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INDIA GLOBAL BUSINESS

North America Edition

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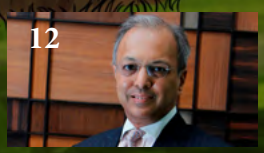

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US support for Modi on Kashmir, opens trade talks

The Howdy Modi rally in Houston and mutual bonhomie on display there between the Indian Prime Minister and US President Donald Trump and their interaction on the sidelines of the UNGA in New York had messages for India, the US, Pakistan and even China.

A very important development, which has got lost in the euphoria over the rally, is Trump's assertion that a trade deal between the two countries is imminent. Even a limited trade deal that restores Generalised System of Preferences benefits to some Indian exports to the US will soothe frayed nerves on both sides.

Modi has also given a new potency to the 3-million strong and affluent Indian American diaspora. Astute political observers would not have missed that Texas is now emerging as a key 2020 presidential election battleground and the Indian American vote and their dollars will be very valuable.

Then, as noted columnist Roger Cohen noted in the NYT: "Less than two months after Narendra Modi… revoked Article 370 of the Indian Constitution… Trump chose to signal approval by standing side-by-side with the Prime Minister."

There were energy deals that preceded the rally and a meeting in New York that followed it, but this was possibly the biggest takeaway from the Houston rally. Trump and the US administration may not want to publicly articulate this stand but the image of the US President and the top leadership of both the Republican and Democratic parties looking on while Modi spoke about his government's rationale for defanging Article 370 could well become the defining feature of the Indian PM's US visit.

India presses the growth reset button

Indian Finance Minister Nirmala Sitharaman last week unveiled her boldest tax move yet. In one fell swoop, she cut India's corporate tax rate from 34 per cent to just over 25 per cent. Further, she announced a new tax rate of 17 per cent for manufacturing companies setting up after 1 October this year and commence operations before 31 March 2023.

These are, easily, the most aggressive and far reaching direct tax cuts for the Indian corporate sector and redeem a pledge made during the Modi government's first term to reduce the rate to 25 per cent to make it competitive vis-à-vis China and the South East Asian economies.

The lower tax rate of 17 per cent is expected to make India an attractive destinations for companies that are looking for alternatives to China in the wake of the China-US trade war. Many of these companies are considering locations in Vietnam and other ASEAN nations. High tax rates were considered the major reason for not considering India. Of course, other issues, like rigid labour laws and poor infrastructure were also hobbling fresh investments in India but these, too, are being addressed by the Modi government.

'India Global Business' believes that these tax cuts will spur a fresh investment cycle and lift the Indian growth rate, which had been lagging in recent quarters, to a much higher trajectory.

Brexit quake leaves Boris shaken, but not stirred

The UK Supreme Court declaring Boris Johnson's prorogation of Parliament unlawful has shaken up the British political system to its very core, with political experts scrambling for words beyond historic and unprecedented.

"The decision to advise Her Majesty to prorogue Parliament was unlawful because it had the effect of frustrating or preventing the ability of Parliament to carry out its constitutional functions without reasonable justification," declared Lady Hale in the unanimous verdict of 11 judges from the UK's highest legal authority. The fact that a sitting Prime Minister's political move to suspend Parliament was declared null and void has triggered a constitutional crisis like no other, forcing Johnson to dash back from the UN summit in New York to confront belligerent MPs in the Commons
.

But the questions go beyond just the realms of politics. While Johnson remains determined not to budge from his "do or die" pledge for Britain to leave the EU by the 31 October deadline, the uncertainty for the business community has only further compounded. The brakes on business as usual have been applied for far too long as the revolving door at Downing Street carries on swinging.

The Pound Sterling has already had a series of turbulent months as the Johnson-led government continues to ramp up the rhetoric over no-deal Brexit and the latest jolt of a legal nature will do little to calm those nerves. In a recent edition, 'India Global Business' had pictured Johnson piloting a WWII plane with the headline: Kamikaze Boris? Perhaps the time is coming close when that question mark will no longerbe required!

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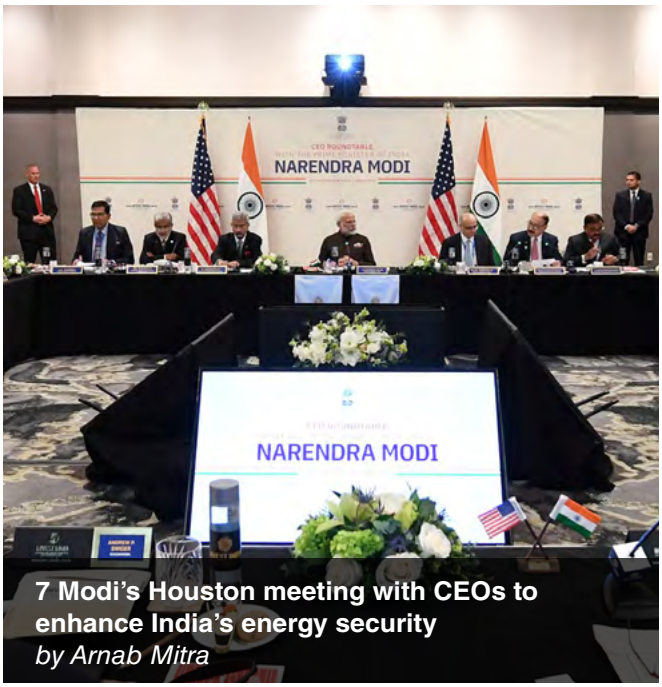
The North America Edition of 'India Global Business' leads with the biggest shakeup in India's tax regime with the announcement by Finance Minister Nirmala Sitharaman to cut corporate tax significantly to spur growth. The rest of the package includes the historic Howdy Modi visit by the Indian Prime Minister, besides a range of expert views and analyses.

THE BIG STORY



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Modi's Houston meeting with CEOs to enhance India's energy security

by Arnab Mitra

The Indian Prime Minister's meeting with the heads of major US oil companies and his government's tango with the Middle East and Russia will ensure that the country gets adequate hydrocarbon supplies to power its growth aspirations.

The recent attack on Saudi Aramco's plants, which resulted in the suspension of 5 per cent of the world's crude oil supplies, led to violent swings in global oil prices. In the two days following the attack, Brent futures went up by almost 20 per cent to $71.95 per barrel and WTI futures by 15.5 per cent to $63.34. This brought home the importance of ensuring India's energy security and highlighted the criticality of Indian Prime Minister Narendra Modi's meeting with leaders of the US oil and gas industry in Houston on 21 September, which had been fixed months in advance.

Why the Houston meeting with oil CEOs is important

Modi met the virtual who's who of the US and European energy sector. His round table included the CEOs of ExxonMobil, BP, Total, Tellurian, Schlumberger, Baker Hughes, Cheniere Energy and Dominion Energy, among others.

India already imports about $4 billion worth of oil and gas from the United States and there are reports that this could double in the near future. Also, US Secretary of State Michael Pompeo has promised India adequate crude oil supplies in the wake of US sanctions on Iran.

Engaging US energy majors is important not only for India's energy security but also for other collateral benefits. It is well known that energy companies are among the top campaign contributors to the Republican Party. Thus, having a long-term relationship with these companies and their influential CEOs, who enjoy tremendous clout in Washington, makes political and strategic sense for India.

The deals in the pipeline

Modi, who drove to the meeting with the head honchos of oil companies straight from the Houston airport, tweeted: "It is impossible to come to Houston and not talk energy! Had a wonderful interaction with leading energy sector CEOs. We discussed methods to harness opportunities in the energy sector. Also witnessed the signing of MoU between Tellurian and Perronet LNG."

He was referring to the agreement to negotiate the import of five million tonnes per annum of LNG by the public sector Indian company from the US energy behemoth's Driftwood project in Louisiana in which the Perronet may also invest $2.5 billion.

