Newspaper Clips
September 10, 2010

Look beyond the obvious

India's IT sector should worry more about rising labour costs than US protectionism

ourtake

The US state of Ohio bans contracts that lead to jobs being outsourced overseas. Déjà vu anyone? In 2005, five states, led by New Jersey, passed or proposed similar legislation. What is the same about these two incidents is that the US was heading for a tight election during an economic turndown. The 2005 laws went nowhere and had no impact on India's infotech services industry. The question is whether the present protectionist sentiment in the US, which includes an earlier increase in H-1B visa fees, will follow previous bursts of anti-outsourcing into oblivion.

A calm assessment of the drivers behind outsourcing seem to indicate India has little to worry about. One, the US private sector is the primary source of outsourcing to India and the recession has only increased the search for cost-cutting. Recent surveys have shown that even in more protectionist Europe 40 per cent of firms plan to increase outsourcing. This is also why calls for India to retaliate by not buying US products are foolish: US corporations are the loudest voice in favour of outsourcing. Two, the specific logic of government outsourcing has only been partially diluted by the recession. Namely, US voters still want better public services without higher taxes and, increasingly, higher government deficits. The most effective way to square this triangle? Outsourcing. Three, the truth is that despite record US unemployment there has been relatively little action against outsourcing. President Barack Obama may take a verbal dig at Bangalore every few months, but his words have translated only rarely into action. Ohio's action affects a handful of jobs going to Central America. The visa hike will take a very small bite out of the $ 50 billion India earns from outsourcing.

The greater worry for India lies at home. Despite millions of underemployed, Indian labour costs have risen so rapidly that it is losing its competitiveness in lower end outsourcing. Firms have said that because of the recession places like small town Ohio can now compete with Bangalore when it comes to outsourcing costs. This is a telling sign of the failure of India's educational system. In the long run, it is not US protectionism but Indian uncompetitiveness that should worry the infotech industry.
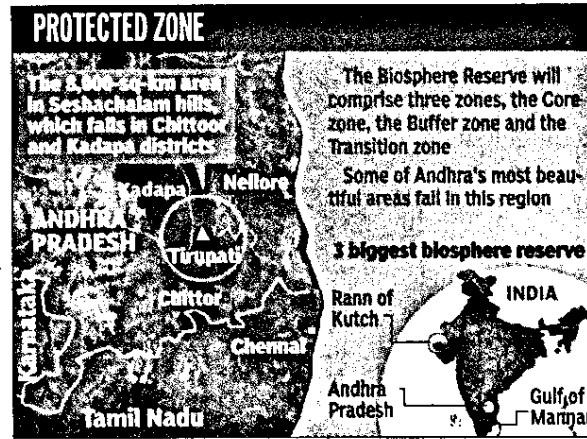
Andhra gets India's 3rd largest reserve

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NEW DELHI: India's richest Tirupati Temple is now inside the country's third biggest biosphere reserve — a highly protected zone home to rare endangered plants and animals.

The Environment Ministry on Wednesday decided to declare the 8,000 square kms area in Seshachalam hills, which falls in Chittoor and Kadapa districts of southern Andhra Pradesh, as biosphere reserve.

"The Biosphere Reserve will comprise three zones, the Core zone, the Buffer zone and the Transition zone spread over 4755.997 sq.km. in the Chittoor and the Kadapa districts of Southern Andhra Pradesh," said the ministry's note of approval.

The core zone comprises of 750.589 sq.km. in the Rajampet forest division of Kadapa district, Tirupathi forest division of Chittoor district, Sri Venkateswara National Park, areas contiguous to the National Park and areas rich in bio-diversity which would enjoy legal protection. The core zones will be free from human habitation and will allow research activity and macro management practices in addition to acting as demonstration sites for value addition to the resources in buffer areas.

The Buffer zone (outside the core zone) spreads over 1865 sq.km. — covering Reserve Forest lands and parts of Sri Venkateswara wildlife sanctuary. An area of 2140 sq. kms falling within 5 km radius from the outer boundary of the Buffer zone is designated as the Transition zone.

Some of Andhra Pradesh's most beautiful areas fall under the reserve like the famous Talakona, Gundalakona and the Gunjana falls and Tirumala, the abode of Lord Venkateshwara located on seven hills known as the Seshachalam hills.

These hill ranges are also home to endangered animals like the Slender Loris, the Indian Giant Squirrel, the Mouse Deer and the Golden Gecko, a ministry official said.

PROTECTED ZONE — The 8,000-sq-km area in Seshachalam hills which falls in Chittoor and Kadapa districts. The Biosphere Reserve will comprise three zones, the Core zone, the Buffer zone and the Transition zone. Some of Andhra's most beautiful areas fall in this region. 3 biggest biosphere reserve: Rann of Kutch, India, Andhra Pradesh, Gulf of Mannar. Graphic: SANJAY KAPOOR

OUTSOURCING BAN

Govt to protest 'protectionism'

■ Barak Obama has said that tax breaks should go to companies that create jobs in the US and not overseas. FILE

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NEW DELHI: The Ohio ban on offshore outsourcing sparked strong reactions here on Thursday, prompting India to voice its protest against US "protectionism" for the second time in a month.

The move, though ridden with America's domestic compulsions with impending elections to the US Congress, has a direct bearing on India's IT sector and has New Delhi concerned.

India had been disappointed about the US not conceding to its concerns over a legislation that raised fees for the two visa categories — H1B and L1 — that IT companies use to send workers to that country for project work. Indian companies are expected to incur an additional annual expense of $200 million for this.

Government sources said they would again take up these matters with the US "as economic relations are a major component in the strategic relationship between the two countries, and Indian IT companies play an important role in it, including making considerable investments in the US".

On the Ohio ban, NASSCOM said it was "counter-productive to the US government thrust on reducing public deficit and possibly lead to an increased tax burden on its citizens".

Infosys and other IT companies also voiced their protest.

Government sources said such decisions amount to "protectionism". "We have to address this irritant and will be taking up the issue with the US. Our IT companies have substantial investment in the US," a government source pointed out.

OBAMA ON TAX BREAKS
President Barack Obama has said that tax breaks should go to companies that create jobs in the US and not overseas.

"For years, our tax code has actually given billions of dollars in tax breaks that encourage companies to create jobs and profits in other countries," Obama, who is slated to visit India in November, said.

IITs want to talk pay, but govt focus on exam reform

ht SPECIAL

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NEW DELHI: The Indian Institutes of Technology wanted to discuss pay-related concerns at Friday's much-awaited meeting of the IIT Council but the human resource development ministry instead wants to focus on reforms, including examination changes.

Asked by the HRD ministry to propose items for Friday's agenda, the IITs had suggested two pay-related concerns which have however not been included in the agenda, top IIT sources revealed to *HT.*

HRD ministry sources were quick to clarify that they have not included the pay-related

> *There appears to be a difference in priorities. That comes through in terms of what is in the agenda...*
>
> an IIT director

suggestions in the agenda only because the Council was an "inappropriate" forum to discuss these concerns "which are being looked into."

But sources in both the IITs and the ministry accepted that while there are no "fundamental problems," Friday's agenda represents divergences in views between them as much as it represents areas where views converge.

"There appears to be a difference in priorities. That comes through both in terms of what is in the agenda and

what has been left out," a director said. "For us, matters affecting our running of the Institutions -including pay-related matters are most important. The government may have a different perspective... perhaps a broader one."

The pay-related concerns included a recent pay setback to select top professors at the IITs and a proposal to hike the salary grade of professors, sources said. The IIT Council, headed by HRD Minister Kapil Sibal is the highest decision making body of the premier engineering schools.

The ministry hopes to discuss its proposal to replace multiple college entrance tests with a single examination – a subject on which a panel of IIT directors did not agree with the government.


Mahindra Satyam staff down 30% since 08-09

The company's headcount had plunged after M&M took the reins of the company in 2009 after an accounting fraud by its founder and chairman Ramalinga Raju, which left Satyam on the brink of collapse. At present, it employs 30,000, down almost 30 per cent from Raju's time.

About 7,000 employees were retrenched as the new management tried to resurrect the company while battling the global economic crisis and the impact of the fraud at the
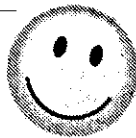
same time.

As part of its revival, Mahindra Satyam has teamed up with Tech Mahindra, another IT firm from the group, to execute projects. Tech Mahindra, which has a long association with British Telecom, is handling telecom projects given its expertise in the domain.

The two companies have also set up joint taskforces to handle issues related to infrastructure, human resources, technology and purchases.

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Sikorsky to develop technology for fastest flying helicopter

VIKAS SRIVASTAV

Mumbai

SIKORSKY Aircraft Corporation, a subsidiary United Technologies, plans to develop the technology for the fastest flying helicopter — X2, in India. The company is in talks with various government bodies and expects a positive response in few months time, a senior official said.

For the uninitiated, US-based United Technologies is the manufacturer of Carrier brand of air-conditioners, besides 'Otis' elevators.
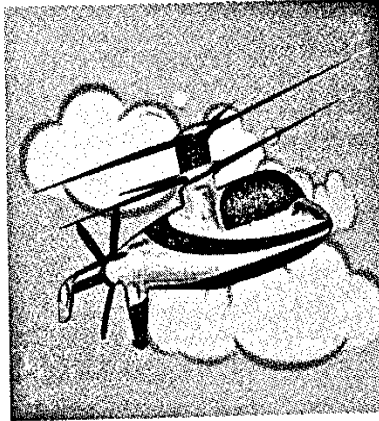
AJS Walia, managing director, India and South Asia, Sikorsky, told *Financial Chronicle* that the company has made presentations to Hindustan Aeronautics Limited (HAL) and other state-owned companies.

"We look at the possibility of manufacturing the technology for X-2 helicopters in India. Besides, we have also responded to the expression of interest by HAL for the co-production of other helicopters," Walia said.

The company on July 26, 2010, said its X2 technology demonstrator, unofficially broke the speed record for rotorcraft, achieving a maximum speed of 225 knots in a one-hour test flight, at the Development Flight Center, Florida. The previous record for a 3,500 kg class rotorcraft was 216 knots per hour, and was set by Westland Lynx three decades back.

Sikorsky plans to achieve the speed of 250 knots by the third quarter of this year, the company said.

He said the X-2 Technology has other advantages compared to fixed wings aircrafts like vertical lifts at faster speed apart from other issues at the airport. It can be the preferred mode of travel for corporate honchos, and big political dignitaries. It will also have a longer reach for oil and gas exploration and evacuation and surveillance purposes," Walia said.

The company is also in final stage of finalising the joint venture with the Tata Group to manufacture precision equipment for helicopters and aircrafts.

"The plant is expected to come up at Hyderabad, as an extension to the existing plant which manufactures cabins for the S-92 Helicopters for Sikorsky," Walia said.

Tata Advanced Systems is supplying three cabins to Sikorsky by the end of this year, the first one is due for delivery in November. The company plans to ramp the production to 36-42 cabins in a year in the next two to three years time, the official said.

Sikorsky also sees huge potential in the defense sector and has shown interest in ramping up the capacity of the coast guards and the Indian Navy.

There is huge potential in the offshore oil and gas sector too, he said.

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Telegraph Kolkata 09.09.10 p-4

IIT retirement age raised to 70 to beat faculty crunch

OUR SPECIAL
CORRESPONDENT

New Delhi, Sept. 8: The Indian Institutes of Technology, facing a severe faculty shortage, can now retain any teacher up to five years beyond the retirement age of 65.

The Union human resource development ministry said in an order that the IITs have been amended board of governors of an IIT can give an extension of three years initially and another two years later to any faculty member.

The statutes of the IITs have been amended with the approval of the Visitor, the President, to allow them to retain teachers up to the age of 70. No extension will be allowed beyond 70 years.

In 2007, the retirement age for IIT teachers was raised from 60 to 65. Higher education institutions, including the IITs, are facing a severe shortage of faculty.

According to government data, there are 4,267 sanctioned teaching positions in the seven older IITs — Kharagpur, Delhi, Madras, Bombay, Kanpur, Roorkee and Guwahati — but only 2,983 faculty members.

However, the decision to allow extensions has been criticised by a section of teachers who feel favouritism will come into play. "Those faculty members who are not liked by the managements may not get further extension. This will make the faculty susceptible to the pressure of IIT managements," an IIT professor said.

The HRD ministry order also said that the retirement age of IIT directors can be raised to 70 years from 65 now. This will help in the re-appointment of certain incumbent directors who are vet to turn 70.

'At day-end, all govts want cost-effective solutions'

SURESH VASWANI, *Joint Chief Executive Officer of Wipro, India's third largest information technology services company, talks to Shivani Shinde on its aim to be a global firm, focus on new segments like the government sector and US anti-outsourcing sentiment. Edited excerpts:*

Q&A

SURESH VASWANI
Joint Chief Executive Officer,
Wipro

For Wipro, US public services or government is a new focus area. How would the recent Ohio governor's action (banning state agencies from outsourcing) impact your plans?

I do not think this will impact us. We have worked with the US government in the past. The new thrust and the formation of a new vertical is being done with a clear view that we can do business, but we might have to do business differently. Simply because it's a market you cannot ignore.

It's not that the government has anything against Wipro but it is concerned from where the service is being delivered. There is a model that can be created to tap this sector. However, anything that seems to be protectionist is clearly not the way global markets work.

In terms of model, will it be more focused towards onsite?

Yes, we might have to be more onsite, but not necessarily. At the end of the day, the government also wants cost-effective solutions. The idea is to leverage the onsite delivery centre. In some of the projects that we have with some of the US state governments, we have used an onsite-offshore strategy. But there is an expectation that what is onsite should be served by locals.

Will the increase in the visa cost be charged to customers?

From an operational point of view, if it is going to be an impact, the customer will have to pay. But more than the effect on margins, I think it is a sentiment that gets impacted. India is a huge market. These kind of actions can start a chain reaction. So, you need to believe in free trade. Besides, American companies need the Indian market. India and China are the fastest growing markets, with over a billion population.

> 'At present, 35-36% of our employees outside India are locals. We aim to make it 50%'

Wipro is increasing its onsite presence. What's the strategy?

As a global firm, we need presence across regions. At present, 35-36 per cent of our employees outside India are locals. We need to have 50 per cent of our overseas employees to be locals to be a truly global firm. We are working towards this. Today, a majority of our senior executives are locals heading those units. For instance, Hiroshi Alley, who heads Japan operations, is a Japanese; the Middle East unit is headed by a local prince.

Some of our business has a rich mix. For instance, consulting. Most of those in this unit are from the US and UK. That shift has taken place at Wipro in the past two years.

When we talk of expansion, we are looking at gearing nearshore centres. Our Atlanta centre is one of these. We want to scale some of the centres.

How has the anti-outsourcing sentiment impacted the business?

One is the sentiment and then there's the harsh business reality. Ultimately, the business has to succeed. From a customer perspective, they do what is right for the business. If I give better quality of services, why would they be concerned about the region or any other criterion? I would service an Indian customer from my US centre if the US centre is not being utilised. I would service from Egypt if I have capacity there. That's the way any business works. Look at MNCs like Microsoft, Cisco and others. They have leveraged the strength of the world.

Offshoring has to increase. Where is the talent? India has the talent and to be a successful global firm, you need to leverage talent.

Financial Express ND 10/09/2010 P1

Withholding tax breather for IT firms

■ Companies need to withhold tax only on royalty paid to non-residents, rules SC

Indu Bhan & Goutam Das

New Delhi/Bangalore, Sep 9: Technology firms are not required to withhold tax on all cross-border payments, but on the royalty they pay to non-residents, the Supreme Court has said. The order was widely welcomed by leading technology companies. Infosys CFO V Balakrishnan said the decision would reduce the cost of software ownership for the company by about 10%.

TDS (tax deducted at source) would be applicable on royalty payments on copyright goods, which are taxable in the hands of the foreign company, and not on purchase of licence to merely use such goods, the apex court said in a ruling on Thursday.

A Bench headed by chief justice SH Kapadia set aside the Karnataka High Court judgment which made tech firms legally bound to withhold tax on all cross-border payments.

The apex court while remanding the huge batch of cases to different high courts asked the latter to decide the same after looking into the nature of payments made to non-resident firms.

The high court while ruling in favour of the revenue department had held that any software purchase from global vendors amounted to royalty payment for a licence to use it, and should not be deemed as a mere purchase of goods excluded from withholding tax.

Tax experts also saw significant benefits to IT firms from the SC ruling. "The argument given in the case was that every payment made to non-residents should not attract TDS under Section 195, but only those payments which are taxable. Today's ruling has asked the high court to re-examine and pass a fresh order. This is a very positive development," said Vishal Malhotra of Ernst & Young.

After the high court order, the department had dispatched several notices to taxpayers who had not deducted TDS.

