inevitably, more space will have to open for public discussion of change in politics and society, fully informed by thinkers who can speak freely about their own country.

This is, in the end, something that the greatest Chinese educators have always understood. It is a very Confucian, not western, idea that the ability to think well has positive effects for all of society, not just a restricted part of it. Cai Yuanpei knew that.

The writer is professor, history and politics of modern China, Oxford University.

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Circumcision stops cervical cancer virus

Washington: Researchers have documented yet another health benefit for circumcision, which can protect men against the Aids virus, saying it can protect their wives and girlfriends from a virus that causes cervical cancer.

Wives and girlfriends of circumcized men had a 28% lower rate of infection over two years with the human papilloma virus or HPV, which causes warts and cervical cancer, they reported in the Lancet medical journal.

"Our findings indicate that male circumcision should now be accepted as an efficacious intervention for reducing the prevalence and incidence of HPV infections in female partners. However, protection is only partial; the promotion of safe sex practices is also important," Maria Wawer and colleagues at Johns Hopkins University in Baltimore wrote.

Wawer's team piggybacked the HPV study onto a larger study that has shown circumcised men are less likely to be infected with the human immunodeficiency virus that causes AIDS. "We enrolled HIV-negative men and their female partners between 2003 and 2006, in Rakai, Uganda," they wrote in their report in the Lancet medical journal.

They were able to get details on HPV infections for nearly 1,000 of the women, all identified by men as long-term sex partners such as wives. After two years, 27.8% of the steady partners of circumcised men had HPV infections, compared to 38.7% of the partners of uncircumcised men. HPV infection is best known as the primary cause of cervical cancer, but it causes genital warts and can also lead to cancers of the anus, penis, head and neck.

Wives and girlfriends of circumcized men have a 28% lower rate of infection over 2 years with the human papilloma virus which causes warts and cervical cancer, say experts

There are dozens of strains of HPV, which are highly contagious. Circumcision removes the foreskin of the penis, which is rich in immune system cells targeted by HIV and perhaps other viruses. Taking off the foreskin likely makes the penis less likely to carry a range of microbes, Wawer's team said.

"Male circumcision has now been shown to decrease HIV, herpes simplex virus-2, and HPV infections and genital ulcer disease in men, and also HPV infection, trichomoniasis, and bacterial vaginosis and genital ulcer disease in their female partners," Wawer's team wrote. REUTERS

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Why some cancers develop in an instant?

London: British scientists claim to have solved the mystery of "instant cancers" — tumours which seem to appear out of nowhere, after they discovered that in some cases cells can explode wreaking havoc in DNA.

In fact, the scientists from the Wellcome Trust Sanger Institute near Cambridge found that in some cases of cancer, a single apocalyptic "explosion" in a cell could cause as much damage to the DNA as decades of hard living. The discovery was made from the study of the genetic flaws in 750 tumours, the Daily Mail reported. Lead scientist Peter Campbell said: "The results astounded us. It seems that in a single cell, in a single event, one or more of the chromosomes explode — literally into hundreds of fragments."

If the cell then botches the repair, stitching the fragments back together in a "higgledy piggledy" fashion, the damage to its genome, or cache of DNA, leaves it ripe for the rapid development of cancer. The phenomenon is particularly common in bone cancers, where the distinct pattern of damage is seen in up to one in four cases. PTI

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'Boozeter' dose: Scientists work on alcoholism vaccine

Santiago: Chilean researchers said they are developing a vaccine against alcoholism that could be tested on humans starting next year and works by neutralizing an enzyme that metabolizes alcohol.

The genetic therapy is based on aldehyde dehydrogenase, a group of enzymes that metabolize alcohol and are thus responsible for alcohol tolerance, said Juan Asenjo, who heads a team of researchers at Chile's Faculty of Sciences and Mathematics and the private lab Recalcine.