Subject to further due diligence and necessary approvals, Tellurian and Perronet are expected to finalise the agreement by 31 March 2020.

Then, Indian Oil Corporation (IOC), India's largest oil refiner, signed two contracts to buy 4.6 million tonnes of US crude oil in 2019-20 from Norway's Equinor ASA and Algeria's state energy company Sonatrach.

Earlier reports said the world's most valuable energy company, ExxonMobil Corporation, is likely to enter a partnership with the public sector GAIL India Ltd to set up a green energy platform in India. India may also pick up a stake in ExxonMobil's offshore Stabroek block in Guyana, which has estimated reserves of more than five billion oil-equivalent barrels.

And as has been widely reported in the Indian media, Indian oil majors have invested about $4 billion in US shale gas assets.

ENGAGING US ENERGY MAJORS IS IMPORTANT NOT ONLY FOR INDIA'S ENERGY SECURITY BUT ALSO FOR OTHER COLLATERAL BENEFITS.

Why energy security is important

India imports 82 per cent of its oil and gas requirements, mostly from the Middle East but also from the US, Russia, Africa and South America. In 2018-19, the country's oil import bill was about $112 billion, a jump of about 30 per cent from $88 billion the previous year. Local production has been stagnant, and this is unlikely to change in the foreseeable future. Even the production of oil from overseas fields owned by Indian companies hasn't been rising fast enough to compensate for stagnating local output.

This will have to change quite drastically if India is to achieve the target set by Modi of reducing oil and gas imports to half the current figure by 2030. As an interim goal, the Indian government is targeting a 10 per cent reduction in oil and gas imports by 2022.

But energy is vital for India to achieve its goal of becoming a $5 trillion economy by 2025 and provide 24x7 power for every Indian by 2022.

India's energy mix

Coal is still the largest source of energy in India. It accounts for 72 per cent of India's electricity generation and is also the main fuel used by sectors such as cement and steel.

BP Energy Outlook 2019 estimates that coal's share in India's primary energy consumption will fall from 56 per cent in 2017 to 48 per cent in 2040. This is more or less in line with the estimate of NITI Aayog, the government's official think tank, which put the figure at 44 per cent. The share of oil will fall from 29 per cent to 23 per cent while that of renewables will rise five-fold over this period to 16 per cent.

India's energy demand is expected to grow at a CAGR of 3.7-4.5 per cent per year till 2047, according to the NITI Aayog. The corresponding figure for electricity demand is 5.4-5.7 per cent. And although the country is home to 18 per cent of the world's population, it consumes only 6 per cent of the world's primary energy.

This is expected to change quite

dramatically as India's per capita energy consumption of 521 kgoe in 2014, which is one-third of the world average, first catches up and then overtakes its share of the world's population.

The renewable energy push

Pushing this surge in energy consumption is the Modi government's aggressive and ambitious target of setting up 175 GW of renewable energy (RE) – solar, wind and biomass – capacity by 2022. According to data available on the website of the Government of India's Ministry of Power, the country had an installed capacity of slightly more than 80 GW of RE, or a little less than half the target, as on August 31, 2019.

Beyond that, India has an even more ambitious goal of setting up 450 GW of RE capacity by 2030 but this will come with its own set of problems.

Infirm power

RE, especially solar and wind power, are infirm sources of power. That means, unlike thermal, hydro and nuclear power, they cannot be produced on demand. Solar power plants cannot generate electricity when the sun is down. Wind power plants cannot generate power when wind speeds are below a particular threshold.

Solar power generation stops in the evening, leaving the grid with a sudden and massive withdrawal of supply between 5 pm and 6 pm every day. The grid faces a similar "shock" from wind power withdrawal when winds stop. This can result in grid instability and huge outages if alternative sources of power are not available to substitute for the power that is withdrawn.

Thermal power plants are not able to ramp up fast enough to replace this. Among power sources, only hydropower plants, gas-based power plants and nuclear power plants can do this.

But India lacks sufficient capacity in these. The alternative is battery storage systems.

In India, power demand peaks in the evenings when solar power plants can no longer generate electricity. But battery storage technology is not yet sufficiently advanced to store the quantum of power needed to compensate for the shortfall.

THE COUNTRY WILL HAVE TO MOVE FAST ON EASING LAND ACQUISITION AND ENVIRONMENTAL AND FOREST CLEARANCE NORMS TO FACILITATE RAPID EXPANSION OF COAL PRODUCTION IN THE COUNTRY.

This makes it imperative for India to secure adequate and reliable supplies of gas as a fuel for power plants that can ramp up or ramp down on demand since hydro and nuclear power plants have long gestations periods and entail huge environmental costs.

This makes security of gas supplies imperative for India's energy security.

The problem with coal

India is the world's second-largest coal producer after China with a share of 10 per cent of the global output and has the fifth-largest coal reserves in the world, according to IEA. India's share of world coal consumption is 13 per cent.

However, 87 per cent of Indian reserves of this mineral fuel is non-coking coal, forcing the country to import 80 per cent of its coking coal needs. Then, India's coking coal reserves are of a poorer quality than those available elsewhere. This means that India will have to continue importing this fuel whose use is expected to triple to 180 million tonnes by 2030.

India also has to import about 20 per cent of its thermal coal requirements as Coal India Ltd (CIL), till recently the monopoly merchant producer of this commodity, which accounts for 84 per cent of the country's coal production, is unable to increase its

THE MODI GOVERNMENT WILL HAVE TO CAREFULLY FINESSE ITS HAND TO MANOEUVRE BETWEEN THESE COMPETING GLOBAL GEOPOLITICAL CONFLICTS TO DIVERSIFY CRUDE SOURCES AND ENSURE INDIA'S ENERGY SECURITY.

output at the required rate.

According to rating agency Crisil, CIL's production will touch one billion tonnes in five years against its target of doing so this year. Since the government has not moved on facilitating private participation in merchant coal production despite passing a law to do so last year, India's coal demand continues to outstrip domestic supplies.

The country will have to move fast on easing land acquisition and environmental and forest clearance norms to facilitate rapid expansion of coal production in the country.

However, the good news is India's peak electricity deficit has declined from 12.7 per cent in 2009-10 to 0.8 per cent in 2018-19.

Walking on geostrategic eggshells

The Middle East, the main source of hydrocarbon supplies to India, is a volatile region. US sanctions on Iran, which supplied up to 10 per cent of India's crude requirements until recently, has adversely impacted India's energy security.

India has turned increasingly to Russia to diversify its crude supply sources. But this, too, has fallen foul of US sanctions on Moscow. Despite this, ONGC Videsh, the foreign investment arm of India's national oil explorer, has a $6-billion investment in the Sakhalin oil fields in the region.

Last year, India and Russia agreed to a sea link between Vladivostok and Chennai that will cut down the transport time from 40 days at present to 24 days, making it easier less costly to import Russian crude.

Thus, the Modi government will have to carefully finesse its hand to manoeuvre between these competing global geopolitical conflicts to diversify crude sources and ensure India's energy security.

Strategic moves

To guard against any major disruption in energy supplies, the Indian government is building a strategic reserve of 5.33 million tonnes of crude in Mangalore (Karnataka), Vishakhapatnam (Andhra Pradesh) and Pudur (Karnataka) to provide for 10 days of supplies.

The Abu Dhabi National Oil Company (Adnoc), has provided half the crude oil that is stored at the 1.5 million tonne Mangalore rock cavern and is also providing oil for the 2.5 million tonne storage facility at Pudur in Karnataka.

Then, Saudi Aramco will invest $15 billion to buy a 20 per cent stake in the oil refining and petrochemicals business of Reliance Industries, India's largest private sector company. This will ensure reliable supplies of crude, the main raw material for Reliance's refining and petrochemicals businesses, at a reasonable cost. A large Saudi stake will provide its Jamnagar refinery, the largest in the world, a secure insurance against Pakistani air and missile attacks in case of hostilities.