Sonata Software head of strategic finance and risk management N Venkatraman said the SC order was positive for the IT industry. In FY10, Sonata ran a disputed tax liability of Rs 224 crore with the High Court of Karnataka holding that the company failed to deduct tax at source on amounts paid to overseas suppliers on purchase of software. The company appealed the Supreme Court.

Withholding tax breather for IT firms

"We import all Microsoft software. Oracle has a duplication licence in India so we can buy Oracle in India. The Karnataka HC had said that whatever payment goes from India to foreign firms, the Indian firm had to deduct tax. The point of law made was whether the payment made outside India was subject to tax in India and if it was so, what was the nature of the payment," he said.

MindTree CFO Rostow Ravanan said the stay order doesn't impact the firm much. "Most of the foreign technology companies we buy from have offices in India. About 80% of our software product billings are done in India," he said.

According to Vikas Vasal, partner, KPMG, the underlying issue in any payment to a non-resident is two-fold: Whether there is income element in that and if it requires tax to be withheld in India. Further, he said, that the other issue is whether a certificate is required from the tax authorities in respect of each and every such payment or only in respect of specific payment where there is income liable to tax and, hence correspondingly, tax withholding is required.

"There have been conflicting decisions on these points which have resulted in some confusion in the minds of taxpayers," Vasal said.

The software companies had argued before the court that there is no need to deduct TDS while remitting payments overseas as they do not deem the income to be taxable in India. However, the commissioner of Income Tax, International Taxation, said the moment there is payment to a non-resident, there is an obligation on the payer to deduct TDS under Section 195 (1) of the Income-Tax Act and the only way to escape the liability is for the payer to make an application to the assessing officer (AO) for non-deduction or for deduction at a lower rate.

If the payer does not make an application and obtain an order, it is not open to him to argue that the payment has not resulted in taxable income in the hands of the non-resident recipient and that, therefore, there is no failure on the part of the payer to deduct tax under Section195 (1), the Revenue contended.

Challenging the high court verdict of April 24, 2009, the firms said that the high court overlooked the accepted principles of international taxation that are broadly being adhered to by all the countries to ensure uniformity in how tax is to be levied on transnational transactions. "The proliferation of DTAAs establishes the growing recognition of harmony in the taxation systems of different nations. One of the accepted principles of taxation is that the law should not seek to assume jurisdiction over a taxpayer who has no presence," the petitions said.

The High Court had followed its earlier decision in the case of CIT vs Samsung Electronics where it had held the only way to escape the obligation to deduct TDS is by filing an application before the assessing officer and obtain an order for non-deduction or for deduction at a lower rate. In both the cases, the assessees made payments to foreign companies for purchase of 'shrink-wrapped' or ready-made software without TDS deduction. While the AO held that the payments were taxable in the hands of the foreign company as "royalty," he held the assessees liable for non-deduction of tax and interest thereon.

While this view was quashed by the Income Tax Appellate Tribunal on the ground that the payments for software being a purchase of a 'copyrighted article' and 'goods' was not liable to tax in India, the high court reversed the tribunal's verdict.

(Tanu Pandey contributed to this story)

Business Standard ND10/09/2010   P-9

84% of rural India not aware of internet

About 84 per cent of the people residing in rural India are not aware of the internet because of inadequate infrastructure facilities, according to a report by the Internet and Mobile Association of India. The report further says 38 per cent of the rural population does not feel the need for internet. While 31 per cent of the rural population does not have any internet access point, 25 per cent has no internet connection and about 22 per cent has no supply of electricity.   **BS REPORTER**

Financial Express ND 10/09/2010   P6

NIIT's IT programmes in Afghanistan soon

NIIT has entered an agreement with Afghanistan's ARIA Institute of Higher Education to develop an employable talent pool of information technology professionals in the country. In a media release, NIIT said it will offer programmes in software engineering and networking. NIIT will also offer career programmes of six months to two years.

Financial Express ND 10/09/2010   P10

Foreign-made
Indian brands

Be it mobiles or SUVs,
Indian entrepreneurs are
launching new brands by
taking the smart route to
competitive manufacturing and
outsourcing production to
countries such as China, Korea
and Taiwan

Photo montage: SADHANA SAXENA

Sukalp Sharma

WHAT COULD an SUV called Rio, IT brand Intex, mobile phone brands like Micromax, Maxx, Zen, Wynncom, Karbonn, high-end bike brand Firefox, Future Group's private labels Koryo and Sensei, ITC's Essenza Di Wills brand of perfumes have in common? Apart from being Indian brands and relatively young ones at that, all of them are manufactured abroad.

Entrepreneurs behind these brands have taken the smart route to competitive manufacturing by outsourcing production to countries such as China, Korea and Taiwan. With high production costs in India and ready availability of large-scale dedicated manufacturers, good support infrastructure, cheap skilled labour and technology abroad, this outsourcing comes as no surprise.

Says Rajan Chhibba, MD, Intrim Business Associates, "Manufacturing pedigree is not that important anymore for brands globally. The product and the brand have taken precedence, while the manufacturing process and location have taken a backseat. Companies, big and small, are getting manufacturing done all over the world and for everything from a low-cost mobile phone to high-end computers and appliances." And what attracts these companies to hubs like China? "Production costs are very low in China mainly because of the scale of manufacturing that goes on in that country, especially in electronics," says Ramesh Srinivas, executive director, KPMG. He adds that Indian companies save on a lot of capital and infrastructure costs by outsourcing manufacturing, as they are not investing in setting up production facilities of their own in India. "Firstly, the kind of scale of production available there can't be matched by India. Secondly, there are large-scale dedicated manufacturers abroad who are in the business since years and have the required set-up in place. This arrangement leaves Indian companies with more traction to focus strongly on other key aspects of advertising, marketing and distribution and keep their products low cost for the consumers," he says.

The companies, too, are quick to list the advantages. "Chinese manufacturers have already achieved economies of scale. Part of the reason lies in the fact that they were able to establish themselves as manufacturing hubs

COMPANIES CLAIM THEY ARE NOT JUST BRANDING FOREIGN PRODUCTS AND LENDING THEM AN INDIAN STAMP; THE GOODS ARE MERELY MANUFACTURED ABROAD, AND WITH COMPLETE QUALITY CONTROL AND PROCESS CHECKING IN PLACE

with extremely competitive pricing much before other countries, and certainly India. Over the years, their ecosystem has really come up well from hardware to design to software to manufacturing," says Ramesh A Vaswani, executive vice-chairman, Intex Technologies, one of the major Indian IT and electronics brands. Having registered a turnover of Rs 593 crore last financial year, Intex gets almost 80% of its products manufactured in China and works with around 40 Chinese manufacturers. Vaibhav Shastri, CEO, Zen mobiles concurs. "We get around 2.5 lakh mobile handsets per month from five-six factories in China

catering to us. They have the expertise in manufacturing, especially mobile phones, as even the best brands globally get their products manufactured in these very factories," he says. The most evident success story has been that of Indian phone manufacturers who have gone from negligible presence in the market two years back to walk away collectively with a 17.5% market share at present, with an estimated collective sales of over two million.

Private labels of big retail houses are not far behind either. "For our brands in electronics and home appliances, Koryo and Sensei, we get our products manufactured from China, Korea, Taiwan and Thailand. While our IT products are manufactured in Korea, appliances come from China. It is economical, swift and hassle-free and allows us to offer great deals to our customers while ensuring world-class quality," says Nitish Tip-

nis, president of Future Group's electronics retail chain, eZone.

And with outsourcing of manufacturing providing a cushion to cut down on pricing, business is growing steadily. "Our private labels have really picked up in terms of sales. Koryo has been doing exceptionally well in AC sales and now our private brands are claiming a 5-7% share of total sales of all brands at eZone, and touching 10% of electronic products sold at Big Bazaar," adds Tipnis.

However, it's just not hardware and electronics that are taking an excited plunge. Premier, one of the pioneers in car manufacturing in India, has re-entered the Indian passenger vehicle market with its compact SUV, Rio, priced in the range of Rs 5.55-6.05 lakh. Premier imports completely knocked down (CKD) kits from China's Zotye group and assembles them in India.

"Our strategy is to keep investments low in the area of tooling and dies of body parts and other aggregates, thereby helping the company to keep the breakeven volumes low. Additionally, it helps in upgrading the model on a continuous basis, helping to keep investments low. The raw material cost and value addition cost in China is much less than any other country in the world. Moreover, today all major automobile companies such as GM, Mahindra & Mahindra, Tata, etc, are sourcing their components from Chinese suppliers for its price advantage," says Rakesh Mehta, vice-president, automotive division, Premier Ltd.

Staying on the road, Firefox, a bicycle company fast gaining popularity in the country, also follows a 'manufacture abroad and import' model. It has been operational since the past five years and had a turnover of close to Rs 22 crore last year. They have more than 50 models in high-end bikes and sell around 25,000 bikes in India each year. "There are two major factors that don't allow us to manufacture our products in India. Firstly, the proper technology to manufacture lightweight and ultra lightweight aluminum frames for bicycles in India is almost non-existent. Secondly, cost of production in India is substantially higher than China, and even if one were to bear the higher costs, the specifications that we require for manufacturing our bikes would hardly be available in India and, therefore, we have to get it from outside," says Ajit Gandhi, marketing head, Firefox bikes.

And, while products manufactured in China have come under the scanner in the past over quality issues, especially around dumping low-quality products into the Indian market, these companies claim that their quality control procedures are well in place. "All components used in our SUV are E-certified (This is certified by European testing agencies, which enables any manufacturer to sell the product in the European market). Additionally, they observe well-established Japanese quality standards and parameters in their factory to ensure the highest quality norms. Finally, our quality assurance team visits them regularly during the stages of kit manufacturing and packing to ensure quality," says Premier's Mehta.

What many companies argue is that while the products may be manufactured in China, their design, specifications and details are decided solely by the company and the manufacturers just follow these. "We are not branding Chinese products and just lending them our company stamp. Our team really gets down to the basics of everything, from designing to manufacturing. Our products are Intex products, manufactured in China. They are not Chinese products just imported by Intex. We have an associate company in China that strictly monitors the quality aspects and even goes down to the level of process inspection. Also, whenever a new vendor has to be signed on, a special team from India visits to approve the signing," says Vaswani. Others, too, have set up teams in China for this purpose. "We have a team of 15 people in China who look after quality issues and detailed quality audits are done regularly there. We also have a design team there so we can prevent delays," says Arvind Vohra, MD, Wynn Telecom.

It is also argued that since even major international brands across the board are also getting their products manufactured from the same factories in China, Indian companies are playing a safe bet. "As far as quality goes, we have tied up with manufacturers who also cater to the top three electronic brands in the world. Apart from that, we have quality assurance teams at all the manufacturing hubs and we follow stringent quality guidelines," says Tipnis. Experts believe that while quality has been an area of concern, China has all sorts of manufacturers and it really depends upon the company to choose what it wants. "China has a mixed market in terms of quality. You'll find high-end as well as low-end manufacturers in abundance. The quality really depends upon the vendors the companies choose for manufacturing. But most companies have a process in place to ensure that they are getting good quality stuff and that they are choosing the right vendors," says Srinivas.

But the thorn in this rosy picture for companies is the heavy shipment and transportation cost. AMW, one of the leading truck and dumper manufacturers in the country, started out by importing fully-made cabins for their dumpers and trucks from China, but over the years has completely switched to manufacturing cabins at their own facility in India owing to high transportation and shipping costs. There are others too who are planning in the same direction. "Once we establish the desired volume and production reaches a break-even, Premier would like to shift at least the bulky and major parts to be processed in India to reduce shipping costs," says Mehta.

So, while India is making efforts to find its feet as a manufacturing hub, which might still be a few years away, the giant on the other side of the Himalayas is standing tall.

Google speeds up search with 'instant' results

## ■ The feature comes to the US this week, reaches the world later this year

San Francisco, Sep 9: Google stepped on its Internet search accelerator Wednesday by adding a feature that displays results as soon as people begin typing their requests. The change, called 'Google Instant', is the closest the 12-year-old company has come yet to realising its founders' ambition to build a search engine that reads its users' minds.

The achievement wasn't lost on Google co-founder Sergey Brin, who jokingly told reporters that the company's lightning-quick computers are morphing into the 'other third' of people's brains.

"I think it's a little bit of a new dawn in computing," Brin said Wednesday.

The shift means Google users will begin to see an ever-evolving set of search results appearing on their computer screens, potentially changing with each additional character typed. That means a satisfactory set of results could take just one keystroke. As an example, a person who types 'w' in Google's search box could see the weather results in the same area as where the request was entered.

Google will also try to predict what a person really wants by filling out the anticipated search terms in gray letters. Below that, in a drop-down box, Google will still offer other suggested search requests, as the site has been offering for the past two years. The feature will be gradually

Go_gle Instant
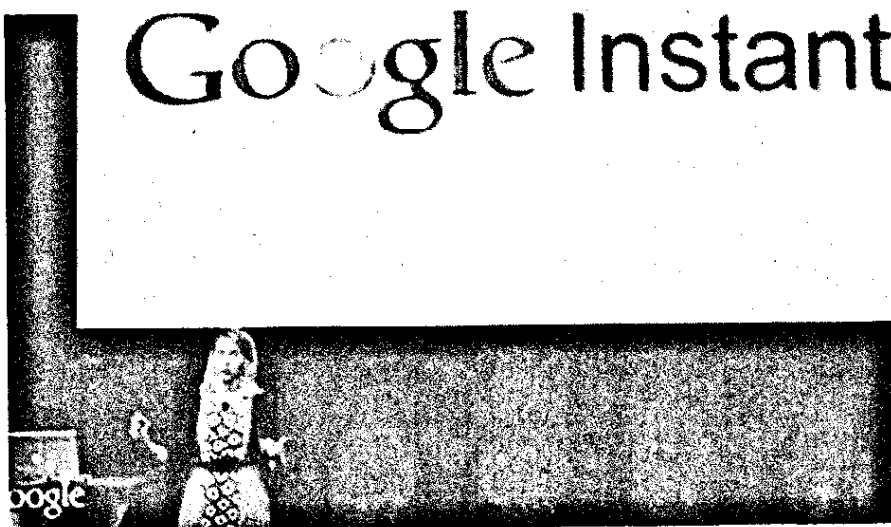
If nothing else, Google hopes the innovation will help it maintain its dominance of the lucrative search market as rivals Yahoo and Microsoft team up to mount a more formidable challenge   REUTERS

rolled out throughout the US this week and will be offered in other parts of the world later this year. It's designed to work on the latest versions of the major Web browsers.

The instant results only will be displayed on Google's standard website, which features little more than its logo and a search box. They won't be shown to users making requests on individually designed 'iGoogle' pages that are usually already covered with different decorations and programs plugged into other online services. People who prefer Google's basic website and don't want to see instant results can turn them off by clicking on a link next to the search box.

To minimise the chances

of offending people or inadvertently exposing children to inappropriate material, Google has programmed the instant results to block websites deemed to be pornographic, violent or hateful. That restriction may trigger complaints that Google is stifling freedom of expression or unfairly screening out some sites that were improperly blacklisted.

Because Google's search formula draws heavily upon common search requests, the instant results also could be biased toward featuring major brands and companies during the first few characters of a request. That factor conceivably could hurt smaller merchants if people stop typing after the first few key-

strokes and accept the results that show up the most quickly.

Despite potential pitfalls, Google search executive Marissa Mayer hailed the instant search breakthrough as a quantum leap akin to Bob Dylan's switch from an acoustic to electric guitar in 1965. "It's a fundamental shift to search and how people think of search," she said.

If nothing else, Google is hoping that the innovation will help it to maintain its dominance of the lucrative search market as rivals Yahoo and Microsoft team up to mount a more formidable challenge. Currently, Google processes about two-thirds of Internet search requests while Microsoft and Yahoo handle most of the rest. *AP*

Business Line ND 10-Sep-10 p-19

'High attrition rates can prove costly for companies'

Our Bureau
New Delhi, Sept. 9

Attrition is back in a big way in the information technology sector with companies such as Wipro and TCS reporting attrition rates of 23 and 16 per cent respectively, said Ms Alpana Ghildyal, Assistant Manager (HR), Fireball Group, at a guest lecture organised by BL Club at the Institute of Information Technology and Management, Janakpuri, here.

The rate of attrition was low in the past year, but with the recessionary trend receding, it is climbing again and the current situation should be treated as a warning sign, Ms Ghildyal said.

What is alarming is that some companies such as Ingram Micro India faced a near complete attrition of 100 per cent, according to a DQ-IDC BES IT survey, she said.

"None of the top five Indian

Management education teaches you case studies. We tell you how to create one.