About 20% of the Asian population lacks this enzyme and thus experience "such a strong reaction that it discourages consumption," he added. The vaccine would similarly increase unease, nausea and tachycardia (accelerated heart beat).

"With the vaccine, the desire to consume alcohol will be greatly reduced thanks to these reactions," Asenjo told Radio Cooperativa. Researchers have already successfully tested the vaccine on rats who were dependent on alcohol, and got them to halve their consumption. "The idea is to have 90-95% reduction of consumption for humans," Asenjo said.

It would work like patches or pills that help smokers kick the habit, but with better efficiency by specifically targeting liver cells and avoiding collateral effects on all cells. In October, US researchers announced they had discovered a gene variation known as CYP2EI that can protect against alcoholism and could lead to a preventative treatment. The gene variant known as CYP2EI is linked to people's response to alcohol. AFP

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'Humans first wore clothes 170,000 years ago'

Washington: Humans began to wear clothing 170,000 years ago, a technology which enabled them to migrate out of Africa successfully, a new study has claimed.

The evidence comes from seemingly very unfashionable lice, since US scientists tracked when head lice evolved into clothing or body lice 170,000 years ago, used DNA sequencing for their calculations. "We wanted to find another method for pinpointing when humans might have first started wearing clothing. Because they are so well adapted to clothing, we know body lice or clothing lice almost certainly didn't exist until clothing came about in humans," said study leader David Reed of Florida University.

The study shows modern humans started wearing clothes about 70,000 years before migrating into colder climates and higher latitudes, which began about 100,000 years ago, the Molecular Biology and Evolution journal reported. This date would be virtually impossible to determine using archaeological data because early clothing would not survive in archaeological sites.

NAKED TRUTH

"The study also shows humans started wearing clothes well after they lost body hair, which genetic skin-colouration research pinpoints at about one million years ago, meaning humans spent a considerable amount of time without body hair and without clothing," Reed said.

Ian Gilligan of Australian National University, an expert, added: "It means modern humans probably started wearing clothes on a regular basis to keep warm when they were first exposed to Ice Age conditions." PTI

Hindustan Times ND 08/01/2011 p-9

Prosecution of ex-AICTE chief sought

ht SPECIAL

Charu Sudan Kasturi
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NEW DELHI: A former Indian Institute of Technology Madras director who headed the All India Council for Technical Education during the NDA regime faces the prospect of prosecution for alleged cheating and forgery during his tenure.

Targeting corruption at the AICTE during the NDA's tenure, for the first time, the CBI has recommended prosecution of R Natarajan, former chairman of India's top technical education regulator, top sources at the investigative agency confirmed to HT.

NATARAJAN, ALLEGEDLY CONSPIRED WITH OTHERS TO APPROVE AN ENGINEERING INSTITUTE USING FORGED DOCUMENTS

Natarajan was chairman of the AICTE between 2001 and 2004, before which he was director of IIT Madras. He has also held several other top positions

If prosecuted, Natarajan will be the first IIT director to face criminal charges. The CBI has also recommended prosecution of 13 other officials, in a report to the human resource development (HRD) ministry, the sources said.

"We have established that the rot at the AICTE started well before 2004, and have evidence of the complicity of Natarajan and other officials we want to prosecute," a senior investigator said.

The CBI has recommended prosecution for cheating, forgery, forgery with the intent of cheating and criminal conspiracy against Natarajan and the 13 other officials. It has recommended departmental action against 13 other officials who were members of AICTE committees or members of inspection committees.

Natarajan and the 13 others, who the CBI wants to prosecute allegedly conspired to approve, extend the approval and allow increase in student intake capacity of Chennai-based JA Institute of Engineering and Technology using forged documents.

The AICTE officials accorded approvals despite knowing that the managing trustee was not planning to establish the college as required under norms, and based on "fabricated fixed deposit receipts," the CBI investigation report says.