In a mutually beneficial deal, the Saudis will gain a secure market for 500,000 barrels of oil every day, a strong partner in the Indian market and an entry into this market of 1.3 billion consumers.

This will give the world's largest oil producer a stake in India's energy security.

Key to energy security

India will also need to address some major internal challenges to ensure its energy security.
According to an EY report: "… While the country has surplus refining capacity and is an exporter of petroleum products, major investments will have to be made in the domestic upstream industry and to acquire hydrocarbon reserves abroad. Additionally, key areas of action are:

- Accelerated development of energy infrastructure
- Human resource development
- Technological upgrade

A more conducive policy environment coupled with an effective regulatory regime is, without doubt, the basis for accelerated growth of domestic energy resources. Energy security needs integrated action by all stakeholders."

India will remain a very attractive place to do business

Gaurav Dalmia, Chairman of Dalmia Group Holdings, discusses the current economic and business climate in India while also highlighting some key lessons for Private Equity investors considering the Indian market.

How would you classify the Indian investment climate against the backdrop of an economic slowdown?

India has been quite a hot destination for investment over the past few years. In the fiscal year 2018-19, India attracted $44 billion in inbound FDI. This is capital that chooses target destinations freely. In the same period, Vietnam attracted about half that. Though for a fair comparison, these numbers should be adjusted for relative economy size etc. They point to the fact that India is an attractive investment destination. On other parameters, the signs may look weaker. For instance, Nomura had a report on the US-China trade war and which countries were gaining trade share and ultimately investment share. Taiwan and Vietnam were large gainers, I suspect, mostly because of their electronics manufacturing base. Malaysia and Chile were also up there. India was not as significant as it ought to be. India's household savings rate as a percentage of GDP and our investment rates are also in decline. To me, if this is a secular trend, it is the most worrying element. There can be a chicken-and-egg type of argument: what came first, the slowdown in the economy or the slowdown in investments, but these reinforce each other. Given high capacity utilisation levels in many sectors, the need for infrastructure and given the low penetration levels in so many consumer categories, I believe that India will remain a very attractive place to do business. This slowdown is not the end of the world; we have been through downturns before. Obviously, we should not ignore it. But we should also not get overwhelmed by it.

Does the outlook for a continued strong growth momentum in private equity in India look promising?

India has seen tremendous private equity interest. Last fiscal, some $37 billion was invested by PE funds. It's become a mainstream financing tool. The industry is mature enough now that we see at least six different distinct segments appearing: buyouts, growth capital, technology venture capital, private equity style investment in public companies, structured credit, and real estate. Emerging markets private equity bets are on growth and have high relative valuations, while developed markets private equity bets are on stable cash flow, low valuation, and financial engineering. Hedge fund managers use the term alpha to measure the extra return from a particular market or strategy. From the figures I have seen, if you compare like-with-like, India does generate 300 to 400 basis points alpha in dollar terms over developed markets. I was told that for the global behemoth Blackstone, India has been the best performing investment destination over the past few years. If you compound this alpha over a decade or more, it can be a real outlier.

THIS SLOWDOWN IS NOT THE END OF THE WORLD; WE HAVE BEEN THROUGH DOWNTURNS BEFORE. OBVIOUSLY, WE SHOULD NOT IGNORE IT. BUT WE SHOULD ALSO NOT GET OVERWHELMED BY IT.

What are some policy reforms you would highlight as contributing to global investor interest in the Indian economy?

To begin with, one should be clear that there are different end goals. If the end goal is 7 per cent or so growth, which I believe is India's natural fighting weight, then we need to ask how to get the hygiene factors out. Financial sector liquidity, plugging the delays in the GST system, relook at agricultural support prices, lower real interest rates – the prescriptions would be of this type. However, if one wants to go into a different orbit, say 10 per cent growth for the next decade, much like what China has achieved, then merely sorting out the hygiene factors will not be enough. Incrementalism and tactical views will not take us there. We'll need fundamental and strategic changes. The policy prescription then would be that India needs to be a part of more free trade agreements, which it needs to negotiate and shape to its advantage. India needs to invest in physical infrastructure for better inventory turnaround, and in education to get productivity gains that are the bedrock of economic growth. Two relevant points worth mentioning here. One, these have long gestation periods and will transcend political and election cycles. Inevitably, in the medium term, there will be noise around such profound changes. Which brings me to my second point. The solutions are not just in the arena of economics. They will fall into the realm of political economy, judicial reform, behavioural science led nudging, international diplomacy etc. The whole country – and not just the government – will have to make hard decisions.

Is India's $5-trillion vision on track; what are the crucial sectors to watch out for in this regard?

There are the usual suspects. Let's look at a sample. It might sound almost trivial, but tourism would be a sector we need to develop. If one takes direct and indirect employment generation, this is the largest employer in the world. And there is quite a bit of headroom for India. For instance, tourism is 5.5 per cent of total exports from India, while for countries such as Australia, which we normally consider as an agriculture and mineral exporter, tourism's share of exports is almost 10 per cent. Infrastructure is another obvious one. We need to over-engineer our infrastructure with a long-term demand estimate and not play continuous catch-up. Social infrastructure like health and education need to be prioritised via private sector investment. This would have multiplier benefits. South East Asian countries have shown this

to be the case. Agriculture is rather inefficient in India. Big structural changes need to be made here and will involve land reform, scaling, water management, insurance, logistics etc. Financial inclusion is another important consideration. My colleagues did some research a few years ago. In 2016, the capital needs of India's small and medium enterprises was $529 billion. Of this, formal sources such as banks funded $116 billion and finance companies funded $63 billion. Informal, friends and family sources funded the rest, which was a staggering $350 billion. In 2020, it is estimated that SME's will collectively need $ 990 billion or so. If we don't strengthen and formalise the financial sector, it could be a serious impediment to progress. We are already seeing the disruptions arising out of the NBFC sector. Let me say, on the whole, the road to $5 trillion is not for the faint-hearted.

What would be your checklist for PE players eyeing the Indian market?

We have been making private equity investments since the '90s. Some lessons stand out. One, make decisions locally. Helicopter style management will not work. One can see the difference in the returns for investors with deep on the ground presence and those who don't have local underwriting capability. Two, because the Indian private equity story is that of funding growth, returns take time. So, this neat year time frame for exits is not optimal. If investors have longer fund lives and more of a business-building temperament, the payoffs can be huge. Three, most mistakes we have seen, at least the ones we have made, have a common theme: investors get seduced by assets and give inadequate attention to people when underwriting new investments, and that is where they falter. Four, add value to investments. Sequoia, Blackstone, Warburg Pincus, they have all built their franchises in India not because they have large wallets, but because they have a deep understanding of businesses and appreciate the unique challenges of scaling in India. It is surprising to me; how many private equity investors have an invest-and-pray strategy for all practical purposes. And five, while investors always marry a top-down view with a bottom-up view, in India, we think a bottom-up view needs more emphasis since most top-down views are quite attractive given the growth; we have seen in so many industries over the past two decades. Having said this, global private equity investors are in their third capital rotation cycle from India now, and all in all, they have become excellent brand ambassadors for India!

On a personal note, what inspires your commitment to the primary education sector?

It is well known that primary education, particularly girls' education, has the best payoffs for society. The North-South divide one can see is closely linked to better education in southern India. Most of South East Asia has seen how investments in education pay off 10-15 years later. Given our size and demographics, we have a unique challenge. And a unique opportunity. Personally, I am very committed to primary education. We have done quite a few things in this area. Most recently, maybe a year or so ago, we contributed to a Silicon Valley-based charity called Room to Read, which has a proven template for improving literacy and is very successful in India. I also Chair Room to Read's Indian Advisory Board. We are going through our own J curve of growth in India. Prime Minister Modi spent considerable time in a Room to Read School in Varanasi on his birthday last year. There is so much good work being done and remains to be done. We have just touched the tip of the iceberg.