Worrying factor: Ms Alpana Ghildyal, Assistant Manager-HR, Fireball Group, delivers the BL Club lecture at IITM (Janakpuri) in New Delhi.

software companies made it to the list of top 50 great places to work with in the sur- vey," she said. Surprisingly, companies that figure in the most preferred recruiter list –

TCS, Wipro, Infosys and Tech-Mahindra – do not find place in the top 50. Three of the top five companies are multinationals. Google ranks number one, followed by MakeMyTrip, Intel Technology, Marriott Hotels and NetApp India. While the attrition rates are going up in the companies, there is no retention policy in place. The HR team should take measures to encourage employees to stay with the organisation.

RETENTION STRATEGIES

While one can do nothing about non-preventable attrition that takes place due to employee's retirement, spouse's transfer or an accident, one can and must focus on controlling the preventable attrition that is a result of lack of job satisfaction, stressful work environment, outside influences, conflict with managers and apprehensions over career growth, she said.

Human resources is not just about taking care of peo-

ple, it is part of a business and has a cost factor just like a finance department or an administration department. The attrition costs add up to the business costs.

It is a myth that people change jobs only because they want more salary, she said. Given a chance, anybody will want to move to a better place with a better package, but it is also true that people sometimes do not leave the organisations, they leave the managers. "Sometimes, even when the remuneration is good, people tend to leave their jobs. It is more often than not because of bad managers," she said.

Everybody in an organisation works hard but when an employee's contribution is not recognised, the person is demoralised and stops working. It is important to recognise and reward the employees' efforts.
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Business Line ND 10-Sep-10   p-20

YOUNG CEOS ARE COMBATIVE, SAYS STUDY

Testosterone may drive aggressive takeovers

Reuters
Washington, Sept. 9

Younger chief executives with high testosterone levels may be more likely to try a hostile takeover – and to get burned in the attempt, Canadian researchers said on Wednesday.

They found age was clearly linked with aggressive takeover behaviour, and did a careful but indirect analysis to see if testosterone might be involved.

It likely is, said Kai Li and colleagues at the Sauder School of Business at the University of British Columbia.

"Young male CEOs appear to be combative: they are 4 per cent more likely to be acquisitive and, having initiated an acquisition, they are over 20 per cent more likely to withdraw an offer," Li's team wrote in the September issue of *Management Science*.

"Furthermore, a young target male CEO is 2 per cent more likely to force a bidder to resort to a tender offer. We argue that this combative nature is a result of testosterone levels that are higher in young males."

Could experience be a factor, or rational thinking? "Our main thesis is hormones in a person's body may influence corporate decisions," Li said

in a telephone interview.

"Personality, gender, age all matter."

DECLINE STARTS AROUND 45

The best way to test that would be to monitor CEOs in the midst of a takeover battle, but it was not practical, Li said. "But there are studies that already demonstrate a strong relationship between male age and testosterone," she said.

The hormone starts to decline in men at around age 45.

So Li's team looked at a Thomson Reuters database of 2,458 acquisition bids made by US public for US public targets between 1997 and 2007.

Researchers looked at the characteristics of the CEOs involved – including how long they had been at the helms of their respective companies, in case the differences came down to simple experience.

There was a clear pattern – younger CEOs were 4 per cent more likely to initiate a bid than CEOs over the age of 45.

"In a more marked finding, male CEOs' relative youth increases their likelihood of withdrawing a merger/acquisition bid by as much as 20 per cent," Li's team wrote.

Younger men with presumably

higher testosterone would reject low offers, even if the rejection meant losing any chance of an offer, the researchers said.

Testosterone appears to provide the best explanation.

"The connections we find are present even after controlling for other plausible influences on M&A outcomes," they wrote.

In controlled laboratory tests, young men with high testosterone often will make a no-win offer, research has shown.

"This opens a new chapter in corporate finance research," Li said.

WOMEN'S WAYS

Do women CEOs behave the same way?

"Unfortunately in the corporate world ... only about 1 per cent of the CEOs are female, so there just aren't enough data points for us to draw any conclusions," Li said.

Last year, researchers at Northwestern University and the University of Chicago found that female MBA students with higher levels of testosterone were far more likely than those with lower levels to choose finance careers such as investment banking that can be lucrative but also risky.

India has no legal option in Ohio issue

NAYANIMA BASU
New Delhi, 9 September

The Ministry of Commerce and Industry has decided to register its protest against the recent move by the state of Ohio to ban outsourcing but it is not in a position to lodge a complaint against the United States in the World Trade Organisation's (WTO) dispute settlement body as New Delhi is not a signatory to the Government Procurement Agreement (GPA).

"I will raise the offshore ban issue by Ohio at the trade policy forum meeting scheduled on September 21," Commerce and Industry Minister Anand Sharma told *Business Standard*. Officials in the government, however, said India could only lodge a protest and not take legal action against the US.

GPA forms a vital part of international trade which stipulates procurement of goods and services by authorised government agencies to prevent fraud, corruption and domestic protectionism. India, which was a strong opponent for starting talks on a binding agreement on government procurement under the Doha Round, has recently sought observer status in the GPA negotiations, which will allow it to monitor the talks without being a part it. In the event India signs the agreement, it would have to provide permanent access to foreign players in governmental contracts and tenders.

Trade experts and analysts whom *Business Standard* spoke to the agreed to the fact that legally India could do little. However, they all suggested that India raised its voice as much as possible to protect its interests.

"We really have no other option but to voice our resentment in global fora that this is resort to protectionism, which has the potential to affect the bilateral relations between both the countries," said Anwarul Hoda of the Indian Council for Re-

Commerce Minister Anand Sharma said he would raise the issue of ban on outsourcing by Ohio at the trade policy forum meeting

search on International Economic Relations, and a former WTO functionary.

Several leading Indian information technology companies such as Wipro and Infosys have protested against the move, including the National Association of Software and Service Companies (Nasscom) that has sought the government's intervention in the issue. On Wednesday, US President Barack Obama announced tax cuts only for companies which create jobs within the US.

"Such measures definitely create hindrances and vitiate the trade atmosphere. The US was always known to be free and fair as a trading partner, which is now changing. We should also have these issues, including the visa Bill, bilaterally on a very strong footing. These would gradually induce India to have a relook of its own domestic policies that might cre-

ate problems for the US in accessing our markets," averred T S Vishwanath, principal adviser, APJ-SLG Law Offices.

Research and Information System for Developing Countries (RIS) Director General Biswajit Dhar said the US was going back on its commitments to keep the markets open. "Somewhere, we need to tell them very clearly that these measures affect our economic interests. Even if we could have appealed it at WTO, it would not have helped us because normally cases like these drag on for years and by that time the damage would have been made," he said.

According to Pradeep Mehta of CUTS, this would not be converted into a law as the final signing authority rests with Obama.

"India should protest such moves in the upcoming G-20 meeting in Seoul and bring it to everyone's notice that countries which preached liberalisation of market are not committed themselves," said R S Ratna, professor, Centre for WTO Studies at the Indian Institute of Foreign Trade.

AT ARM'S LENGTH

The biggest mobile phone chip designer successfully keeps competition at bay while venturing into new segments

BIBHU RANJAN MISHRA
BANGALORE

The demand for chipsets and microprocessors in the mobility space – mobile phones, navigation devices, iPods, music players and cameras – is virtually exploding. No wonder that chip manufacturer Intel has been trying to garner a pie of this growing market, which so far has been dominated by UK-based ARM.

With a revenue of close to $490 million and a market cap of about $6 billion, ARM is no match to Intel because of the latter's sheer size. But the company (ARM), which is an undisputed leader in the mobile phone market has been giving Intel a run for its money.

Hence, it did not come as a surprise when Intel announced its intention to acquire the wireless communication unit of Infineon Technologies. Infineon's wireless unit makes chips for smart phones such as Apple's iPhone. Its earlier acquisition of security firm McAfee was also geared to tap the mobile users, as handsets are increasingly being targeted by hackers. Earlier attempts made by the chip-manufacturer to enter the mobile space have not done well.

The reasons for this shift is quite evident. ARM ships almost four billion chipsets every year. Of this, two-third odd chipsets are used in mobile phones. Arm's chip designs dominate the mobile phone market, with nine out of every 10 handsets using them. Its microprocessor units are used in devices such as Amazon Kindle, iPhone, Dell Notebook and Google Nexus One among others.

The vastness of the size of the market that ARM caters to has made Intel, which used to be one of its customers, one of its biggest competitors. California-based Intel very well knows that the size of the PC market which is about 400 million chipsets

(shipped every year) is in no way comparable with the four billion chipsets rolled out every year using ARM's design architecture.

With Intel entering the smartphone processor market, ARM is certainly feeling the heat, but not so much so that the company will not be able to keep it at an 'arm's length'. Tudor Brown, co-founder and president of chip designer ARM Holdings, who was in India recently told Business Standard that even Intel's latest version of Atom processor meant to address the mobility space consumes at least 10 times more power than ARM's processors.

"This is the beauty and funny side of our business model. Intel has licences for ARM technology for modems, wi-max and a lot of other things, but for their main application processor (X86) they are fighting with Intel. A part of Intel is publicly fighting with us and parts of Intel are using ARM's technology," said Brown.
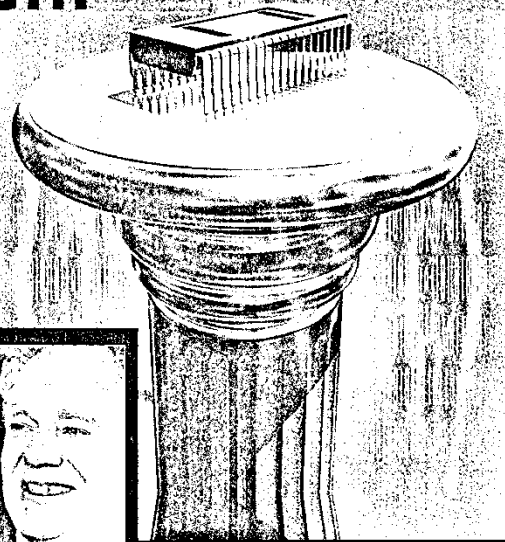
ARM's second quarter numbers beat market expectations, with an increase in the use of chips in car engines, washing machines and office equipment. Smartphone makers need one chipset each for application like music player, camera, bluetooth, wi-fi and radio. While a smartphone has at least two chipsets, it can go up to 5-6 in high-end smartphones and the market is growing steadily.

"Similarly, sectors like automotive, medical electronics and aerospace use larger number of microprocessors even though the volume is not that high as mobile phones. A high-end BMW, for example, typically uses at least 100 microprocessors for virtually every application starting from the breaking system, radio, navigation and dashboard," said Brown.

For ARM the action is very much in India, where the growth in mobile devices is clearly ahead of the global markets. Brown says India is significant for the company primarily

for two things — it not only houses the third largest design (R&D) centre of the company, it is also a great place to get business locally by working closely with its customers like Texas Instruments, Nvidia, Qualcomm and Freescale — some of the leading semiconductor companies in the world.

The Bangalore design centre that came through an acquisition in December 2004 has since grown from 50 people to 300. The company plans to keep the headcount to 400. Globally the firm employs 2,000 staff.

"India is an interesting country for us in many sense because there are not many Indian companies who we can license technology but there are

a lot of MNCs who are operating here that we can have a direct relationship with and provide local level support," he added. His recent trip to India was for an induction programme for new hires.

"We have to be careful where we spent time and I am spending time here this week because we think it's more important to help these 50 people who joined ARM in the last 6-9 months to understand some of the culture of ARM — what really matters to us. I think it's very important," said Brown, who has seen the company growing from strength to strength to being considered as one of the most valued companies in recent times.

Digital information in India to grow 60 fold by 2020: EMC

BS REPORTER
Mumbai

India's share of digital information is expected to grow 60-fold by 2020, driven by the launch of 3G and BWA networks, digitisation of television networks and increased technology adoption among individuals, small and medium enterprises, enterprises and in government services like the Unique ID project and Census, among others, said a study.

The findings of "The Digital Universe in India" sponsored by EMC – provider of information infrastructure technology – said India's 2010 tally for digital information equals information stored in 2.5 billion iPads of 16GB. It would mean more than 464,000 separate towers of iPads of 16GB stacked flat on top of each other — each as high as India's famed Qutub Minar. If the 2.5 billion iPads were laid end-to-end, they would be equal to a continuous line of more than 187 million Tata Nano cars.

"The digital information explosion will create significant challenges for India's CIOs and IT managers for two reasons. First, enterprises have responsibility for the storage, protection and management of 80 per cent of the digital universe's data, and this liability will only increase as social networking and Web 2.0 technologies continue to impact the enterprise," said Manoj Chugh, president, EMC In-

dia and SAARC and director of Global Accounts for EMC Asia Pacific & Japan.

"Second, while digital information will grow 60-fold, enterprise investments in IT and staffing will grow only in single digits. The cumulative effect is driving CIOs to transform traditional infrastructures into private cloud data centers that offer internal and external customers IT as a service," he added.

The EMC-IDC study further said that 50 per cent more digital information is created today in India than the capacity that exists to store it. This number will grow to 80 per cent over the next decade. The study revealed that over the next decade (2010 to 2020), digital information in India will grow from 40,000 petabytes to 2.3 million petabytes, twice as fast as the worldwide rate.

"The digital information deluge will translate into a significant market opportunity in India over the next decade. This is why EMC continues to invest in scaling its operations as part of its previously announced $2 billion investment commitment through 2014."

To help address customers' increasing challenges to store, protect and manage ever- growing digital information, EMC is rolling out its private cloud strategy in India and forging industry partnerships locally and global ally to help customers move quickly toward private cloud computing environments.

India's 2010 tally for digital information equals information stored in 2.5 bn iPads of 16GB

Multilingual Web should be a priority for India: W3C chief

Six months into his new job, Jeffrey Jaffe, Chief Executive Officer of the World Wide Web Consortium has his work cut out

LESLIE D'MONTE
Cambridge (US)

The World Wide Web Consortium or W3C, as it is better known, is where the industry meets to set standards for the Web. And Jeffery Jaffe – an IT industry veteran who held prominent positions at Bell Labs (Lucent Technologies), IBM, and more recently at Novell – as its CEO not only oversees the W3C's largest project in progress (HTML5 standards group) but is also trying to ensure that "he Consortium sharpens its focus on multilingual web standards for countries like India.

"This May, I visited India partly to help launch the new W3C office at a conference. My experience in the conference and in meetings illustrated opportunities that W3C has in India — better communication of our work, greater participation in this work by engineers from India and expanding our technical scope. In India, W3C's office is hosted by the Technology Development for Indic Languages (TDIL). This partnership will strengthen our internationalisation work, part of ensuring that the Web

is available to all people."

"With 22 official languages in India, in addition to a larger number of languages and dialects – making the Web available irrespective of language and literacy levels is a key issue for India and consonant with our values," said Jaffe.

As the CEO, Jaffe has other important issues that merit his attention. "The Web, as we know, has been around for two decades but has been expanding at a rapid pace. New capabilities are being added periodically. Moreover, data are being accessed from mobiles too. So new standards have to be set," he explained.

This August, for instance, W3C began discussing a new framework for different fonts on the Web. Web designers have generally relied on a small number of pre-installed typefaces – such as Arial, Verdana and Times New Roman – considered to be 'Web-Safe' and thus dependably rendered by various browsers. The large number of other typefaces used in the print media have remained out of reach, due to lack of an interoperable format supported by different browsers and the lack of practical Webfont licensing options. "The Web

Open File Format (WOFF 1.0) will change all that," said Jaffe.

Moreover, open global standards like HTML5 and cascading style sheets (CSS) for Web technology are starting to be deployed in browsers. HTML5 (like its earlier versions HTML 4.01 and XHTML 1.1) is the language that the World Wide Web uses to make content intelligible to internet users. The new standard incorporates features like video playback and drag-and-drop that have been previously dependent on third-party browser plug-ins such as Adobe Flash, Microsoft Silverlight, and Google Gears. The specification is an ongoing work and is expected to remain so for many years.

"There are many challenges when settling on standards. But parts of HTML5 will be finished and implemented in browsers earlier. You will see a lot of action on this

> ### With 22 official languages... making the Web available irrespective of language and literacy levels is a key issue in India
> **JEFFERY JAFFE**
> CEO, W3C

front next year."

"With these new capabilities, we are faced with new challenges," said Jaffe, adding, "There's a constant tension between innovation and standardisation. Innovators introduce new technologies on the Web. There's nothing wrong with it. In fact, we encourage this trend. But platforms must be open to the extent possible and where there are not, we have to get the stakeholders to work with the larger interests of internet users rather than restricting their technology with patents (reference to patent trolls)."