The CBI last year arrested the AICTE member secretary K Narayana Rao and raided the home and office of then chairman RA Yadav, based on complaints of bribery. The agency has found evidence against Yadav, Rao and several other officials who were working at the AICTE under them.

Business Line ND 8/01/2011 P-4

The Telecom Minister, Mr Kapil Sibal (left), and the Minister for Overseas Indian Affairs, Mr Vayalar Ravi, at a seminar in New Delhi on Friday. — S. Subramanium

Sibal asks diaspora to invest in domestic education sector

Our Bureau

New Delhi, Jan. 7

The Ministry of Human Resource Development on Friday called on the Indian diaspora to actively engage in the development of educational infrastructure in the country. Speaking at the inaugural session of the ninth Pravasi Bhartiya Divas, the HRD Minister, Mr Kapil Sibal, said that the country would need over $150 billion worth of investment in the next 10 years to sustain high economic growth.

The Minister invited the diaspora back to the "land of new opportunities" and help the Government cover the demand-supply mismatch in the education sector.

He said that the country needs 250 million graduates and 500 million skilled workers in the next 15-20 years to sustain the high growth rate. Mr Sibal added that only 12.4 per cent of the total 220 million school-going children reach college and this figure needs to increase to 30 per cent by 2020.

MORE UNIVERSITIES

"We will need 1,000 more universities and 45,000 more colleges. So there is a huge opportunity. It is not an easy job. It is a mindboggling challenge and I think 25 million diaspora is our strength here," he said at the annual meet.

Highlighting the Government's initiatives in reforming the education sector, Mr Sibal said that various legislations are in the offing including the Foreign Education Providers Bill. However, he added that opposition parties did not allow the Parliament to function in the Winter Session, thereby resulting in a delay of the passage of the Bill.

Financial Express ND 08/01/2011 P8

Patent problem?

CSIR patents fall. India's up, but China's far ahead

By most conventional measures, the future of Indian innovation in the global context seems doomed. According to the KEI (Knowledge Economy Indicators) developed by the World Bank, India has an adult literacy rate of 66% (compared to 90% and 93% for Brazil and China, respectively), a tertiary education enrolment rate of only 11.85% (versus 30% in Brazil), 110 researchers per million people (China has 926), R&D spending of a measly 0.69% of GDP (versus 1.42% in China, that too over a bigger base) and hi-tech exports as a percentage of total manufactured exports of 6% (compared to China's 29%, again over a larger base). Not only this, India's KEI score has fallen from 3.56 in 1995 to 3.09 in the most recent assessment, while China's has gone up from 3.93 to 4.47 and Brazil's from 5.23 to 5.66. So not only is India far behind China and Brazil, its latest population-weighted score is lower than that in 1995. Add to this the fact that India has only one name in the list of top 300 global entities that have received the most number of patents. But then India's overall innovation metrics have improved in the past decade. India is second in the number of patents filed amongst the Bric (plus South Africa). Although it is alarming that filings by CSIR, India's largest patent holder, have reduced, the decrease appears more due to the cost of filing and maintaining patents in the US than the rate of innovation, according to a report by *FE*. In any event, even though CSIR's numbers are down, the number of patents filed by Indians in the USPTO has risen to 2,387 (2007) from 438 in 2000— a five-fold increase in just seven years.

In moving to a more innovation-friendly environment, India is instituting some interesting measures, one of which is the Protection and Utilisation of Publicly Funded Intellectual Property Bill that proposes to split royalty from publicly funded research projects between the researchers, the institution and the government to help accelerate the pace of innovations and encourage patenting. But improving the incentive framework is not enough—India needs to enact an overarching programme like China has done, putting down some tangible targets for the numbers of patents to be filed, the number of examiners, public funding for R&D spending, closer interaction with industry as well as exposure to global practices via exchange programmes between universities as well as R&D institutions. The country would do well to take a page out of corporate India's book on investing in skilled manpower so it has enough manpower to exploit opportunities as and when they present themselves.