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UK's Labour Party is recklessly out of sync with New India

by Manoj Ladwa

Labour's politics is terribly and recklessly out of sync with Britain's business and wider strategic interests in aligning with democratic India. The US Democrats would do well to take note.

The Labour Party has historically enjoyed good relations with India and its 1.5-million strong diaspora community in the UK. The overwhelming majority of British Indians have traditionally voted for Labour. It has long been felt that the Labour Party has best represented the interests of immigrant communities. But no longer.

In the biggest jolt to India, and the Indian community's relationship with Labour that I can ever remember, the party at its annual conference earlier this week passed a resolution which demanded international intervention and a campaign for self-determination in Kashmir. In uncharacteristic bluntness and speed, the Indian Ministry of External Affairs (MEA) spokesperson issued an instant rebuke with the words: "We regret the uninformed and unfounded positions taken at this event". Raveesh Kumar went further to declare that there is no question of India engaging with the Labour Party or its representatives on this issue.

The resolution about the Indian state of Jammu & Kashmir is ill conceived, misinformed, and will only further alienate the vast majority of Indians from Labour.

THE RESOLUTION ABOUT THE INDIAN STATE OF JAMMU & KASHMIR IS ILL CONCEIVED, MISINFORMED, AND WILL ONLY FURTHER ALIENATE THE VAST MAJORITY OF INDIANS FROM LABOUR.

The revocation of Article 370 was constitutional, democratic and just, giving women, minorities, LGBTQ communities at last the rights which the so-called "special status" denied. It's ironic that Labour, the historic flag-bearer of liberal social values, through adopting this resolution, seeks the continued oppression of these communities.

Under Jeremy Corbyn it is obvious that the relationship has become fractured. Having been a member of the Labour Party for over 20 years, before I resigned soon after Corbyn took over, and having run many of its community engagement programmes, I have had first-hand experience of its changing face. I therefore have no hesitation in saying that Labour now has an institutional bias against India and Indians.

I left the Labour Party precisely because it no longer is a party of the many. Much of its policy-making has been hijacked by a coalition of hard Left extremists and Jihadi sympathisers. Corbyn's long-held support for separatist and often violent causes around the world is well known. Under his leadership, Labour pretends to speak in liberal terms but panders to the most illiberal ideologies. This is a slippery road

to more divisions in British society, precisely at a time when Brexit-torn Britain needs politicians to build bridges with all communities and friendly nations like India.

India is today the third-largest investor into the UK and among the largest employers of the economy with the Tata Group leading that front.

Hence, with the prospect of a Corbyn-led government, one would not blame Indian companies if they start to re-evaluate their UK investment plans, just as British Indian voters have started to turn their backs on their traditional party of choice. This would be a real shame, given the immense work over many years by both countries, and successive governments of all shades, to build an otherwise robust trade, investment, and strategic relationship.

This Labour Party is, however, unable to reconcile the re-emergence of its militant tendency in a much more potent avatar, with a new, confident, outward-looking, and economically progressive India. Labour's politics is terribly and recklessly out of sync with Britain's business and wider strategic interests in aligning squarely with democratic India.

In a book titled 'Winning Partnership – India-UK Relations Beyond Brexit' that I edited, Britain's former Ambassador to India, Sir Michael Arthur, questioned whether the UK needed India more or vice versa. He concluded: "India will need to be an important part of Britain's global leg — if India sees its interests that way." Under Corbyn, the days of New Labour, and its centrist politics, are truly over. But the days of New India are firmly here. It's high time Labour smells the chai. But I fear it may be already too late. The US Democrats would do well to take note.

Manoj Ladwa is the Founder and Chief Executive of India Inc. and a former Chair of the Labour Party's Indian Community Engagement Forum.

The UK-India Tech Partnership: Supporting our future workforce

by Julian David

As the UK is predicted to have sizeable increase of tech-related jobs over the next few years, a partnership with India could be the solution to the futureproofing the workforce.

Whether you call it the Fourth Industrial Revolution or Society 5.0, the transformations we are witnessing across the globe bring unprecedented changes and enormous opportunities. Equally, they present difficult challenges. Rapid advances in technology are fundamentally changing the way we work and learn, and how we connect with the world. In the UK, we must work together now with international partners to reap the rewards of what this digitised world has to offer.

We often refer to the Fourth Industrial Revolution as if it is a static moment in time – a moment of huge upheaval and then a settling down. The truth is new technologies are becoming ever more sophisticated and integrated, creating wave after wave of change – with the UK and India having built excellent foundations to ride these waves together.

The ties that bind both nations today go beyond the usual rhetoric of shared history, common language or cultural ties. The UK-India partnership has weathered the test of time and both countries now stand as equal partners with a strong two-way investment story to tell.

The UK is now the single largest western investor in India with British businesses creating over 422,000 jobs since the turn of the century. India, on the other hand, is the third-largest source of FDI into the UK. Its record number of 842 companies, with combined revenues of £48 billion, employ nearly 110,000 people in the UK. The benefits of this unbeatable combination are clear: new jobs, economic growth and new avenues to co-create and co-innovate.

Individually, both nations are thriving in this space. The UK's digital economy is worth more than any other European country while India is on course to becoming the second largest market for internet in the world. Collectively, they bring visible contributions to each other's tech sectors. Around 31 per cent of India's investments in the UK are now in tech, while the UK has increased its digital services exports to India to £344 million. Notably, India now places the UK as the second-largest international partner in research and innovation.

Undoubtedly the UK-India Tech Partnership lies at the heart of this relationship. Established as a stalwart example of a mutually beneficial relationship, the one-year-old Partnership has already delivered notable achievements. The list of achievements is long, and the partnership is going from strength-to-strength. This includes cluster partnerships to enable complementary regions to connect, a new UK-India Tech Hub to fast-track mechanisms for investments and trade-barrier resolutions.

There are, however, still opportunities beyond tech trade and investment and to work together to address common challenges, including skills and future workforce development.

There is no denying that there is a widening supply and demand gap in the STEM field in the UK. Over 83 per cent of the tech community believe their biggest challenge is access to skilled workers and the scarcity of digital skills affects around 93 per

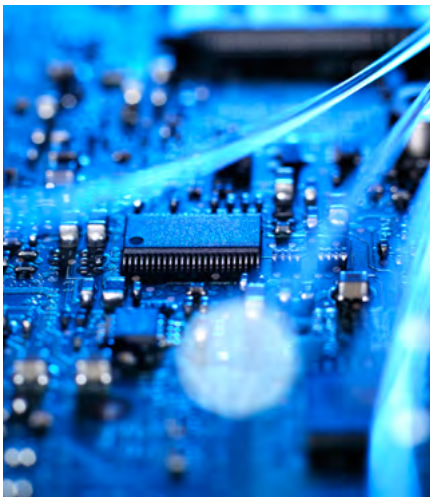
cent of UK tech companies. While we currently have around 600,000 digital vacancies at any given time, this number is expected to increase to one million by 2020. By 2030, it is forecast that around 35 per cent of the existing workforce (11 million jobs) will become automated while an additional 4.5 million new jobs will be added to the tech economy.

Accelerating advancement in new technology will certainly continue to change the nature of work with whole new industries being created and old roles becoming obsolete at an increasing speed. Enabling businesses to take advantage of arising opportunities while also preparing the workforce to adapt to these changes is one of the most critical policy discussions facing us today.

In this context, we need to ask ourselves: given that we are creating more jobs than we can fill, and the shortage of talent increases, how can we futureproof our workforce? Failure to address these challenges in the short-term, as well as finding innovative solutions for the future, could leave the UK trailing behind our global peers in a rapidly expanding digital economy.

The UK-India Tech Partnership is creating vast opportunities for tech investment and incentives for businesses to embed their operations in local markets. An undeniable by-product of this is that companies are not only investing heavily in digital transformation but also enhancing the local supply of skills to achieve their businesses' objectives.