Jaffe, however, declines to comment on the controversial topic of 'Net Neutrality' — the principle that no one should interfere with the workings of the internet and, more specifically, that governments and internet service providers (ISPs) should not place any restrictions on the internet's content or means of

accessing that content. "We are a technical standards body. We do not take any sides on policy matters."

Meanwhile, the W3C, according to Jaffe, is laying emphasis on the 'Semantic Web' that comprises a group of methods and technologies to allow machines to interpret the meaning of the information on the World Wide Web. It is a collaborative effort led by W3C with participation from a large number of researchers and industrial partners.

The term was coined by W3C director Tim Berners-Lee. Technologies include the Resource Description Framework (RDF) and the Web Ontology Language (OWL) which are aimed at providing a formal description of concepts, terms, and relationships within a given knowledge domain.

However, the Semantic Web as a global vision, remains a work in progress. "For it to ' ecome successful, we need more semantic data on the web. The trend will then pick up pace," Jaffe signed off.

Zero in on maths

India will do well to tackle red tape that hobbles its academia and encourage its mathematicians to build ties abroad

QUANTUM LEAP

DEVANGSHU DATTA

Despite Ramanujam, Varadhan and a host of other talented Indian mathematicians, the subject occupies little space in public consciousness. There is even a rancid joke to the effect that India invented the zero and after that, India's contribution to maths is zero.

It was never true. But many talented Indian mathematicians work abroad, with a few exceptions such as Manindra Agrawal, Neeraj Kay-

al and Nitin Saxena, the trio that generated the AKS Primality Test at IIT, Kanpur.

There are few opportunities for locals to interact with practitioners based elsewhere. The recently-concluded International Congress of Mathematicians (ICM) in Hyderabad was a good first effort at breaking the ice.

ICM started in Zurich in 1897 at the behest of the International Mathematicians Union (IMU). India hosted the quadrennial event for the first time. Incidentally, IMU also elected its first-ever woman president, Ingrid Daubechies of Princeton.

Every seminal maths problem, including a vast array of applied problems, has been ventilated at the ICMs. But as Oswald Veblen once

explained, the ICMs are " not congresses of mathematics, that highly organised body of knowledge, but of mathematicians, those rather chaotic individuals who create and conserve mathematics".

The 'killer apps' is that academics get ample opportunity to meet informally. They discuss not only papers they've published but also discarded drafts and blind alleys. The value of that interaction cannot be quantified. An unstructured conversation may lead to a big collaborative effort or insightful breakthroughs.

Massively collaborative efforts like Tim Gower's Polymath Project and Stanford-Berkeley's MathsOverflow Project are now common. The Polymath Project

solved the Density Hales-Jewett theorem (which had defeated everyone for years) in 37 days in an online effort, involving 800 people, who collectively signed off as "DHJ Polymath". The use of social networking techniques completes a circle because those applications are built on mathematics.

Events like ICM create preconditions for future collaboration. Of course, the agenda is structured around the valedictory with the handing out of awards and prizes. The biggest award is the Fields Medal. The Fields carries only $15,000 in monetary terms. But it's the Nobel-equivalent for mathematicians. It is only awarded to somebody under 40. No Indian has ever won.

There was some excitement when 39-year-old Vinay Deolalikar claimed a solution to the "N Vs NP problem" in early August, just days before the ICM. N Vs NP is one of seven "Millennium Problems", in which the Clay Mathematical Institute offers a $1 million award. Unfortunately Deolalikar's proof was flawed.

The Fields winners were Cedric Villani (France), Ngo Bao Chau (Vietnam), Elon Lindenstrauss (Israel) and Stanislav Smirnov (Switzerland). Other awards included the Rolf Nevanlinna Prize for work in computer science to Danny Speelman (US), and the Gauss Prize for applied maths to Yves Mayer (France), as well as the new Chern Prize for lifetime achievement, to Louis Nirenberg (US).

Another new award was the Leelavati Prize (named after Bhaskara's Sanskrit textbook) for "outstanding public outreach" to Simon Singh, ("Fermat's Last theorem", "Codebook"). The Kenneth May prize for work on the History of Mathematics went to Radha Charan Gupta for his history of "desi" trigonometry in "Mathematics in India".

A couple of events piggybacking ICM generated publicity, some negative. One was the brilliant theatrical adaption of Ramanujam's life story in "A Disappearing Number", which was performed by Complicite in several locales.

Another was the needless controversy over the citizenship of world chess champion Viswanathan Anand. Anand, who gave a simultaneous display against 40 mathematicians, was due to be awarded an honorary PHD before the HRD Ministry tied itself in bureaucratic knots.

This was a sad reversion to the sort of red tape that hobbles Indian academia. The Government of India (GoI) is generally tardy in processing applications from foreign academics. It did a good job for ICM but it has to get better at bread-and-butter work-permit clearances.

Despite India's mammoth technical pool, it has few pure research institutes like TIFR, IISC and ISI. There is little pressure to publish, given time-bound promotions. This creates a vicious circle with a small local pool isolated from the mainstream.

If India's policy makers wish to change this situation, they must create conditions in which the best want to come and work here. They must also help India academics to

interact more easily and build ties abroad. Visas are only part of the problem, of course.

The myth of the borderline lunatic, mathematical loner persists and it's perpetrated by geniuses like Grigori Perelman and John Nash. Everyone knows about Nash and his beautiful mind. Perelman who has refused to accept either the Millennium (for solving the Poincare Conjecture) or the Field Medal, is famously reclusive.

They're exceptions. It is no accident that most of awardees at ICM 2010 have worked in several countries. It is normal for papers to be co-authored, to be published online and thus, open to multiple peer-review.

ICM demonstrated that the Indian mathematical community enjoys meeting up with their global counterparts. The fruit of such associations will only be apparent over time. One hopes that the GoI's strong support in hosting ICM was not an aberration but a signal of a new policy that encourages more intimate contact.

Outsourcing protest

India needs reality check on government procurement

While the Indian information technology (IT) and related services industry's protest against a decision of the government of the state of Ohio in the United States on banning outsourcing of IT services in government procurement is understandable, India has no official ground to stand on in conveying its displeasure. By choosing to remain outside the existing plurilateral agreements on government procurement, even though India finally decided to become an observer on a World Trade Organisation (WTO) panel on government procurement earlier this year, the government cannot really take the US to the WTO on this issue. In announcing its decision to become an observer on the WTO panel this January, a government spokesperson said that India could be hurt by retaliatory action by the US that could impose a ban on Indian companies benefiting from US government procurement, if India did not open its own government procurement to global tenders under a WTO protocol. The Ohio state government action is a sample of things to come.

It would, however, be wrong for India to assume that such bans are India-specific. With upwards of 10 per cent unemployment and declining popularity, the Barack Obama government is under pressure to do something to generate more jobs at home. Actions like these are aimed precisely at achieving that objective and Indian companies must be prepared for more. At the same time,

it is important not to exaggerate the impact of government procurement on total demand for outsourcing emanating from the US. Indian IT and software services companies supply services to almost every Fortune 500 company in the US. The US private sector market is huge and will continue to demand Indian services in its own bid to remain globally competitive. Hence, Indian politicians and lobbyists need not get too worked up, even if they must wake up and respond to this new source of pressure on Indian exports.

One way India can help buy support for itself in the US is to buy more from the US. Such purchases by an India growing at over 8 per cent from a country facing the threat of double-dip recession can help win friends and calm fears in the US. The recent decision of the Indian civil aviation sector to buy more Boeing aircraft will help. If the Indian nuclear liability regime had been more accommodative of US corporate interests, that too would have helped. But having upset US companies with its high-minded supplier liability regime, India should only expect such pinpricks as the one from Ohio. Finally, India must take a new look at its stance on a WTO agreement on government procurement and on the wider issue of the agreement on trade in services. India needs multilateral protection from such arbitrary bilateral action. Yielding ground on government procurement in exchange for an agreement on services covering all modes should be considered.

The non-identical twins of the East

BOOK REVIEW

NEHA CHOWDHRY

Will China always overshadow India? A Morgan Stanley report released in August provocatively declares that by 2015, India will begin outpacing China's rapid GDP growth. Given the current economic divide between the two countries, this looks unlikely at first glance.

Yet, Subramanian Swamy comes to a similar conclusion in his book Economic Development and Reforms in India and China: A Comparative Perspective.

Citing new reforms in the financial system, inclusiveness of education and intelligent manipulation of the demographic dividend as crucial determinants of growth, the author predicts that India, with its sustained democracy, will overtake China by 2020.

Swamy, an early advocate of Indian economic liberalisation, attained his PhD from Harvard University, where he taught for 10 years before becoming a professor of economics at IIT, Delhi. He has been elected to Parliament for five terms and has been a Cabinet minister twice.

He presents his main reasons for the focus on India and China early in the book. Swamy emphasises the similarities the neighbours share in terms of size, population and their economic history; the common growth models of socialist persuasion till the 1980s, followed by market-oriented reforms. He also points to the contrast of India's democracy and China's authoritarianism which provides an interesting case-study of what each political model has to offer in terms of development. Finally, as China aims to create a "Harmonious Society" and India wants an "Inclusive Society", the possibility of a future ideological convergence warrants analysis.

From 1952 to 1980, China and India grew at 4 per cent each. It was only after economic reforms under Deng Xiao Ping in 1978 that China began to grow at 10 per cent, while India grew at 5.5 per cent. This trend continued throughout the 90s, with China growing at 8 per cent, compared to India's 6.5 per cent. From 2003 to 2008, both grew at more than 8 per cent, but with China always leading the pack.

By beginning reforms more than a decade ahead of India, China was able to take advantage of a new surge in global capital and rising costs of labour in the East Asian economies. Despite the fallout from the financial crisis, China and India have continued to grow at 11.9 per cent and 8.8 per cent, respectively — the fastest in the world.

Yet, amidst predictions of China and India's upcoming superpower status, Swamy discusses the on-ground reality of both countries. Poverty, regional inequalities, structural weaknesses in the financial sector and the need for an extensive set of reforms remain to be dealt with.

He alludes to democracy and the prevailing demographic dividend as India's trump cards over China's. Beijing's political style allows for quick decision-making compared to India's arduous bureaucratic process, he predicts that the lack of citizen participation will lead to greater social unrest in the long run. Also, he notes that with more than half of India's population under the age of 25, the ratio of the working population will not decrease before 2051, giving the government time to train and empower the youth to fuel future development.

The book also repeats the well-worn statement that "what China is to manufacturing, India is to services". The service sector constitutes 50 per cent of India's GDP. While an admirable jump from agriculture-led growth to service-led growth is uncommon in developing countries, a concerted effort to develop the manufacturing sector in India needs to be made. This is crucial to creating adequate employment for those who are semi-skilled and cannot get work in the agricultural sector.

The author points out a number of competitive disadvantages that India faces in comparison to China in the area of manufacturing. The prohibitively high cost of power in India (nearly two-and-a-half times that in China), which results in higher input costs, is one such disadvantage. Another is the negative externalities that result from the inefficiencies of Indian ports; China handles four times the amount of freight that India handles. In terms of policy measures, China's consistent creation of new town and village industries (TVEs) allowed for a more substantial labour shift from agriculture to industry than in India. Combined with high market incentives, these TVEs have been more successful than India's small scale businesses.

A McKinsey Global Institute (MGI) study revealed the three main barriers retarding India's annual growth by 4 per cent as "the remaining multiplicity of regulations governing product markets, distortions in the land markets and extensive government ownership of business".

The book points to removing these obstacles as labour productivity would increase by 8 per cent, creating 75 million new jobs which, in turn, would translate into the 10 per cent growth rate that India needs to overtake its behemoth neighbour.

In the 1600s, China and India accounted for more than half of the world's GDP. Imperialistic nations, colonisation and exploitation of the two giants resulted in a lull in their world economic dominance. Yet, if the IMF is right, that economic powerhouse image is being rapidly reinstated, with a combined share of 22.8 per cent of global GDP predicted by 2014.

ECONOMIC DEVELOPMENT AND REFORMS IN INDIA AND CHINA
A Comparative Perspective

DIGITAL SIGNATURES

Signing the electronic way

MASOOM GUPTE

Under Karnik was ecstatic when he filed his income tax return (ITR) electronically, as it helped him save time. But he also had to submit a physical copy of the ITR papers. Reason: He used a scanned copy of his signature, instead of a digital one.

Many people, like Karnik, confuse a digital signature with an e-signature. An e-signature is a scanned image of your physical signature. A document with a digital signature will simply state that it has been digitally signed by (name of the person). When you click on this link, you get the details of the signatory. These include name, public key, date of expiry, issuer's name, the serial number of the digital signature and the digital signature.

A digital signature is the only way one can authenticate electronic or online transactions legally — for example, while using e-commerce websites and other transactional portals, internet banking, broking and other online transactions like e-filing of returns. You can even encrypt information in your e-mail using a private key.

How does it work
A digital signature certificate has to be purchased from a government-approved certification agency. At present, there are seven such agencies, including companies like Informatics Centre, 3i Infotech, MTNL and Tata Consultancy Services.

Customers are given two codes for verification —private and public keys.

A digital signature is produced using a special algorithm and a private key. When digital signature is used, it is verified by a signature verifying the algorithm, the public key and the signature.

Limitations
"At present, use of digital signatures is limited to certain transactions or when mandated by the government," says P S Nagaraju, director, etaxmentor.com.

Though the Indian Information Technology Act allows a digital signature to replace the physical one, there are certain limitations. For instance, a digital signature may be used for signing a property deed in an electronic form. But a physical copy of the deed is mandatory, as it needs to be stamped by the registrar's office. The Indian Evidence Act calls for physical signatures to authenticate such transactions and documents as property deeds.

Cost and validity
However, digital signatures also come with a validity period of one-two years, implying there is a cost attached/ There are extra costs if the same is loaded on a USB drive (mentioned as a token) or mailed through a link.

Typically, for a one-year period, you will have to shell out ₹500-600, but will only be able to use it to sign your e-mails digitally. If it authenticates your identity for sensitive transactions like e-filing of returns or internet banking & broking, the costs are between ₹2,200 (without token) and ₹3,200 (with token). There is an additional one-time charge for the USB drive.

However, costs are expected to come down as "a lot of agencies have now started issuing digital certificates with a validity period of one-three months to individuals. This is helpful when you need the signature for a single transaction like e-filing of returns," says P S Nagaraju, director, etaxmentor.com.

Caution
While the USP (unique selling point) of a digital signature is believed to be security, it allows one while conducting even the most confidential transactions. Ironically, this is also one of the biggest deterrent to its use. A digital signature can be mis-used a lot more, as it can be used for several transactions with equal accuracy each time.

Anil Harish, partner, D M Harish and Co, Advocates, explains, "If a physical signature is mis-used, you may seek legal recourse citing forgery. In case of digital signature being mis-used, it is difficult to prove this legally".

> A digital signature is the only way one can authenticate electronic or online transactions legally

A third eye on government functions

In public service delivery, third-party assessments can plug gaps that the government and bureaucracy can't

How do we minimize leakages in welfare programmes? How do we improve the quality of service delivery in public institutions? How do we ensure quality in construction of infrastructure assets? These questions are central to public policymaking in India. A possible answer might lie in third-party assessments.

Implementation failure has been a frustratingly persistent feature of even the better conceived government programmes. Traditional bureaucratic supervisory mechanisms, responsible for implementing the myriad development schemes, suffer from numerous deficiencies.

Apart from a badly misaligned incentive structure, dysfunctional chain of command and poorly motivated individuals, the existing supervisory architecture is overburdened across many dimensions. Field supervisors invariably have to deal with too many locations, spread over too large an area, and with a gamut of activities—all this without adequate training, logistics or resources.

In the circumstances, third-party assessment contracts with professionally competent and independent agencies have the potential to significantly improve the quality of public service delivery and programme implementation. Since the current supervisory mechanism constitutes the very people whose services are monitored, the theoretical case in favour of external assessment is unexceptionable. Such independent monitoring is all the more necessary, given the unmistakable shift in focus from a merely quantitative to a more qualitative assessment of the government's functions.

One of the biggest breakthroughs in improving the quality of construction works in recent years has come from the introduction of mandatory third-party quality control (TPQC) checks. Typical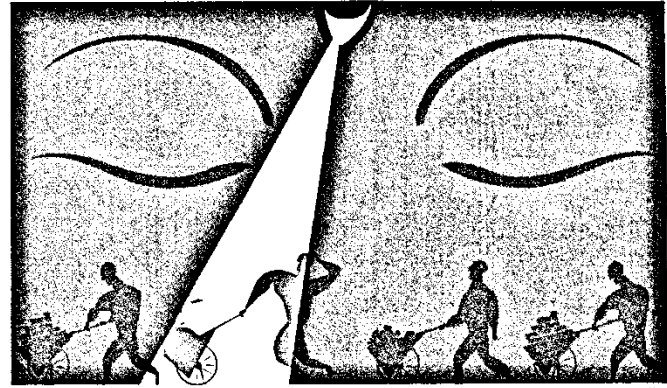ly, government departments call open competitive tenders and entrust engineering works—roads and drains, water and sewerage, buildings and so on—for execution through contractors. Regular department officials then supervise the quality of execution.