Companies like Vodafone have launched digital skills and jobs initiatives to train over five million people in India. Similarly, Indian companies are now a leading force in upskilling in the UK. To name but a few, Infosys, Wipro and TCS have invested in coding academies, talent and innovation hubs and online skills platforms respectfully. By enabling businesses to expand across the UK-India tech corridor, facilitating collaboration and generating opportunities to embed locally, the Tech Partnership is opening up spaces for businesses to invest more in skills and contribute towards futureproofing the workforce.



RAPID ADVANCES IN TECHNOLOGY ARE FUNDAMENTALLY CHANGING THE WAY WE WORK AND LEARN, AND HOW WE CONNECT WITH THE WORLD.

The inescapable short-term reality is, however, that the UK also needs more highly skilled talent in the next few years than we will be able to produce. Whilst many businesses are already taking steps to address their digital skills needs, and the majority are somewhat confident that they will be able to hire the skills they need over the next five years, most businesses are taking the same action by hiring overseas talent.

Partnership with India – a growing source of intellectual tech capital – is offering avenues to explore and address these short-term questions further. The country is expected to have a surplus of 1.3 million highly skilled people in tech by 2030 and it now produces approximately four million highly skilled graduates each year in specialisms that UK businesses need. I am delighted to see that the UK-India Tech Partnership – through efforts of many collaborating partners, including techUK – is now shaping the conversation on how we can enable more frictionless movement of tech talent across the UK-India corridor. From the relaxation of rules on ICT visas to recently announced extensions on student work visas, we are moving in the right direction. To truly capitalise on this opportunity, the momentum must be sustained.

However, this is not a one-way street. As India steers towards becoming one of the leading economies in the world, its rapid growth in new tech comes with its own challenges. It must keep pace with the transformation of its digital economy and find the right ways for bringing new skills and new types of company into its market. According to KPMG, no less than 54 per cent of all employees will require significant re-skilling and upskilling by 2022 and approximately 60-65 per cent of four million tech jobs are expected to change over the next five years. India's talent movement story will have to shift from an exclusive "India outbound" chapter to more of "India inbound,". Enabling greater mobility and opportunities for UK companies to set up in India will contribute to its quest for transforming its economy.

I am proud that the techUK-NASSCOM UK-India Tech Alliance is leading the conversation on talent and skills and we have made great strides in the right direction but there are still greater opportunities for further collaboration. As India's Prime Minister, Narendra Modi, once said, "the UK and India are an unbeatable combination." Ties built in the past have grown stronger in the present and there are opportunities to make these bonds even more robust in the future. It is now time to build on this positive momentum and get ready for a gear change in upskilling, collaboration, co-innovation and co-creation.

Julian David is the CEO of techUK.

The India-US relationship stands strong

The past few weeks saw several India-US collaborations across various sectors.

Petronet to invest $2.5bn in Tellurian's Louisiana project

Tellurian Inc. has signed a $7.5 billion agreement for India's Petronet LNG Ltd to buy a stake in its proposed liquefied natural gas (LNG) terminal in Louisiana, in what could potentially be one of the largest foreign investments in the US for shipping shale gas abroad. The deal, signed in Houston in the presence of Prime Minister Narendra Modi, underscores a record year for the LNG industry, with tens of billions of dollars worth of export projects given the green light.

Meg Gentle, CEO, Tellurian, said Petronet will spend $2.5 billion for an 18 per cent equity stake in the $28 billion Driftwood LNG terminal, the largest outside holding so far in the project, and negotiate the purchase of 5 million tonnes of gas per annum. The remainder of the total will come from debt.

Charif Souki, Co-founder, Tellurian, said: "The United States and India have a significant issue diametrically opposed. We have too much gas that we don't know what to do with and India needs greater gas, and 1 million tons a time is not going to solve the problem."

India's oil minister Dharmendra Pradhan said in a tweet: "The MoU signed in Houston is a part of wider energy cooperation under the India-US Strategic Energy Partnership and will further deepen our energy trade and investment relationship."

Google plans to expand digital payments in India

Alphabet Inc.'s Google plans several big moves into digital payments in India, as it is home to a huge first-time internet user population that serves as a test-bed for innovations in smartphone technology.

The US-based search giant will start a service called Spot. It hopes will get more merchants to adopt online payments, helping early partners including MakeMyTrip, home services marketplace UrbanClap and food delivery brand Oven Story set up branded shops using Google Pay. It's also pushing digital tokens for mobile commerce, a feature the company will roll out with Visa Inc. for several Indian banks in the coming months.

The effort is part of Google's broader push into one of the world's fastest-growing internet arenas. It will also open a research lab focusing on artificial intelligence applications in fields like health care and education, and it'll offer public Wi-Fi to villages in three regions. Google will take any lessons learned in India to the more than two dozen countries where it offers digital payments.

Aside from voice searches in Hindi, the Google Assistant will soon support eight more local languages. Translations will be added in the coming months. And Google's speech-based Bolo app, intended to help children read, will also be available in five additional Indian languages with expanded content.

T-Hub signs MoU with VentureLink and Choose New Jersey

Hyderabad-based incubator T-Hub signed a tripartite memorandum of Understanding (MoU) with 'Choose New Jersey', an economic development organisation and 'VentureLink', a community hub for technology companies at the New Jersey Institute of Technology (NJIT) for Northern New Jersey. Through the agreement, T-Hub will provide growth-stage start-ups in India with business opportunities, market understanding and access to clients in the US.

Under the agreement, two individuals per start-up will get complimentary space for two months. The MoU will promote technology and investment exchange between New Jersey and India through this collaboration between T-Hub, VentureLink, and Choose New Jersey. The three organisations will also support joint research and development in the areas of common interest between the parties.

On its part, T-Hub will offer reciprocal services, as and when required, to VentureLink (which is a community hub for technology companies at NJIT) members interested in exploring business and investment opportunities in India. The Hyderabad-based incubator will also initiate the call for applications for start-ups to participate in this opportunity.

Through the MoU, start-ups will get an opportunity to tap into one of the biggest fintech ecosystems in the world in New Jersey. Under the MoU, T-Hub will enable the selected start-ups to get direct access to relevant funding opportunities via VentureLink.

Much ado about India's no-first-use nuke policy

by Toby Dalton

A nuclear energy expert shares his views on the recent shift in India's Nuclear Doctrine and how it will impact the wider geopolitics with its neighbours.

Indian Defence Minister Rajnath Singh made headlines in August when he appeared to nullify India's nuclear weapons no first use (NFU) policy. "Till today, our nuclear policy is 'no first use'. What happens in future depends on the circumstances," he said. In the context of Prime Minister Modi's effort to project a more muscular image, Singh's comments played well among Indian hawks. Internationally, however, a more aggressive Indian nuclear policy is raising concerns anew about nuclear conflict in South Asia.

An NFU policy essentially constitutes a promise, backed by a survivable nuclear arsenal, to only use nuclear weapons in response to a nuclear attack. The logic is simple and effective: you don't nuke me, and I won't nuke you. India and China both have declared no-first-use policies, whereas Pakistan and the United States, among others, do not rule out the first use of nuclear weapons in a conflict.

Since it was announced in 2003, India's NFU policy has taken regular fire from Indian strategists and retired military officers. This debate burbled along among experts until 2014, when the election manifesto of the ruling BJP party called for the policy to be revised and updated. Though Modi himself called NFU part of India's "cultural heritage," his defence ministers cast doubt on its shelf-life. In 2016, Manohar Parrikar, Singh's predecessor as defence minister, wondered publicly why he should be bound by it. Contemporary rumours from New Delhi suggest the government's forthcoming National Security Strategy will put the final nail in the coffin of the NFU policy.