However, this arrangement poses an inevitable conflict of interest, wherein the supervisory engineers often collude with the contractors to dilute the quality of works. In this context, third-party audits—consisting of random and surprise inspections of works at each stage—by competitively selected external agencies emerged as a preferred strategy to elicit an independent qualitative feedback. In fact, its success has meant that TPQC is now a mandatory requirement in all the major projects implemented by Union and state governments.

Going beyond engineering works, it is natural to seek an independent and periodic feedback about the functioning of public institutions such as schools, hospitals and various government offices, apart from the quality of service delivery in welfare programmes. The feedback can range from the specific—which teacher, doctor or official is taking bribes, or is irregular or ineffectual at work—to the general—sources of leakages or bottlenecks or delays in service delivery, and so on.

In fact, instead of third-party assessments duplicating the existing regular supervisory mechanism, a mandate involving randomly sampled inspections may be adequate. The certainty of follow-up action, punitive or remedial, will be a powerful enough deterrent to ensure its effectiveness.

The critical ingredient for success in this market is credibility of the external agency—third-party assessment agencies are in the business of selling integrity. In a complex socio-political environment in which the avenues for incentive distortions are numerous and mostly unanticipated, managing such a busi-

ness can be a Herculean task.

Most often, a successful engineering TPQC agency, which starts off as a small group of committed people with exceptional integrity, loses way as it expands to take in more work. In a rapidly emerging market where success immediately begets more success, with a resultant proliferation of business opportunities, firms often bite off more than they can chew. In the process, they end up diluting performance standards, and ultimately lose credibility. With time, many of them end up being indistinguishable from the government supervisory mechanism.

Rigorous internal quality controls are, therefore, fundamental to success in this business. Once lost, credibility is very difficult to recover. The general lack of qualified professionals, coupled with the need to attract people with integrity and keep them honest, would require the development of a robust business model.

Clarity in the definition of scope of work and objectives is critical to ensuring that third-party assessments do not become an excuse for further erosion of already weak systems. It should complement, not replace, the role of the regular supervisory framework. Primarily, the outputs of the third-party agency should be a feedback for only the

highest level of administration, preferably only the head of a department.

Critics will surely allege that this provides a back door entry for private agencies into basic governance functions, the hallowed turf of governments. But, far from dismantling the regular government bureaucracy, external assessment would contribute to keeping them honest. Further, it needs to be borne in mind that the success and widespread adoption of TPQC with engineering works have not generated voices calling for scaling back regular engineering quality supervision.

Though there are likely to be several formidable systemic problems, it cannot be denied that third-party assessment equips officials with a powerful force multiplier that dramatically increases their span of control and, thereby, supervisory effectiveness.

For all those development venture capitalists in search of an idea to fund, partnership with the government in the creation of a competitive market for independent service quality assessments would contribute, at least partially, to addressing the implementation woes of the Indian bureaucracy.

Comments are welcome at
theirview@livemint.com

EXPANDING PRESENCE

US tech firms continue to grow in India

Despite the backlash against outsourcing, US firms continue to shift ops on a large scale to cut costs, meet demand

By SURABHI AGARWAL & LISON JOSEPH

NEW DELHI/MUMBAI

Unperturbed by growing calls against outsourcing, US information technology (IT) companies continue to shift out operations on a large scale to India to cut costs and meet growing demand.

On Thursday, soon after Ohio banned outsourcing of government IT projects, US President Barack Obama reiterated he would end tax breaks for companies that send work abroad.

Indian IT executives say US firms know the US administration is clamping on offshoring as a populist measure in an election year, but they still want India to warn Washington against violating fair trade laws.

Since February, US technology and consulting firm Accenture Plc has added 8,000 people to its India operations, raising their number to 50,000.

Another American IT firm, CSC, has one-fifth of its global headcount in India. It plans to hire 5,000 more over the next 6-12 months.

The company has moved a large portion of its application outsourcing and software development operations to India, it says in its latest annual report. "We plan to continue to expand our presence there and in other lower-cost locations."

At Cognizant Technology Solutions Corp., three-fourths of its 88,700 employees are in India, though 80% of its revenue comes from North America. In the nine months to end-June, it hired 24,600 people, of whom 75% are in India.

"A substantial majority of the personnel on most on-site teams and virtually all the personnel staffed on offshore teams is comprised of Indian nationals," the company said in its latest annual report, adding that it intends to expand offshore facilities in India.

Other large US IT firms such as International Business Machines Corp., or IBM, do not reveal their India headcount, but are estimated to have around 100,000 employees in the country.

The US government recently hiked the fees for professional visas that are mostly used by Indian IT firms to send workers to the US, saying it will use the additional money to fund new border security measures. India threatened to drag the US to the World Trade Organization if the move violated international trade laws, *Mint* reported on 17 August. But that hasn't stopped the rhetoric.

"Instead of tax loopholes that incentivize investment in overseas jobs, I'm proposing a more generous, permanent extension of the tax credit that goes to companies for all the research and innovation they do right here in America," Obama said on Thursday.

Bala Rajaraman, US tax partner on secondment at Deloitte India, said Obama has proposed making permanent the tax credit for companies doing research in the US. Currently, the tax credit has to be renewed every few years.

"However, several such proposals have been made in the past with no implementation. Even if it goes by, it is not sure that companies will move back work to the US as there are more economic factors behind such business decisions apart from just tax," he said.

Pramod Bhasin, chief executive of India's largest outsourcing firm Genpact Ltd, said the tirade against outsourcing will continue to rise as the US faces high unemployment rates in an election year. Midterm elections to the US Congress are slated for November.

Kiran Karnik, former president of the Indian IT lobby group Nasscom, said the anti-outsourcing cry is a worry, especially "when such discriminatory things (the visa fee hike) are signed into a law."

Karnik added India "should put some pressure on the US indirectly and cleverly to put its point across that such actions are against fair trade and globalization."

CSC says in its report that it is exposed to risks inherent to operating in India, which include "the possibility that the US federal government or the European Union may enact legislation which may provide significant disincentives to customers to offshore certain of their operations..."

Bhasin said India is already raising the issue with the US at various levels.

India is likely to take it up again during Obama's first visit to the country, expected in November.

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> **US firms know the administration is clamping on offshoring as a populist measure in an election year, say Indian IT executives**

BACK OFFICES THRIVE

- Barack Obama on Thursday reiterated his stance of ending tax breaks for companies that outsource jobs
- Over the last two years, most of American companies have either expanded their existing facilities or shifted entire business units to India
- Since February, American technology and consulting firm Accenture has added 8,000 people to its India operations, which employs 50,000 people
- American IT player CSC, which has one-fourth of its global headcount in the country, has plans to add 5,000 employees in the next 6-12 months.
- Cognizant, which has 75% of its global workforce in India, hired 24,600 people in the nine months to June 2010, of which 75% are in India.
- Over the last one month, the anti-outsourcing sentiment has really gained ground, with the US hiking fees for professional visas and the state of Ohio banning outsourcing of government IT

NO BUNKING TELLS SPA STUDENTS IT'S ONLY BY ATTENDING CLASS THAT THEY GET REQUISITE KNOWLEDGE FOR WHICH THEY JOINED INSTITUTE

Students must fulfil attendance criterion to sit for exams: HC

UTKARSH ANAND

NEW DELHI, SEPTEMBER 9

"BRILLIANCE in creativity is no substitute for regular attendance in classes," was the lesson the Delhi High Court handed out to 105 students of the School of Planning & Architecture (SPA) while dismissing their plea against disqualification from the annual exams.

Justice Rajiv Sahai Endlaw backed the SPA's decision to enforce the 75 per cent minimum attendance criterion for students across batches. Throwing out the students' argument that creativity was more important than attendance, the judge said the traditional form of knowledge dissemination still held great relevance where instructional interference was mandatory.

The petition was filed by 64 students, from all the three years, after the SPA restrained them from appearing in the exams starting from May 17. They approached the court on May 18 and Justice Endlaw, in an interim order, asked the SPA to allow them to sit for the exams, but also told the institute to withhold their results. The SPA, in compliance with the directive, allowed 41 other students, who were also detained for want of attendance, to appear for the exams. The Wednesday verdict, however, discards all relief to the students, who will now have to repeat the

HC directs police to protect couple

NEW DELHI: The Delhi High Court on Thursday directed the police to provide protection to a couple who apprehended a threat to their lives from the girl's family as she converted from Islam to Hinduism for marriage.

Justice A K Pathak directed the SHO of Narayana police station to provide protection to Kapil Tanwar (22) and Nagma (18), alias Priya, on a petition alleging that they had approached local police for protection but nothing has been done so far. Issuing a notice to the police, the court sought a response by October 4. Kapil resides in Delhi while the girl, a polytechnic student, hails from Baghpat near Meerut in Uttar Pradesh. On August 28, she had come to Delhi to get married to Kapil and reportedly informed the Baghpat police about the development. She requested them not to register any case as she is a major and left home on her own wish. Three days after, the girl converted to Hinduism to marry Tanwar in an Arya Samaj temple. Apprehending threat from the girl's parents, the couple sought the court's direction to the local police for protection. PTI

exams next year.

"It is only by attending classes that the students can get the requisite exposure to the knowledge for which they joined the institute. The students passing out from the respondent institute are expected to design buildings and any slackness in the training of any of the said disciplines can have dangerous consequences not only for the buildings but also its occupants," said the court. Justice Endlaw further noted that the requirement of minimum attendance was not a mere formality but a term of eligibility to sit for examination.

"After all, if the students felt that without attending classes they could create and design, they were free to do so. But once they have joined the respondent Institute, they are required to conform to the norms thereof and not fall back on the pleas of the course not requiring them to attend classes," held the court.

The court also pulled up the students' counsel for advancing the argument that SPA's move was unfair on the students because nobody was detained by them in the past. "Even if in the past, no one was ever detained on account of attendance, it is no ground for granting indulgence to the petitioners who are violators of the written rules," said the judge.

classes to fulfil the attendance criterion in order to sit for the ex-

Tribune ND 10-Sep-10   p-8

Real-life Munnabhais

Admission frauds are no joke

WHENEVER any well-meaning special facility is provided, there are always people waiting in the wings to misuse it. One such scheme is Direct Admission of Students Abroad (DASA), under which eligible foreign nationals, persons of Indian origin (PIOs) and non-resident Indians (NRIs) are admitted to undergraduate engineering programmes offered by the National Institutes of Technology (formerly Regional Engineering Colleges) and other centrally funded institutions (other than IITs) and Punjab Engineering College, Chandigarh. It seems to have been hijacked by some, 11 of whom got admission to the Chandigarh college alone by using fake documents. According to preliminary reports, a Hisar doctor gave them fake Nepalese identity cards by charging Rs 10 to 15 lakh from each student.

The CBI is seized of the matter and is conducting inquiries. As a result, a reputed centre of learning has come in for negative publicity. Actually, the fault does not exactly lie with the PEC because the Union Ministry of Human Resources has entrusted the central coordination of admissions under the DASA scheme to the National Institute of Technology, Surathkal. The students who thus tried to make way into a professional college fraudulently – like the lead character of the film Munnabhai MBBS – have not only ruined their own careers but have also brought a bad name to the institution.

Due to the acute shortage of good colleges, there is always a mad scramble for admissions. And there are enough unscrupulous persons to take the admission seekers for a ride. It is good that the conspiracy was detected fairly early. This will put the fear of the law in the minds of the wrong-doers. But there are far too many of them eager to employ underhand means. A consistent drive against them will be necessary to keep them out of business. An unqualified person getting admission into a medical or engineering college fraudulently may be good for a few laughs in a film but such an incident taking place in real life is simply not acceptable because it brings the entire education system into disrepute.

Indian Express ND   10/09/2010   p-13
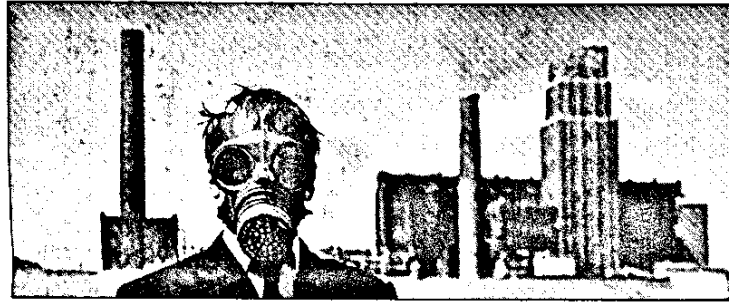
Science and Technology

Must try harder

CLIMATE-CHANGE ASSESSMENT

A call to reform the IPCC

IF THIS week's report into the workings of the Intergovernmental Panel on Climate Change (IPCC) by a council of national academies of science were the sort of report children take home from school, its main themes would be expressed as "could do better" and "needs to show workings". Stern parents might read it as calling for a Gradgrind-like clampdown; more indulgent ones as an inducement for the little darlings to try a little harder.

At a meeting in Busan, South Korea, this October, the parents in question — the representatives of the IPCC's member governments — will decide which sort they want to be. Read in detail, the report suggests that if they want credible climate assessments, a firm hand will be required.

The report, produced by a committee chaired by Harold Shapiro, once the president of Princeton, under the auspices of the InterAcademy Council, was requested in March by the UN's secretary-general, Ban Ki-moon, and the chairman of the IPCC, Rajendra Pachauri, after a mistake about Himalayan glaciers triggered a spate of criticism earlier this year. It praises the IPCC for its achievements so far — the best known of which is a series of mammoth assessments of climate science that provide the panel's member governments with a shared basis for their negotiations on climate change. At the same time it calls for changes to the panel's organisation, its procedures for choosing authors, its ways of dealing with review comments and its sometimes-misplaced statements of confidence in its own findings.

Since the IPCC was created in 1988, the report says, charitable, educational and other organisations have been through a "governance revolution" in accountability and transparency. The IPCC has, for the most part, sat this revolution out. In many areas it lacks procedures for defining what is needed. Without these there is no agreed standard against which to judge its performance. In a contentious area where the good faith of scientists is frequently challenged, this lack of transparency and explicit procedure breeds distrust.

The report says that the IPCC needs clear statements on who decides, and by what criteria, what should be in its reports; on what it is looking for in its authors and on how they measure up; on what constitutes a conflict of interest for a panel member; and on what sort of primary material should be deemed worthy of inclusion (peer-reviewed science, yes; other stuff only if explicitly approved by the authors with appropriate arguments for so doing). Review editors need to marshal the thousands of comments they receive on drafts into clear critical arguments, and the authors need to respond to those arguments fully. Statements that go beyond the evidence or move into the realm of advocacy need to be avoided.

The argument that all this demands only gradual reform rests on the idea that the IPCC is already meant to be doing these things, and that the report just provides a helpful codification of best practice. The argument for something more fundamental is that, in a practice that is a long way from best, many of these things are not being done, despite the fact that it has long been clear that they should be.

Reviews can be sloppy and incomplete. In the IPCC's most recent report no glacier experts saw the incorrect paragraphs in the regional chapter on Asia, though a lot of them were involved in a chapter on "snow, ice and frozen ground" in a separate volume. Reviewers' comments were sometimes dealt with only superficially, if not ignored altogether. As the "climategate" e-mails from the Climatic Research Unit at the University of East Anglia showed, authors sought to minimise the influence of views they disagreed with while failing to document their arguments as to why that was the right thing to do. And the criteria by which those authors are chosen in the first place are opaque.

The Shapiro committee says that as well as having clearer rules and more transparent procedures, the IPCC needs ways of being more responsive. It suggests an executive committee with the power to reshape the panel's plans and respond to criticism. This committee should include people not involved in the IPCC's daily work and at least one person from outside climate science altogether. In order to keep things fresh and avoid institutionalisation, committee members, including the chairman, should serve for only one of the six-year stints it takes to produce the mammoth assessment reports.

Dr Pachauri, who started chairing the fourth IPCC report in 2002, is well into his second six-year stint. The logic of the Shapiro committee suggests that it would be better for him to stand down now, rather than in 2014. This is not something the committee calls for explicitly. But when the IPCC's member governments meet in Busan the question of whether Dr Pachauri is the man to implement the committee's recommendations will doubtless play a large part in their thinking, even if it is not discussed much in the open. (Or what passes for the open, for the IPCC's plenaries are normally closed to press and public.)

Ironically, that exclusion underlines the fact that replacing Dr Pachauri is not the main point. The real point is actually achieving the sort of transparency and accountability that the "governance revolution" requires. Whoever leads the IPCC, the governments — and, indeed, Mr Ban — should make sure that there is a well-thought-out structure, and perhaps some expert special advisers, put in place in order to see to it that change happens. They might do well to ask Dr Shapiro for more detailed views on how that should be done, and to report back on the results.

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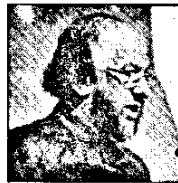
The weirdness of warming

Linking extreme climate across to global warming may be hard — but tracing it to human activity is easier

ANDREW C. REVKIN

NEW YORK City just had its hottest June-to-August stretch on record. Moscow, suffering from a once-in-a-millennium heat wave, tallied thousands of deaths, a toll that included hundreds of inebriated, overheated citizens who stumbled into rivers and lakes and didn't come out. Pakistan is reeling from flooding that inundated close to a fifth of the country.

For decades, scientists have predicted that disastrous weather, including heat, drought and deluges, would occur with increasing frequency in a world heated by the rising concentrations of greenhouse gases. While some may be tempted to label this summer's extremes the manifestation of our climate meddling, there's just not a clear-cut link — yet.

Martin Hoerling, a research meteorologist who investigates extreme weather for the National Oceanic and Atmospheric Administration, calls any such impression "subjective validation." He and other climate scientists insist there's still no way to point to any particular meteorological calamity and firmly finger human-caused global warming, despite high confidence that such warming is already well under way.

One reason is that extreme weather, while by definition rare, is almost never truly unprecedented. Oklahoma City and Nashville in the United States had astonishing downpours this year, but a large area of Vermont was devastated by a 36-hour deluge in November 1927. The late-season tropical storm killed more than 80 people, including the state's lieutenant governor, drowned thousands of dairy cows and destroyed 1,200 bridges.

A 2002 study of lake sediments in and around Vermont found that the 1927 flood was mild compared with some in the pre-Columbian past. In fact, since the

end of the last ice age, there were four periods — each about 1,000 years long and peaking roughly every 3,000 years — that saw a substantial number of much more intense, scouring floods. (The researchers found hints in the mud that a fifth such period is beginning.)
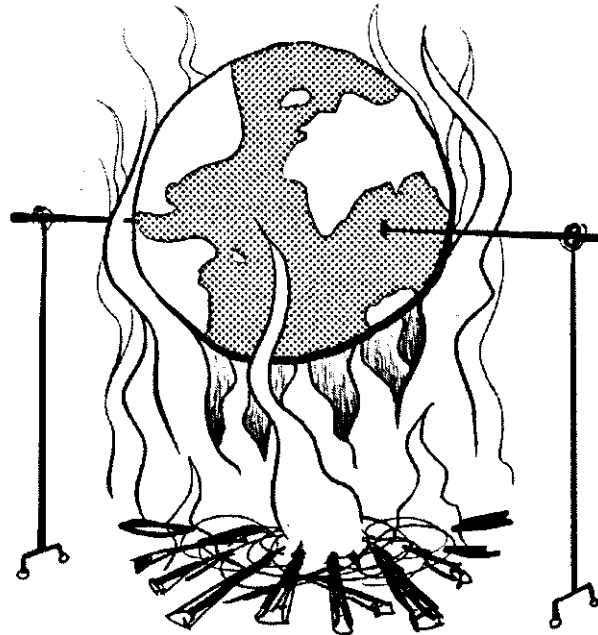
Many scientists believe that sub-Saharan Africa will be particularly vulnerable in the coming decades to climate-related dangers like heat waves and flash-flooding. But global warming is the murkiest of the factors increasing the risks there. Persistent poverty, a lack of governance and high rates of population growth have left African countries with scant capacity to

manage too much or too little water.

As in Vermont, the climate history of Africa's tropical belt also makes it incredibly difficult to attribute shifts in extreme weather to any one cause. A recent study of layered sediment in a Ghanaian lake revealed that the region has been periodically beset by centuries-long super-droughts, more potent and prolonged than any in modern times. The most recent lasted from 1400 to 1750.

Though today's extremes can't be reliably attributed to the greenhouse effect, they do give us the feel, sweat and all, of what's to come if emissions are not reined in. Martin Hoerling told me that by the end of the century, this summer's heat may be the status quo in parts of Russia, not a devastating fluke. Similar projections exist for Washington, the American Southwest, much of India and many other spots.

With the global population cresting in the coming decades, our exposure to extreme events will only worsen. So whatever nations decide to do about greenhouse gas emissions, there is an urgent need to "climate proof" human endeavours. That means building roads in Pakistan and reservoirs in Malawi that can withstand flooding. And it means no longer encouraging construction in flood plains, as we have been doing in areas around St. Louis that were submerged in the great 1993 Mississippi deluge.

In the end, there are two climate threats: one created by increasing human vulnerability to calamitous weather, the other by human actions, particularly emissions of warming gases, that relentlessly shift the odds toward making today's weather extremes tomorrow's norm. Without addressing both dangers, there'll be lots of regrets. But conflating them is likely to add to confusion, not produce solutions.

C R SASIKUMAR

Our exposure to extreme events will only worsen. So whatever nations decide to do about emissions, there is an urgent need to 'climate proof' human endeavours.

China in, India out of global best campus ranking list

ANUBHUTI VISHNOI

NEW DELHI, SEPTEMBER 9

FOUR Chinese universities figure in the list of the world's best 50 educational institutions, even as India's sole representative in the top 200 — IIT Bombay — has slipped 24 places from its 2009 position.

The University of Cambridge has replaced Harvard as the world's best university in the prestigious QS World University Rankings, 2010, published in London yesterday. Six of the top 10 universities in the world are American, the other four are in the UK. The US and UK share positions 1 through 17 among themselves.

The QS rankings, earlier published in collaboration with *Times Higher Education*, are an annual ranking of the top 500 universities in the world, based on an academic reputation index, employer reputation index, institution inclusion, and research among other criteria.

Among Asian countries, Japan has 10 universities in the top 200; China and Korea have six and five respectively. India has one — IIT Bombay at No. 187, down from No. 163 in 2009.

IIT Guwahati has crashed 100 places from No. 401 to No. 501, University of Delhi is down 80 places from 291 to 371, IIT Delhi is down 21 from 181 to 202, and IIT Kanpur is down 12 from 237 to 249. The Universities of Mumbai and Pune are in the 450-500 bracket, compara-

WORLD'S TOP 10
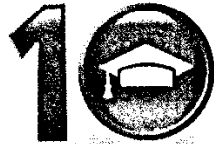
1 (2)	Cambridge, UK
2 (1)	Harvard, US
3 (3)	Yale, US
4 (4)	UCL, UK
5 (9)	MIT, US
6 (5)	Oxford, UK
7 (5)	Imperial College, UK
8 (7)	University of Chicago, US
9 (10)	California Inst. of Tech., US
10 (8)	Princeton, US

...AND INDIA'S BEST

187 (163)	IIT Bombay
202 (181)	IIT Delhi
262 (284)	IIT Madras
401 (455)	IIT Roorkee
311 (335)	IIT Kharagpur
249 (237)	IIT Kanpur
371 (291)	Delhi University
401-500 (401-500)	Mumbai University
401-500 (401-500)	Pune University
501 (401)	IIT Guwahati

2009 ranks in parenthesis

ble to Tehran.

In contrast, three of the four Chinese universities in the top 50 have improved their positions since last year. At No. 23, the University of Hong Kong is up one place, and on top of the Asian pile. The Chinese University of Hong Kong is up to 42 from 46, and Peking University is up to 47 from 52.

China in, India out of 2 best campus rankings

Hong Kong University of Science and Technology is at No. 40, down from No. 35 last year.

Beijing's Tsinghua University is the fifth Chinese institution in the top 100, coming in at No. 54.

Martin Ince, convener of the Academic Advisory Board for the QS World University Rankings, said that the poor performance by the IITs apart, "the real story is the very modest showing of all other Indian higher education in our rankings".

"Delhi University scores well in our assessment of academic and employer opinion but very poorly on our other measures — faculty/student ratio, citations, international staff, international students," Ince wrote in an email to *The Indian Express*.

"This is a very modest performance for the flagship university of a very significant nation... Note too that many universities around the world are investing heavily and want to be prominent in this and other rankings. So universities need to improve just to stand still."

IIT Guwahati director, Prof Gautam Barua, expressed surprise and disappointment over the steep fall in the institute's rank and said he would examine the issue. IIT Kanpur director Sanjay G Dhande, however, said that wide disparities in the budgetary structures of Indian and Western institu-

tions — even though faculty and student profiles may be comparable — make it unfair to measure them by the same yardstick.

Indian government policymakers argue that international ranking criteria are based largely on western models and do not take into account several other indicators. The University Grants Commission is in fact, in the process of developing its own ranking system based on "Indian indicators of performance".

Ince, however, argued that "the much more prominent position of Chinese universities than Indian ones proves that we are not simply being nice to western institutions". He added, "In fact, India's tradition of the English language ought to give it a big advantage over China in world higher education, but we do not see this effect at work."

HRD Minister Kapil Sibal, though, struck an optimistic note.

"In the next ten years several of our institutes will be among the top 100 in international rankings. Without commenting on the merits and demerits of these rankings, with the reform in education systems, we should see more Indian institutes figuring on them. It should also be thought what should be adopted as a global criteria... not necessary it has to be western-style", Sibal told *The Indian Express*.

Govt to rent out computers in rural areas @ ₹15 a day

Harsimran Julka
NEW DELHI

AFTER the slow pick-up of the $220 One Laptop Per Child Project, and an uncertainty over the $35 laptop called Sakshat, the government is now experimenting with another model—to dole out computers on rent to spread IT literacy in the country.

Under a pilot program to be launched by the ministry of IT & communications, computers specially built for rural areas will be deployed in five locations, and then rented out to citizens. "The cost may vary from ₹15-20 per day. This model may remove the hindrance of affordability in buying computers. We are talking to various companies like Intel, HCL Infosystems and One Laptop Per Child Project," a senior official at ministry of IT & communications told ET.

The pilot program would cost the government about ₹45 lakh. "It will also remove the problem of maintenance and repair which is a common problem in many areas. Besides the person can rent it only for the time power is available," he added.

In another IT experiment, the government last year had claimed to have launched a $10 computer which actually turned out to be a $10 storage device. This year the min-

CHARTING A NEW PATH

istry of human resource & development launched a $35 laptop called Sakshat. The MHRD plans to bring the cost of this laptop down to $20 and then to $10 ultimately.

But many experts cast a sceptical eye to the Sakshat project. "Any body in the industry having some knowledge of making laptops knows that its impossible to manufac-

ture a laptop for $10," says Satish Jha, OLPC India president, whose laptop costs about $220 to manufacture. Add about ₹2,300 as duties and ₹1,700 as shipment cost, and the price shoots up to nearly the price of a netbook available in the market. But he defends his OLPC laptop saying that none of the netbooks would ever have a shockproof body, solar charging capabilities, and a host of 230 applications. He claims to have deployed about 2,000 OLPC laptops in various parts of India.

He welcomes the government's new move to rent computers, but admits there is a huge power and maintenance problem which prevents PC buying in rural areas. "It costs about ₹16,000 for power over five years, to run a desktop PC. For adult education, renting computers for a few hours may be a good idea," he said.

HCL in 2006 had launched a Community PC with an innovative power management system called RP2 that switches the computer to a power battery. The battery can be charged by using bicycle peddle power. But that computer too failed to see heightened demand in rural India. Clearly, the government needs to create a utility-based demand before it can work out these models for rural areas.

US IT cos get lion's share of e-governance pie

Harsimran Julka & Debjoy Sengupta
NEW DELHI, BANGALORE

INDIAN IT service providers are only just readying to tap the US government market but US IT and consultancy firms have already benefitted from India's booming e-governance spends.

For instance, IBM, which has landed marquee contracts such as Bharti Airtel's total outsourcing IT deal, is also a significant player in government projects. It is one of the vendors in the ₹2,000-crore Tax Net project being implemented by the Central Board of Direct Taxes while its US rival Accenture has landed one of the contracts in the prestigious Unique ID (UID) project.

IBM, along with Hewlett Packard, is also competing with home grown Indian service providers such as Tata Consultancy Services, Wipro, Infosys Technologies for another ₹2,000-crore contract, which is part of the UID project.

Similarly, Microsoft is involved with the Citizen Service Centre project while Intel is involved with the WiMax program. Even smaller projects like LIC's ₹50-crore CRM project has been awarded to IBM. But an interesting fact is that most strategic planning work for e-governance in India is also done by US consulting firms, though HCL, Wipro,

Infosys and TCS all have consulting arms.

"US IT cos get almost 80% of the consulting assignments. Any e-governance contract we execute the first two questions asked are that how will you secure the data and how will you ensure that strategic control rests with the government. But almost all consulting work is awarded to US firms which creates a security issue and which is almost always structured in a manner to benefit them profitably in the long run," said an e-governance business head of a tier I IT company.

While Ernst & Young is a consultant in the Unique ID program, PwC consults the central government on the nation's e-governance programs. Accenture has devised the strategy of India's Department of Posts program. "We even invite US companies to participate and look forward to them," said a top e-governance official at the ministry of IT & communication.

IBM, is one of the vendors in the ₹2,000 crore Income Tax Network project being implemented by the Central Board of Direct Taxes, while its US rival Accenture has landed one of the ₹200-crore biometric solutions contracts in the prestigious Unique ID (UID) project.

"Over 50% of the budget in e-governance projects goes towards US IT
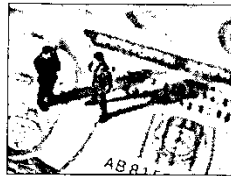
INDIA CALLING

companies, even if we (Indian IT company) win an e-governance contract," says an official involved in e-governance tendering and contracts. "That's because most product companies like HP, Intel, AMD, Microsoft, EMC, Cisco, Red Hat are US-based," he explains.

The US government IT market is on the other hand a $77-billion untapped potential. Still none of the Indian IT companies feel that US firms should be disallowed from participating. "Nobody likes a closed market. Markets have to open. Only then we can do business. We must not do anything like this because the government of India is entitled to best service. Only by keeping our markets open can we force oth-

er markets to be open," said TV Mohandas Pai Director HR at Infosys Technologies.

A top e-governance official at the ministry of IT & communication who overlooks the $6 billion NeGP IT spending says that the Ohio ban is a discriminatory decision. "We even invite US companies to participate and look forward to them. On the other hand they have taken a drastic measure." Regarding a possible ban of US IT companies from participating in critical e-governance tenders, he says ministry of commerce is the right to decide it, if they want to take it as a reciprocatory measure. "ministry of IT cannot take a policy decision on it," he said.

Analysts also claim that the Ohio-ban is a loss of potential business opportunity for Indian IT providers in the long term as state governments in US take a protectionist stance. "Smaller IT offshoring companies would find it more challenging as they will now have to work onshore which might become a survival issue," said Arup Roy, research analyst at Gartner.

Commenting on the ban, Nasscom also felt that US states should reciprocate. "The issue here is that when India doesn't discriminate between American and Indian firms when doling out billion dollar e-governance contracts, US should also recip-

rocate. This is about services, but state governments in India do not discriminate too, when procuring products like IT hardware between Indian or American firms," a Nasscom spokeswoman had told ET earlier.

"The volume of outsourcing business done by US-based companies in India is far less than the total business being done by Indian companies in the US. A counter ban could in fact have negative effects on the Indian IT companies only, who depend heavily on clients in the US," says Kumar Parakala, head IT Advisory at KPMG.

But international trade experts say that India cannot technically reciprocate under WTO rules, because the Ohio ban is against all foreign offshore providers and not against a single nation.

MindTree which is interestingly headquartered in New Jersey also feels that India should not react. "To be honest, the cost of this has to be decided on business sense. This is political gimmickry. At the end of the day, if you look at the last job creation data in the US, the government jobs have gone down and they should be addressing that. The US reacting to this situation does not make sense," said Krishnakumar Natarajan, CEO and MD, MindTree.