Indian critics of NFU argue that the mere existence of the policy restricts New Delhi's options in a conflict with Pakistan. They contend it would strengthen deterrence if Pakistan had to worry about whether its actions might provoke India to use nuclear weapons first. Some even argue that India should go further and develop the plans and capability for nuclear pre-emption. They fantasize about using the capability, early in a conflict, to take out Pakistan's nuclear forces before they could be fired against India.

These ideas sound very 1983, evoking a period of deepest danger between the United States and the Soviet Union. Pervasive fear of pre-emption among military planners created an imperative to use nuclear weapons before the adversary. American and Soviet leaders from the 1950s on fell prey to this fear and built ludicrously large nuclear arsenals as a result. They also placed nuclear weapons on a hair-trigger alert – a so-called launch-on-warning posture – in order to avoid losing their nuclear arsenals in a first strike. Fears of pre-emption also placed enormous time pressure on decision making during a crisis.

To make a nuclear pre-emption policy credible, India's nuclear forces would require significant modification, including in military preparations to use them. Until now, based on available data, India has yet to seriously grow its nuclear arsenal or place it on alert. Indeed, previous Indian governments, including the Vajpayee-led administration that ordered the 1998 nuclear tests, tended to downplay the military utility of nuclear weapons. Building up the nuclear arsenal and upgrading its readiness would be costly and complicated endeavours at a time when India already faces significant budgetary pressures amidst forecasts of anaemic economic growth.

If Indian decision-makers skirt the hard choices and military investments necessary to carry out nuclear pre-emption, then doing away with NFU looks more like a cosmetic change to India's nuclear policy. Soundbites like Singh's thus feed a suspicion, in the

words of noted Indian scholar Rajesh Rajagopalan, "that such proposals are ideologically-driven short-cuts to demonstrate 'resolve' rather than a careful response to India's strategic problems."

So what, then, is the practical effect of India's waffling on NFU? At some level, perhaps it is much ado about nothing. China rarely acknowledges India's nuclear weapons. Pakistani officials, meanwhile, argue they never believed India's NFU pledge to begin with. In an e-mail making the rounds after Singh's remarks, the former head of Pakistan's nuclear program, General Khalid Kidwai, derisively dismissed India's policy as "an academic formulation aimed at point scoring and earning brownie points with the international community." Further, Indian statements have "no practical or operational connotations for Pakistan. It's a political statement directed to the domestic gallery in a display of yet another macho conduct," he concluded.

There are some international repercussions, however. For years, Indian diplomats and officials cultivated an image of India as a responsible nuclear state, one which does not make rash nuclear threats. This image bolstered India's efforts to "de-hyphenate" itself from Pakistan and to be seen as an important power beyond South Asia. It also was a central argument in the failed campaign to gain India entry into the Nuclear Suppliers Group.

BUILDING UP THE NUCLEAR ARSENAL AND UPGRADING ITS READINESS WOULD BE COSTLY AND COMPLICATED ENDEAVOURS AT A TIME WHEN INDIA ALREADY FACES SIGNIFICANT BUDGETARY PRESSURES AMIDST FORECASTS OF ANAEMIC ECONOMIC GROWTH.

Singh's statement, coming on the heels of Modi's campaign bluster that India's nuclear weapons are not just for Diwali, vitiated this project. Unsurprisingly, some prominent architects of India's nuclear policy are raising the alarm. For instance, former Indian foreign secretary and national security advisor Shyam Sarah cautioned that, "The reputation we have built up as a responsible and reliable nuclear weapon state, which will act with restraint and prudence in handling these dangerous weapons, will be severely dented." Reading between the lines of President Trump's recent musings about "mediating Kashmir" suggests renewed international fears of nuclear conflict in South Asia.

It may seem Pollyannaish to look for silver linings in India's effort to recast its nuclear policy. Yet, with a broad election mandate, demonstrated power of persuasion, and legions of supporters ready to defend any move he makes, Modi could just as easily choose to secure India through both strength and accommodation.

It is hard to assess the likelihood of such fantasy. Yet, few predicted that after calling the Soviet Union an "evil empire" in 1983, in 1984 President Reagan would authorise an effort to negotiate a comprehensive nuclear arms control agreement with the Moscow. These negotiations resulted in two landmark treaties that stopped the arms race and reduced the risks of a US-Soviet nuclear war.

One hopes that over the course of his second term at the helm in India, Modi charts a similar course toward nuclear peace.

Toby Dalton is Co-director of the Nuclear Policy Program and Senior Fellow at the Carnegie Endowment for International Peace in Washington, DC.

What's ailing India's solar rooftop ecosystem?

by Andrew Hines

India's solar rooftop sector reached a culminative capacity of 3.3GW last financial year. Andrew Hines, Co-founder of CleanMax Solar, India's largest provider of solar power in the commercial and industrial segment, identifies areas India needs to address if it is to meet its target of 40GW of rooftop solar power by 2022.

In the past decade, renewable energy has emerged as a force to be reckoned with, providing power that is not only clean but also increasingly cost-effective. Solar and wind power have become steadily cheaper, and are now more cost effective than coal, gas and other forms of power generation in much of the world. The case for renewable energy in India is particularly strong, as the country has relatively expensive electricity prices, and arguably the cheapest solar power in the world. An analysis by IRENA has found that the cost of setting up solar PV projects in India has dropped by about 80 per cent, between the years 2010 to 2018. In the meantime, thermal power prices have risen steadily, to the point that major investors, lenders and insurers are becoming reluctant to invest in new coal plants.

From a holistic perspective, rooftop solar power is among the most advantageous forms of renewable energy, as it can generate cheap and clean electricity where it's needed, without the need for land or new transmission infrastructure. Rooftop solar also creates jobs – far more per employment per kWh than fossil fuel power generation, and also more than large-scale renewable projects. In fact, in the US, the rooftop solar industry already far surpasses the coal industry in terms of employment.

As solar prices have fallen, the rooftop solar sector in India has grown significantly. At the end of the last financial year, the cumulative installed capacity of rooftop solar reached 3.3GW, with rooftop installations growing by 66 per cent year-on-year, with capacity additions to the tune of 1.7GW within one year. That said, the country is still far from its stated target of 40GW of rooftop solar by 2022, and there is still enormous potential for growth in untapped segments.

The vast majority of the rooftop capacity installed to date is in two segments. One is government buildings, where central and state governments can take direct action to adopt solar themselves. The second category, accounting for 70 per cent of installations, is the commercial and industrial (C&I) segment, and particularly large, creditworthy or cash-rich power consumers. The reason this segment has thrived is very simple. These consumers pay the highest electricity prices and have the means to adopt rooftop solar in order to achieve significant operating cost savings. They can afford to either invest in the plants themselves or are creditworthy enough to get into long-term power purchase agreements (PPAs) with solar developers.

To accelerate the growth of rooftop solar, the country needs to take a two-pronged strategy. The first prong is to sustain, rather than slow down, the growth of the C&I segment. As the sector has grown, utilities have begun to resist it, creating obstacles to projects and pushing regulators for restrictions. The motivation to do so is obvious – rooftop solar projects take away their best customers. However, the C&I segment is crucial to the continued growth of rooftop solar in India. Policymakers and regulators must address the revenue concerns of utilities, but not by curtailing rooftop solar projects or creating policy uncertainty, which will directly lead to a slowdown in the sector.

The second way to encourage growth would be to create favourable conditions in other segments. The residential segment has great potential in aggregate but is difficult to promote. Individual rooftops are very small, and individual consumers may be reluctant to make large investments, even if it's in their long-term interest. This is why it currently accounts for only 9 per cent of installations. To promote this segment will require more than subsidies – a new and creative approach to this segment would likely be required.

A SUCCESSFUL POLICY WOULD NEED TO RECOGNISE THE SPECIFIC CONSTRAINTS OF EACH SEGMENT – RESIDENTIAL USERS, MSMES, LARGE CORPORATES, AND OTHERS.