WITH INPUTS FROM SRIVIDYA IYER

Economic Times ND10/09/2010   P-8

VOICE TO EMPLOYEE: A WIN-WIN APPROACH

Hewitt Associates' Total Rewards Optimisation tool guides companies on employee benefits by measuring preferences through trade-offs. The results have made both companies and staff happy

Pay & perk's the new deal

*C*AN a company calculate exactly how much it needs to spend on benefits to keep employees happy and still not dent its coffers? Can it figure out how to leverage the rewards it offers to not only attract the best talent in the market, but also retain it and up its productivity? Tim Glowa and Ray Baumruk, global solution leads at Hewitt Associates, recently introduced Indian companies to an exercise they called Total Rewards Optimisation (TRO), to do all of the above, and more. Already launched in the US, Canada, Europe, and in Singapore and Hong Kong in Southeast Asia, the TRO tool will soon hit China, they tell *Labonita Ghosh. Excerpts from an interview.*

What exactly is the Total Rewards Optimisation (TRO) tool?
The TRO tool is a short, fun and engaging survey to measure employee preferences through a simple process of trade-offs. Using a technique called conjoint, that has been in the market for almost 25 years, we check on employees' preferences for various rewards and benefits. If you ask them directly what they want, they'll say everything, which is not actionable. But things are easier to infer if it's in the form of trade-offs. It's the same sort of trade-offs we make every day: Where to go for lunch, what road to take to work, what computer or clothes to buy, etc. We're unconsciously making these decisions all the time, and that's the trade-off we wanted to mimic through the TRO exercise. It is really about bringing a voice to the employee. Often, this is the voice that's left out when companies plan their rewards package. We don't know if the employee is interested in the rewards offered (or what s/he would like instead). Once we know their preferences for different rewards, we deliver these to the client through analytics that help them understand the implications of the survey. We look at optimising the spend on rewards, segmenting results for different types of employees and help provide insights to help companies make better decisions about the benefits they offer.

How can the TRO tool be adapted to different countries and markets?
The questions and the analytical techniques vary based on the questions asked. So in the US, you can ask employees about the 401K (a US-specific retirement plan), but that doesn't exist in India. So, here we can talk about medical cost-sharing or about various kinds of two-by-two trade-offs. Like more vacation or less pay, or more pay and less vacation. Or more medical coverage and less variable pay. We provide several trade-off scenarios in the TRO survey, and employees decide what and how much they want. The difference between a

PACKAGE FOR EMPLOYEES: TIPS FOR COMPANIES

* **Let employees work out their own** rewards package. Talk to them, listen to them, take their opinion on the current rewards package being offered, rather than try to guess their choices

* **A good rewards package is not only a** hook to lure the best talent in the market, but also a good tool to retain that talent and, with regular tweaks to the benefits package, make sure it is continually productive
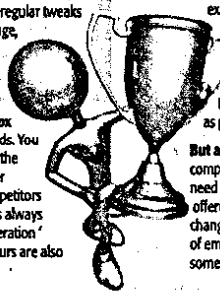
* **Think out-of-the-box** when thinking rewards. You will be able to scoop the best talent if you offer something your competitors are not. While cash is always important, 'next generation' features, like flexi-hours are also becoming important

* **Spend efficiently on rewards — not** necessarily more — by giving employees exactly what they value. In a dynamic economy like India, rewards tend to get undervalued very quickly. Companies need to keep up, and revisit the rewards they offered earlier as much as possible

* **But also – don't benchmark your** compensation to the marketplace. You need to be consistent with the rewards offered, and not keep tweaking and changing them too often. Preferences of employees is more stable than some companies might imagine

* **Bring more marketing focus** to the rewards package. Think of employees as consumers of the benefits and rewards and what you could do to please them

* **Employees** prefer a bunch of smaller rewards, than one big benefit. Companies need to mix and match

Ray Baumruk   Tim Glowa

Retention is a key outcome that companies look for, from optimising total rewards. But the other important things are attraction — to have a package of rewards that people in a growth market like India will be attracted to, and that competing companies may not offer — and productivity, that can be pushed up by optimising the rewards package.

survey of this kind and a more traditional survey of satisfaction is that the TRO tool puts things in order of most or least important, and simulates how employees might make choices in real life. But we don't want to mismanage employee expectations or test for things the company couldn't offer. Employees may want a three-month holiday, but there's no chance a company would give it to them. We want the survey to be relevant, so we design it to include the things clients would practically execute against.

Is retention at the heart of this exercise?
Retention is a key outcome that companies look for, from optimising total rewards. But the other important things are attraction — to have a package of rewards that people in a growth market like India will be attracted to, and that competing companies may not offer — and productivity, that can be pushed up by optimising the rewards package. When there's more productivity, there's more money to spend on rewards. A related outcome could be to spend more efficiently on rewards. We find that 10-15% of the spend on rewards is wasted by giving employees benefits they don't value. We can fix this by shifting the money around and reducing spend on benefits they don't appreciate,

and increasing it on benefits that they do.
So, for many companies, it may not be about saving the costs spent on rewards, but spending their rewards currency more effectively. We've been able to use the TRO tool to identify alternative programmes that 70, 80 or even 90% of employees prefer over what they currently have, and also save 10-15% of the company's rewards money. It's a win-win for both employees and the company.

You have found, through using the TRO tool, that US companies need to spend upwards of $15,000 per employee, and need to increase that by 3-5% per annum. How do you assign such a figure to something (employee preferences) that is largely abstract?
The trade-off that the TRO tool uses is between the kind of rewards and services people can get and what they're looking for. By understanding this, we can bring in another element — the cost of delivering those services. Once we have those two pieces of data, we put them together to see how we can optimise on the rewards spend. That's where the $15,000 comes in: It's an average cost of benefits per employee in the US. Some will spend more, some will spend less. But rewards are

highly leverageable. Cash is always important, but may not be the most efficient way for a company to spend its rewards currency.
An example, in the US, is childcare subsidies. Suppose an employee earns $50,000 a year and gets a hike of about $5,000. But he's recently had a child, and spends the entire additional money on childcare. In effect, the raise is now gone. But suppose the company gave him a raise of $2,500 instead of $5,000, and also offered him subsidies to use some sort of high-quality childcare service. The company would still be paying $2,500, but the employee perceives this as something better that he got for half the amount. Similarly, some employees may value housing benefits; others value tuition and training. The TRO tool lets companies allocate benefits among employees according to who likes what, and everybody is happy.

What should companies in India be looking out for?
While you have to look at a core range of items that you're currently spending money on — salary changes, allowances, medicals — Indian companies should think outside the box. If the company is offering the same rewards as everyone else, why would an employee join it? We encourage clients to look at the next generation of features, like flexi-hours. The

critical thing is understanding exactly what employees are looking for. We think we know, but until we actually talk to employees, we're merely guessing. The TRO tool, instead of guessing, brings some empirical evidence to the company's decision-making on rewards.

Can we have some TRO success stories?
We worked with a large retailer in the US, which has almost 200,000 employees. They were looking to see how they can more efficiently design employee benefits. We did the study and found alternatives that 75% of employees preferred over what they were getting, and were able to save the company $200 million. It was a huge saving for the company, and three out of four employees thought it was better than what they had been receiving.
There was a similar outcome with a global chemical company. In that instance, the TRO tool saved the company a relatively small amount, $5 million, but foregrounded a problem they were struggling with: key talent leaving the company. They had been unable to figure out why, even from exit interviews, till we worked this problem into the TRO survey. We found that if the company took some money out of profit-sharing schemes and put them into matching contributions, employees preferred that. It was a simple change that would not have come to light but for the TRO.

OUT OF THE BOX: ENTREPRENEURS TRACK BUSINESS IN EDUCATION

Non-formal education is emerging as fertile business ground, as more Indians seek facilities to develop learning and vocational skills in their wards, beyond what is being offered by the country's academia-oriented schooling system.

Non-formal lessons of opportunity

IT ALL began with a search for a great place where his three-year-old son could play. At 37, Dev Roy had just completed a stint as head of Barclays Capital in Europe and had moved his family to Bangalore, where he hoped to begin a fresh career as an entrepreneur.

When he found there wasn't any interesting play-and-learn facility in the city for very young children, Mr Roy decided to start his own venture, LeapStart, a sports and fitness program for children, combining a family need with a career ambition.

Across the city, another family that relocated from the US was finding it difficult to find an invigorating learning programme for their children. To fill the gap, Shivram Venkatasubramaniam and Shuchi Grover started a new venture, Academy for Math, Sciences, Arts and Technology (Amsat), which offers programmes such as the Stanford University education programme for gifted youth.
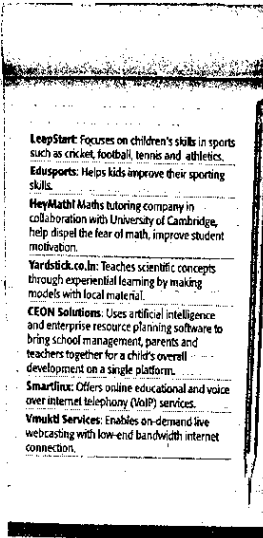
As more Indians seek facilities to develop learning and vocational skills in their wards, beyond what is being offered by the country's academia-oriented schooling system, non-formal education is emerging as fertile ground where entrepreneurs such as Mr Roy can seed a host of new ventures.

The sector, which includes pre-schools, coaching and vocational skill development, is estimated to have a value of $10 billion — that is over a tenth of the overall $85-billion Indian education industry. "The non-formal segment will grow to a $20-billion market in a couple of years," says Bharat Parmar, consultant at Eduvisors an education sector advisory services firm.

Mr Roy's venture offers children a chance to develop a range of sports skills. Training is provided for games such as cricket, football and tennis to athletics. Besides physical health, LeapStart also improves overall kinetic skills with a combination of video and bio-mechanic analysis. "Physical education is not a punishment, kids should have fun doing it", says Mr Roy who has a management degree from the University of Chicago.

LeapStart has taken principles from US-based SPARK, a research-based public health organisation of the San Diego State University Research Foundation. It is based on 45 research papers and is aligned with the curricula prescribed by the National Association for Sport and Physical education, and Indian certifying boards such as CBSE and NCERT. The company expects to enrol 35,000 students this year and aims to be a ₹100-crore company in the next three years.

A focus on physical education has already yielded returns for serial entrepreneur Saumil Majmudar, founder of Edusports, who has grown his business to around ₹5 crore, by helping children improve their sporting skills. "We are seeing a huge market, as parents today want their children to not only have skills and knowledge but also re-

main fit, learn teamwork and acquire leadership skills," says Mr Majmudar, who runs Sportz Village, which is a group company of EduSports

With around 70 schools having outsourced their sports activities to EduSports, Mr Majumdar expects to clock ₹100 crore by 2015, reaching over 1000 schools and a million children. EduSports' clients are not drawn from elite schools in metros, but from tier-II and III cities such as Amritsar, Ludhiana, Lucknow, Baroda, Mangalore and Madurai, with the lowest fee being ₹250 per month.

There are others who see opportunity in dispelling the fear of subjects such as mathematics and scientific concepts amongst Indian children.

Harsh Rajan and Nirmala Sankaran quit their jobs managing cash and derivatives with Credit Suisse and Citibank in London respectively to return home and start HeyMath!. The mathematics-teaching company, which has collaborated with the University of Cambridge, helps dispel the fear of mathematics, and improve student motivation amongst school-

going children. The firm, which incorporates interactive lessons peppered with animation, graphics, real-life problems and quizzes, has today reached students in over 50 countries. HeyMath is becoming the mathematics back-office and tuition provider across the world, with a growing user base that includes the Massachusetts and New York City Department of Education, the Delhi NCT government, and the KwaZulu-Natal Department of Education in South Africa.

"In Singapore, 60% of top-performing kids have been using HeyMath. We expect to be a ₹200-crore company by 2013-2014," said Harsh Rajan, co-founder of HeyMath!.

Technology to make learning more fun is also an area that entrepreneurs are targeting. Yardstick.co.in uses locally available material, including clay to fashion three dimensional models of scientific concepts for children. "For example, if we have to explain Newton's law of motion to children, we use common things such as ice-cream sticks, balloons, magnets, rubber bands. We will tell children to design a car and make them understand

these laws," says De Paul Kannamthanam, founder of Yardstick.co.in

The Hyderabad-based company was started in 2008. It has about 40 employees, with a revenue of ₹80-90 lakh. The firm expects a topline of ₹1.5 crore by the academic year 2010-2011. It will reach about 12,000 children by December this year.

This experiential learning segment is one that even large education companies such as NIIT too are targeting. To explore science through computer-aided experimentation, the company has introduced the Mobile Science Lab for schools in India in association with US-based Fourier Systems.

As part of this partnership, NIIT will make available technology-enabled learning solution to explore science through computer-aided experimentation.

"Mobile Science Lab is a breakthrough initiative, which aims at redefining the teaching and learning of science. We are confident that it will bring alive science subjects in our classrooms and help de-stress the learning ecosystem in schools," said Sanjiv R Pande, presi-

dent, School Learning Solutions, NIIT. Over 210 experiments from NCERT-defined curriculum can be performed with the device.

Risk capital investors, who follow the education sector in a big way, now say that this area is beginning to attract high quality entrepreneurs, as education companies earlier were driven by academicians who were not good business-builders.

"A new breed of entrepreneurs coming from the corporate world are venturing to start education companies. The real scalability in education is in areas such as Kindergarten to 12th grade education, vocational training and preparing students for entrance exams," says Sanjeev Aggarwal, managing director of Helion Advisors, a $350-million India-focused fund, which is exploring opportunities in education sector.

It has invested $2-10 million in education firm Global Talent Track.

As the demand for non-formal education is being driven in a big way by children and young people in semi-urban and rural areas, this has also turned the focus to gaps in the in-

frastructure. This includes connecting schools through information and communications technology.

For instance, CEON Solutions, the brainchild of three students from the Indian Institute of Information Technology and Management, Gwalior, uses artificial intelligence and enterprise resource planning software to bring the school management, parents and teachers together on a single platform, for a child's overall development.

"Focusing on every single student's multidimensional growth has become impossible for the teacher. Our solutions helps to analyse each and every student, discover their hidden talents, uncover his or her weaknesses and take remedial action," says Abhay Panjiyar, CEO and MD of CEON. It has 50 clients and expects to have 500 schools as its customers in the next 2-3 years.

Similarly, Hyderabad-based Smartlinx, which offers online educational and voice-over-internet telephony (VoIP) services, is focusing on Kindergarten to 12th grade (K-12) market. Smartlinx, which has tied up with telecom major BSNL, aims to sign on 50,000 teachers and enrol about 200,000 students. It has a revenue target of $100 million by 2015.

"According to one report, broadband penetration can empower 326 million students and seven million teachers. This gives tremendous scope for e-learning and virtual learning to grow in India," says Job Thomas, director and COO of Smartlinx.

It is this demand from remote locations that prompted two brothers Hardik Sanghvi and Kushal Sanghvi to launch Vmukti Services, which enables on-demand live webcasting with low-end bandwidth internet connection.

In just six months of its operations this year, about 10,000 students — most of them from tier-II and tier-III cities — are taking coaching classes through Vmukti. Incubated at IIM-A, the firm plans to collaborate with cyber cafes to tap markets such as Africa. The promoters expect to reach ₹250-crore turnover by 2014.

"We are working with Indian institutes to train students in markets such as Zambia and Kenya. The faculty in India will teach the students located in these African regions through Vmukti," said Kushal Sanghvi of Vmukti

The untapped rural opportunities has also lured young entrepreneurs at TransGenez, an educational BPO, to provide educational services to tier-II and III towns. TransGenez, which started with a seed fund of $350,000, aims to achieve a revenue of $8 million by June 2010-2011.

Experts say companies will have to spread their offerings, and not focus only on niche areas, in order to build scalable business in this sector. "It is difficult for entrepreneurs to attract venture capital funding if they are focusing only on sharp niche areas, that are not scalable models," said Aggarwal of Helion Advisors.

PEERZADA ABRAR

LeapStart: Focuses on children's skills in sports such as cricket, football, tennis and athletics.

Edusports: Helps kids improve their sporting skills.

HeyMath! Maths tutoring company in collaboration with University of Cambridge, help dispel the fear of math, improve student motivation.

Yardstick.co.in: Teaches scientific concepts through experiential learning by making models with local material.

CEON Solutions: Uses artificial intelligence and enterprise resource planning software to bring school management, parents and teachers together for a child's overall development on a single platform.

Smartlinx: Offers online educational and voice over internet telephony (VoIP) services.

Vmukti Services: Enables on-demand live webcasting with low-end bandwidth internet connection.

Confident speech spells business

IIM Alumni Finds Big Opportunity In Developing Soft Skills Of Students, Employees

EARLY this week, at the Info Institute of Engineering in Coimbatore, the faculty and the parents were surprised to find students stride up to the podium and deliver eloquent leave-taking speeches in perfect English. The college had gathered to commemorate its first batch of graduating students.

The surprise was more palpable, as this group of students — most of whom hail from the southern towns and districts of Tamil Nadu — had dismal English-speaking capabilities when they enrolled at the institute in 2007. "They were spending so much of money to get an engineering degree, but I felt none of them will be employable at the end of the four-year course, as they lacked communication skills," says Chitra Manohar, secretary, Info Institute of Engineering.

It is a problem unique to India where professional colleges focus almost exclusively on technical knowledge, providing fewer opportunities for students to gain industry exposure and develop soft skills. As a result, just about 39.5% of graduates in India are rated as employable, with the rest needing various levels of training before they are ready to become productive members of the workforce.

This is a gap that Ms Manohar and her team were keen to plug right within the college, for which they roped in an IIM-Kozhikode alumnus B Rajesh Kumar to head a soft-skills training course for their students. While the college now offers Mr Kumar most of the credit for the improved communication skills of its students, for the trainer this was the perfect launchpad for his start-up venture, one that offers skill-development programmes for students and corporates.

Mr Kumar, who joined global banking major Citi Bank after his MBA programme, had always nursed ambitions of becoming an entrepreneur. When he was ranked fourth at all-India level for

the first quarter in 2008 in the Champions League, an in-house competition for employees at Citi Bank, he reckoned that by the age of 40, he could at best aspire to be the Country Head. He found that it was not a very enthusing prospect.

Deciding to pursue his start-up dreams, Mr Kumar teamed up with an IIM batchmate, V Venkata Raghulan, to capitalise on their skills in the area of communication, leadership and mentoring, to set up their own company in December 2008. Today, the IIM-K graduates' business enterprise Focus 4-D Career Education has clocked up a turnover of ₹2 crore. They hope to double its revenue in the current financial year.

The company has two business verticals under it. Through Focus Academy

for Career Enhancement (FACE), they conduct skills-development programmes for college students by signing MoUs with the colleges.

They offer year-long as well as short-term training programmes for management-based competitive exams, and also recruits students under train-and-hire model for corporates. It also provides e-learning solutions, blended learning solutions and web presence solutions to corporates and institutions under EdLog Solutions.

Being IIM alumni, the duo were able to package their training with unique insights about management exams. "We offered training at premium rates, but our products were the best. In our first batch, 17 out of 22 students who

underwent training for group discussion and personal interview, gained entry into various IIMs," says Mr Kumar.

"Rajesh was earning more than ₹1 lakh per month at Citi Bank, but he quit all that to begin his own company and struggled initially to reach this level," says Ms Manohar. The big breakthrough for the company happened after their first year in the business. The soft-skills training space in Tamil Nadu had a clutch of competing players. In a bid to gain a lead, Mr Kumar negotiated a merger with a company with a similar profile, e-brahma, which was a franchise operator for PT Education. It helped that e-brahma's founder TP Senthil Kumar too was an IIM-alumnus.

"Instead of competing with each other in the market, we decided to join hands as our objectives were the same," he says. The merger, completed in October 2009, was a no-cash deal. Focus 4-D Career Education has given minority stakes to e-brahma, which brought along with it 12 clients (colleges), 12 full-fledged associates, and two rental office locations. The company continues to be owned by the original promoter duo of Mr Kumar and Mr Raghulan, while Senthil Kumar from e-brahma has joined Focus 4-D Career Education as a full-time director.

Earlier this year, the start-up also bagged its most prestigious corporate engagement — training entry-level recruits on communication skills and corporate etiquette under the 'train-and-hire' model for Cognizant, one of India's fastest growing IT services firms. "Early this year, Cognizant had shortlisted 26 students from the Hindustan College of Arts and Science. We trained them at campus, and all the students got offer letters from the company now," says Mr Kumar.

S SUJATHA

Venkata Raghulan (L) and Rajesh Kumar

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Varsity tells college to take back lecturer

TIMES NEWS NETWORK

Thiruvananthapuram: The syndicate of Mahatma Gandhi University, Kottayam, on Thursday decided to ask the management of Church-run Newman College to revoke the dismissal of lecturer TJ Joseph whose right hand was chopped off by alleged

Muslim fanatics last July 4 alleging blasphemy.

After the syndicate's meeting, VC Rajan Gurukkal said the college management had not followed norms while taking action against Joseph. The university, he said, would ask the college to take him back.

The management of Newman Col-

lege, Thodupuzha, had suspended Joseph soon after a controversy over a question paper set by him for an internal exam.

Despite the university revoking Joseph's suspension, the college gave him the marching orders on September 1 stating it was necessary to protect secular credentials of the in-

stitution.

Joseph, meanwhile, shot off a letter to the college management pleading he be taken back on humanitarian grounds. He argued his salary was the only source of income for his family. The College is run by Kothamangalam diocese of Syro Malabar Church.

'Ohio ban against spirit of free trade'

Mini Joseph Tejaswi
& Sujit John | TNN

Bangalore: The Ohio governor's decision to prohibit state agencies from hiring firms that send work offshore provoked an immediate and strong reaction from the IT industry. And in a sign that corporate India in general is getting worried by the protectionist moves in the US, national industry association Assocham came out strongly against the move, saying that it is against the spirit of free world trade and amounts to creating trade barriers.

Infosys also expressed concern. Nasscom said more such actions could be expected as

Obama's reiteration of his administration's desire to withdraw tax breaks to US companies that create jobs overseas, instead of at home, is unlikely to have any direct impact on Indian IT firms

the US heads towards its November elections, but noted that such initiatives could be counterproductive to the US government's thrust on reducing public deficit and possibly lead to an increased tax burden on its citizens.

"It is imperative that the

focus on free trade remains strong, but instances like Senator Schumer's Border Security Bill and the Ohio ban on outsourcing only reinforce our stand on discrimination," Nasscom said.

According to experts, US President Barack Obama's re-

iteration of his administrations desire to withdraw tax breaks to American companies that create jobs overseas, instead of at home, is unlikely to have any direct impact on Indian IT companies. The target, it is believed, could be subsidiaries of American companies that book profits in low-tax regions, and do not repatriate the same to the US, where tax rates are higher. A measure like that is unlikely to affect Indian companies.

International trade is a federal subject and Nasscom added that it is studying the legality of such a bill being passed by a state government. The industry body is leading a delegation to the US later

this month and plans to take this up with relevant officials in the US.

IT firms indicated that they would increase their delivery strength in US to reduce the offshoring need. Infosys CEO Kris Gopalakrishnan said the company was increasing local recruitment across all its global locations. "I do believe that is a solution that works for us and them (the US). We incur higher costs in relocating our employees from India with their families. Infosys initiative in the public services sector is focussed on creating a domestic delivery centre in the US, hence this should not be affected," he said.

India slips to 51 on global competitive list

Shella Mathrani

Geneva: India has slipped to 51st from the 49th spot in the World Economic Forum's annual Global Competitiveness Report (GCR) 2010-2011 among 139 countries rated for institutions, policies, and factors that determine the level of productivity.

The top ten ranked countries have retained their spots since 2009. While Switzerland is first for the second consecutive year, Sweden is second and Singapore is at the third spot. The US has slipped to fourth and China had jumped to 27 from 29.

"Switzerland, a model country, has the most effective and transparent public institutions in the world with a level playing field, an independent judiciary, strong rule of law, and highly account-

able public sector," said the report released on Thursday.

"India has failed to improve significantly on any of the basic drivers of its competitiveness," said the report. But its large market size, good results in more complex areas including financial markets, business sophistication and innovation make it competitive.

India shows up poorly when it comes to institutions. It ranks 71 in diversion of public funds, 88 in the public's trust of politicians, 83 in irregular payments and bribes, 72 in favouritism in decisions of government officials, 57 in wastefulness of government spending, 95 in burden of government regulation, 127 in business costs of terrorism, 67 in business costs of crime and violence, 73 in organised

How They Perform

Switzerland	Sweden	Singapore	United States
1	2	3	4
Germany	Japan	Finland	Netherlands
5	6	7	8
Denmark	Canada	China	INDIA
9	10	27	51
12	139		(49 last year)

crime, 68 in reliability of public services, 70 in ethical behaviour of firms and 76 in efficacy of corporate boards.

However, India ranks 42 in transparency of government policy making, 45 in its

strength of auditing and reporting standards, 33 in strength of investor protection, 41 in judicial independence, 47 in legal framework in dispute settlement and 37 in legal framework in challenging regulations.

India's macroeconomic environment continues to be characterised by persistent budget deficits (80), high public debt (115) and high inflation (123 out of 139). However, it ranks ninth in national savings rate.

India is 104th in health and primary education, with high rates of communicable diseases and high infant mortality (111).

Life expectancy in India (rank 109) is 10 years less than in Brazil and China. The quality of primary education remains fairly poor (rank 98), despite becoming universal.

Higher education also is a weak point, with low enrolment rates at secondary (rank 108) and tertiary (rank 101) levels. It is 39 in the quality of its educational system, and 23 in the quality of its management schools.

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'Family planning is not just controlling numbers'

Jyoti Shankar Singh has been the longest serving United Nations official in the population field. A former deputy executive director of UNFPA, he played a pivotal role as executive coordinator of the International Conference on Population and Development (ICPD) in Cairo in 1994. He is also author of a recently published book, Creating a New Consensus on Population. He spoke to Rahul Singh:

■ **Has the concept of family planning changed over the years?**

Yes, it is not just a question of controlling numbers; it relates to health, education and contraceptive services. That is why the ICPD was so significant. It did what no population conference had before, by adopting a 20-year framework of action. Family planning was broadened to include provision of reproductive health services, reduction of infant mortality, improvement in maternal health, education and women's empowerment.

■ **What has been achieved since 1994?**

Gains have been made in reducing infant mortality, and the concept of reproductive health has gained increasing acceptance around the world.

■ **What still needs to be done?**

There is a lack of sufficient funding: 120 million couples still lack access to reproductive health commodities and services, and maternal mortality sadly remains at a very high level. Education, particularly for girls, has not yet been fully achieved.

■ **Millennium Development Goals (MDGs) were laid down by the United Nations over**
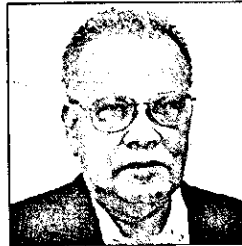
two decades ago. What were the most important ones?

The most important goal was reducing by half the proportion of people living in extreme poverty by 2015. There were about 1.25 billion people in developing countries living on less than $1 a day (defined as extreme poverty) in 1990. Since then, there has been an impressive reduction in poverty in China and even in India the overall poverty rate has come down, though in Africa the rate has come down at a much slower pace.

Other goals include universal primary education, with particular attention to girls, reducing child mortality and improving maternal health. Promoting gender equality and empowering women, along with ensuring environmental sustainability, are two other MDGs that have acquired increasing urgency in recent years.

■ **How has India done?**

Better than many demographers claim. Most of India has moved towards population stabilisation. Rajasthan and Madhya Pradesh, once part of the BIMARU states, have done well lately, but Bihar and eastern UP remain problem areas. India's maternal death rate is also much too high: if health services were within easy reach, the rate could be reduced by half.

■ **Some Indian states are passing legislation that does not permit candidates with more than two children to stand for political office. Will such measures work?**

I don't have the details but no country in the world has succeeded in making a serious impact on population growth by such coercive measures.

■ **There is a widespread perception that Islam is opposed to family planning. How correct is this?**

Not correct. Take Iran, Indonesia, Turkey and Tunisia, to name just four major Islamic countries. They all promote family planning and have been successful in reducing population growth, even more successful than India.

'State education boards oppose IIT-JEE reform plan

Akshaya Mukul | TNN

New Delhi: Many state education boards have rejected the proposal of giving weightage to class XII marks for admission to IITs on the ground that each board has its own standard of examination and way of evaluation which cannot be put on a par with others.

The report on JEE reforms, prepared by a committee headed by IIT Kharagpur's director Damodar Acharya, will come up for discussion during the IIT Council meeting on Friday and it remains to be seen how the issue will be resolved. The Acharya committee had said that the admission would be based on the class XII marks

as well as the marks scored in an aptitude test and an add-on test, based on subjective questions. The state boards of Bihar, Uttar Pradesh and many northern states have said there is a great deal of variation in evaluation that cannot be resolved through the process of normalisation. Explaining problems with normalization, a senior official of the Uttar Pradesh board said, "The process of normalization will result in many state boards inflating marks of children."

He gave the example of BITS Pilani that gave up the system of direct admission after normalizing marks of students from all over the country. The reason, the UP official

said, was that BITS realized that 70% of its students were coming from one state. Finally, BITS started taking students through its own entrance examination called BITSAT. Now direct admission is limited to state board toppers.

He pointed out that even IIT-GATE, UPSC-civil services have discarded normalization of marks because it cannot be done effectively.

But Acharya's ideas have found favour with the Central Board of Secondary Education and the state boards of Tamil Nadu and Andhra Pradesh. An official of the AP board said, "The proposal by Acharya will be good for students and less stressful."

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Taiwan puts hospitals on high alert over 'made-in-India' bug

Kounteya Sinha | TNN

New Delhi: With the antibiotic resistant superbug NDM1, that scientists claimed originated in India springing up in almost 14 countries, Taiwan on Thursday decided to declare it a category-four communicable disease.

This means that hospitals and clinics will have to immediately report any suspected cases.

The bug, which is named from an enzyme called New Delhi metallo-beta-lactamase-1, has been found in patients from United Kingdom, US, Canada, Australia, Netherlands and Japan, who had recently returned from India after medical treatment.

According to Taiwan's Centre for Disease Control, NDM-1 has the potential to become a serious public health problem as the superbug is extremely virulent and resistant to almost all antibiotics, even the most powerful ones.

Chou Jih-haw, deputy director-general of CDC, on Thursday said doctors would have to notify the CDC or its local branches within 24 hours of seeing a patient who has received invasive surgery, has travelled abroad — to India and Pakistan in particular — over the past six months and whose

samples show the occurence of resistance to antibiotics.

Doctors failing to issue such a notification after attending a patient who meets the three conditions could face a fine of up to US$ 14,063, he added.

The announcement came a day after Japan's health minister Akira Nagatsuma announced that his country would begin a national survey to see how far the new type of antibiotics-resistant bacteria spread across Japan. On Tuesday, Japan reported its first case of NDM1 infection in an India-returned Japanese national.

The World Health Organisation has also now designated antimicrobial resistance as the official global theme for World Health Day 2011 (April 7).

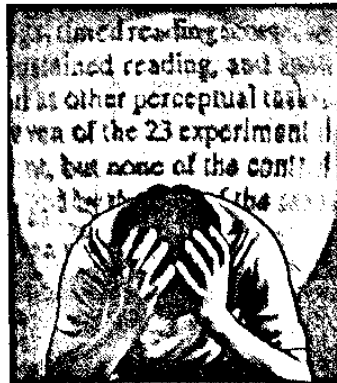# IITs, IIMs get in-house shrinks to beat stress

Students Also Face Loneliness, Depression

Sruthy Susan Ullas | TNN

Bangalore: If getting into any of these premier institutes is difficult, coping with the pressure once inside is even more difficult.

A realization that students in a premier institute wake up to once they walk into the campus. Amid the most hectic and tough academic schedules and with the pressure to perform, they realize that stress is their worst enemy. Be it at the 100-year-old IISc or IIT in Mumbai/Chennai or the IIM-B, stress has become a raging campus epidemic. Almost all the institutes have counsellors on campus, both student counsellors and professionals. The latter are approached only when the internal centre cannot handle the case. Dr Nalini Dwarakanath, psychologist and social counsellor at IISc, told TOI that she counselled many students every month. There are months when there are hardly any cases and times when there are many, she said. Though counselling days are twice a week, if needed, she goes to the campus on other days as well.

In IIT Madras, there is a guidance and counselling unit — a student counsellor is available from 9am to 5pm and a psychiatrist available at the IIT Hospital. IIT Mumbai has an on-campus hospital and on its rolls are part-time psychologists and psychiatrists. At least one doctor is on campus every day. IIM-B has a 15-member student body called Mitr and a parent body called Vishwas that consists of professional counsellors.

The problems faced by the students range from feelings of loneliness and depression to stress caused by increasing academic demands.

The issues don't have to be confined to the classroom. "It could be homesickness or a case of academic backlog or even an affair gone awry. We need to remember that these students are nothing more than teenagers or boys and girls in their early 20s," a faculty member from IIT Mumbai said.

At IIM-Bangalore, the cases are seen more during the time of placements and exams. "The summer placements are during November first week. And in September there are exams. It is mostly I year students who come to the centres as the second year students would have been accustomed to the system by then. I feel that the cases have come down over the years as the students are mainly people with work experience and they know what they are walking into," said Abhishek Mittal, Mitr volunteer.

The counsellors frequently get students who are worked up with various issues. "There are students who come by their own to me. In some cases, they go to the health centre with problems related to stomach and sleeplessness. When the centre realises that there is nothing physically wrong with them, they refer the student to me. Sometimes even the professors and guides send them," said Dr Nalini.

The cases at IISc are usually divided into the stages of their course programme — first year, second year and so on. Students who are in their second and third year of research go through mental agony when their projects don't go well. They lose heart, tend to change the project and even think of discontinuing.