A more addressable segment would be MSMEs. The early adopters of rooftop solar have been the C&I consumers with financial means. However, below this "cream" of the C&I segment is a vast number of companies which could benefit financially but would find it difficult to do so. They may not have the financial means to invest in a project with a long-term payback. At the same time, solar developers and banks will not make the investment unless they are highly creditworthy.

To promote this segment, what is needed is not a subsidy, but someone to take on some of the credit risks of these projects. For example, a "first loss protection" program, promoted by the government or perhaps a multilateral agency, would reduce the credit risk to these projects. This would allow MSMEs to enter into long-term, zero capex rooftop solar contracts. In addition to benefiting the environment, it would also bring down electricity costs for these companies, which are a significant impediment to industrial growth in India, and the associated employment.

Earlier this year, the government issued guidelines for the second phase of the grid-connected rooftop programme for achieving a cumulative capacity of 40GW rooftop capacity by 2022. The guidelines are a step in the right direction; for example, recognising the important role that utilities must play in the sector, and recommending they be incentivised to encourage projects rather than obstruct them. However, the guidelines do not address the obstacles constraining growth in the C&I segment, nor do they get at the fundamental obstacles facing MSMEs and residential consumers.

To truly nurture this industry, the approach should be to create a national rooftop solar policy. Rather than subsidising or mandating installations, the approach should be to create an enabling environment, with the objective of broad adoption of rooftop solar by all categories of consumers.

A successful policy would need to recognise the specific constraints of each segment – residential users, MSMEs, large corporates, and others – and take measures to address them. Once those obstacles are removed, those companies and individuals will do what is in their interest: to harness the cheap and abundant energy of the sun, to the benefit of the entire country.

Andrew Hines is the co-founder of CleanMax Solar, the largest provider of solar power in the commercial and industrial segment in India

Queensland: A smart investment decision

by Gitesh Agarwal

Renowned for its excellence in a broad spectrum of sectors including agritech, biotech, education and renewable energy, Queensland's innovative climate and geographical positioning make it an ideal bet for Indian investors, claims a trade expert.

Stretching across 1.7 million kilometres in Australia's sunny north, the state of Queensland is looking to the future and embracing the opportunities of a changing global economy.

Queensland is finding new and better ways to build on strengths such as resources and agriculture and making a global mark in forward-looking industries including renewables, advanced manufacturing, and knowledge industries. It is ideally positioned to take advantage of the flourishing economies of the Asia-Pacific which are creating extraordinary opportunities, with markets in China, Hong Kong, Korea, Japan and Singapore all within just two hours of Queensland's time zone.

Queensland's results speak for themselves:

- Our rate of economic growth has consistently outperformed the average of other advanced economies since the early 1990s.
- The value of Queensland's goods and services exports has increased by more than 50 per cent in the last decade.
- The GSP of the state is A$348 billion (2017-18) and Exports were A$85 billion in 2019 (May).
- Queensland has a diverse economy, with strong growth in future-focused industries such as education and training, manufacturing, and professional and scientific services.

Why Queensland?

- **Strong economy:** Queensland has a highly resilient and stable economy, underpinned by strong economic growth, with continued growth forecast of just under 3 per cent per year over the next three years.
- **Strategic location:** Queensland is ideally positioned as an international gateway to the Asia-

Pacific region, in close proximity to some of the world's strongest growth markets. Its unique time zone advantages and cultural connection with Asia and strong business relationships with America and Europe make it a perfect location for international investment.

- **Business-friendly regulatory environment:** The state's legal framework is conducive to business investment, by enforcing the regulation of contracts, loans, banking, real estate and the stock market, and by providing full protection of intellectual property and patents.
- **Competitive operating environment:** Queensland offers business owners and investors many advantages, including one of the lowest rates of payroll tax in Australia, competitive labour costs, low cost of living, simple development approval and project facilitation processes, and strong private-sector investment.
- **Focus on innovation and research and development:** Queensland has been recognised by the World Bank as a global innovation hotspot. Assisted by the Government's Advance Queensland agenda, the economy is experiencing increased levels of innovation and research and development within business and industry. This has been vital to support the growth of existing, new and emerging industries, and is of increasing importance in a global economy characterised by innovation and technological change.

COMBINED WITH ITS STRATEGIC ASIA-PACIFIC LOCATION, EFFICIENT PROCESSING AND RELIABLE SUPPLY CHAINS, QUEENSLAND IS A WORLD LEADER IN FOOD AND AGRIBUSINESS.

- **Stable government and institutions:** Queensland presents a low sovereign risk, with a stable government, a democratic society and well-established legal systems that operate under the rule of law. The state has sound finances and is well positioned to further foster diversification, innovation and skilled workforces.
- **Infrastructure:** Queensland boasts robust supply chains and industry clusters. Across the state, thriving industries are connected to international markets through world-class infrastructure.
- **Interconnectivity:** With six international airports and 191 regional airports (including 56 certified airports), criss-crossed by more than 177,000 km of modern and efficient road network, Queensland is connected to land transport routes that play a crucial role in moving freight to international markets.
- **Highly skilled and multilingual workforce:** Queensland has a multicultural, well-educated, resourceful and versatile workforce. Its enviable lifestyle, world-class education and training institutes attract and retain highly skilled workers. Its dynamic workforce is adaptable to change as new technologies, innovations and industries drive structural shifts in the economy and labour market.

MULTIPLE SECTORAL STRENGTHS

Mining, and mining equipment, technology and services

Queensland is one of Australia's leading mining states with vast

QUEENSLAND HAS A HIGHLY RESILIENT AND STABLE ECONOMY, UNDERPINNED BY STRONG ECONOMIC GROWTH, WITH CONTINUED GROWTH FORECAST OF JUST UNDER 3 PER CENT PER YEAR OVER THE NEXT THREE YEARS.

coal, gas, copper, zinc and other mineral resource endowments, well-established expertise and a proven history of innovative exploration and mining practices.

Supported by over 800 high-quality mining equipment, technology and services (METS) companies, the state is a mining and resources investment proposition of choice.

It is the largest exporter of metallurgical coal in the world and its liquified natural gas (LNG) industry is fast emerging as a global force in production and export.

Food and agribusiness

Combined with its strategic Asia-Pacific location, efficient processing and reliable supply chains, Queensland is a world leader in food and agribusiness. Its clean environment, climatic diversity and abundance of agricultural land make it possible to generate high-quality, fresh, clean and sustainably produced meat, seafood, fruit and vegetables for export internationally.

Meat and livestock

The region is a world-class provider of tropical and subtropical livestock technologies and services that include genetics, nutrition, pasture management, food safety and integrity, livestock tracing systems, environmental management, specialist infrastructure and equipment, technical training and animal health and welfare. Over 60 countries import Queensland beef products.

Agricultural technology

Queensland's agtech sector is known for a variety of innovative technologies including farm equipment and management, weather, seed optimisation, fertiliser and crop inputs, remote sensing and agricultural big data.

It has internationally recognised research and development capabilities at its major universities, with biotech research that encompasses new industrial processes, new or improved crops or foods and the development of antibiotics, vaccines, genomics and advanced imaging.

Queensland's cleantech sector also features companies with expertise in water management, biomass and waste mitigation, controlled environment agriculture, renewable fuels and carbon trading.

International education and training

Queensland's world-class education and training institutions, safe, multicultural communities, idyllic locations, and enviable lifestyle make it the location of choice for many international students.

Among its 10 universities, The University of Queensland is one of the world's top 50 universities. The state is also home to another three of Australia's top 10 universities: Queensland University of Technology, Griffith University, and James Cook University. BOND University is also Australia's only Private University.

New and emerging industries

Queensland is taking the lead to invest, develop and incentivise, new and emerging industries that are already servicing the needs of our changing world represent strong opportunities for investors.

Investors keen on Queensland will

find an advantage in the Queensland Government's Advance Queensland (AQ) initiative, which is providing $755 million in grants and incentives to help drive innovation and grasp tomorrow's opportunities.

Under the program's initiatives, Queensland entrepreneurs, industry, universities and government agencies are collaborating to turn great ideas into commercial products and services.

Through AQ, the Government is creating 10-year roadmaps and action plans across - Advanced manufacturing; Aerospace; Bio-futures; Biomedical; Defence; Mining Equipment, technology and services; Screen Industry and Agriculture & food.

Renewable energy

Queensland has an enviable capacity to produce renewable and alternative energy, being rich in renewable energy resources and possessing existing operations in large-scale solar, wind, biomass, geothermal and hydroelectric energy. With a strong agricultural sector and boasting an average of 300 days of sunshine annually, Queensland has a solid platform to expand the renewable energy sector and become a global leader in the transition towards a clean-energy future.

The Queensland Government has released the Powering Queensland Plan to achieve a 50 per cent renewable energy target by 2030. As a result, Queensland is already Australia's most popular renewable energy investment location, with over 24 large-scale projects either commencing construction or finalising commercial arrangements.

Queensland is also home to the world's first utility-scale battery storage connected to a solar project next to the electricity grid.

The Queensland Government is committed to attracting international investment and growing international trade:

a) Queensland released its first **country-specific strategy,** with India being the first focus nation. The strategy was released in Oct 2018 by Hon Kate Jones, Minister for Innovation, Tourism and Commonwealth Games, in Bangalore.
b) The Queensland Government is focused on providing Long-term infrastructure planning and project pipelines. Queensland's **State infrastructure plan** identifies investment opportunities and gaps across a 15-year timeframe, to support innovations and encourage private-sector investment and partnerships to deliver Queensland's infrastructure needs.
c) **Market-led proposals** allow the private sector to initiate and submit proposals seeking exclusive commercial arrangements with the Queensland Government. Through the Queensland Government's Market-Led Proposals Framework, the state has improved the efficiency of project decision-making and delivery by contracting exclusively with proponents rather than engaging in unnecessary competitive processes for services or infrastructures.
d) **Priority development areas** provide opportunities for investment in a broad range of infrastructure projects, through the support of the Queensland Government. In partnership with local councils, investors are able to streamline the planning, approval and development processes for investment.
e) **State development areas** are clearly defined areas of land established by the Coordinator-General to promote economic development in Queensland. They typically take the form of one of the following: industrial hubs for large-scale, heavy industry; multi-user infrastructure corridors and major public infrastructure sites.
f) **The business migration program** - The Queensland Government welcomes successful business investors who wish to invest and live there. In partnership with the Australian Department of Home Affairs, Queensland nominates business migrants seeking to make an investment that directly benefits the state's economy. Nominations for business migrants are available through the Business Innovation and Investment Program. This is administered by Business and Skilled Migration Queensland (BSMQ).

Gitesh Agarwal is Commissioner – India at Trade & Investment Queensland.

The flexibility offered by e-learning holds many merits

by John Ingram

An EdTech champion discusses the role online learning can play in upgrading India's education system.

Over the past two decades, despite rapid economic growth and technological advancement, government and investor interest, and the rise of EdTech companies such as Byju's, India's education system remains among the worst in the world. Despite enacting the Right to Education A in 2009, which aimed to give every child in the country the right to a full-time elementary education "of satisfactory and equitable quality", India ranks 94th out of 149 countries in the Legatum Institute's overall Prosperity Index rankings and 104th in the education category.

Half of India's 1.3 billion population is under 25, and, with more than 260 million enrolments, it has the world's largest K-12 education system. Yet, like many other countries around the world, India is facing a teacher shortage in order to educate this vast, young population – UNESCO estimates that it will need some three million new school teachers by 2030. Other challenges include keeping girls in school (between 2006 and 2010, only 26 per cent of girls completed secondary education, compared to 50 per cent of boys) and the lack of PCs or tablets in schools.

THERE HAS ALSO BEEN A STRONG GOVERNMENT PUSH TO INTRODUCE NEW ONLINE EDUCATIONAL TECHNOLOGIES, NOT LEAST BY THE "DIGITAL INDIA" STRATEGY.

Despite what may appear to be a gloomy outlook, I'm optimistic that methodologies such as online learning can help modernise India's education system and bring it into the 21st century. There are in fact many possibilities, including collaborative online international learning (COIL) where students connect virtually on courses with different countries, such as the recent example of Cornell University students in the US liaising with students from two universities in China and one university in India via online discussions and video conference to discuss sustainable food, energy and water policies around the world and propose solutions to problems related to global food and nutrition security. Despite the lack of connectivity in many of India's public schools at the moment, there have been efforts to extend access or build offline solutions, especially in rural areas. Private sector schools, which account for a quarter of the nation's 1.5 million schools, are also rapidly upgrading their digital and connectivity tools and facilities.

There has also been a strong

government push to introduce new online educational technologies, not least by the "Digital India" strategy led by Prime Minister Modi. In recent years, the government has rolled-out five major e-learning initiatives, each seeking to uphold the three principles outlined in the Education Policy of Digital India: access, equity, and quality. These are SWAYAM, which lists over 1000 MOOCs; SWAYAM Prabha, which offers 32 Direct-to-Home channels for transmitting high-quality educational content; the National Digital Library which contains over 15 million books in more than 70 languages; the National Repository of Open Educational Resources; and E-pathshala, a bank of educational e-books and resources. Over the last three years, the government has committed over £30 million to the projects.

On top of these government initiatives, students themselves are leaning towards online learning as a preferential way of learning. A recent research survey by Gradeup, a preparatory platform for competitive exams, on over 10,000 students from across India who were studying for competitive exams like JEE, NEET, GATE, and SSC, found that 70 per cent of students who were preparing for exams offline would shift to online if they were given access to live online classes. Bangalore-based Unacademy, which operates an online learning platform to help students prepare for exams in India, recently raised $50 million to further scale its reach – showing the high demand that exists for online learning within exam preparation alone.

But it's not just exam preparation where online learning can help students. Increasingly, students can take entire subjects online throughout an academic school year. These can be through virtual classrooms with fully trained online teachers – perhaps to provide cover for temporary teacher shortages at a school. Learning online like this can also be life-changing for a student who would otherwise not be able to study a subject they have a passion for as it was not covered by their school. Blended learning – which combines the best of classroom instruction and online learning – is another flexible, popular methodology that recent research has shown is driving the growth of the online education market in India, the second largest market of its kind in the world after the US.

Blended learning helps teachers as it allows them to spend more time in class giving individualised support to students, allowing slower and faster learners to move ahead at their own pace. With some blended learning tools, entire courses are provided online in pre-prepared lessons, assessment materials and monitoring tools, greatly reducing time spent by teachers on course preparation, marking and reporting. Aside from blended learning models where entire courses are available online for students at home, models that use low-cost technologies such as tablets can even bring online learning experiences to children in the most challenging circumstances in India's slums.

There is also a gap today between what students are taught in classrooms and what employers are demanding from prospective employees, a gap that is growing every day. The rate of change in technology has, and will continue to, outpace the change in curricula, so the flexibility offered by online learning is indispensable – allowing people to change their career paths and learn new skills. Online learning can sometimes be the only educational option that can be fitted around busy working lives.

India has a long tradition of face-to-face learning; the teacher or guru cannot simply be replaced by technology. But the many benefits of online and blended learning methodologies can play a vital role in supporting teachers and students, and help India modernise its education system. If parents, so often the gatekeepers to a child's educational opportunities, can be convinced of the merits of new, digital systems of education, then it could set a new generation of Indian students on a path towards dramatically improved educational outcomes.

John Ingram is the CEO of Pamoja Education, an education technology company based in Oxford, UK, providing online learning solutions for secondary education.

Howdy Modi: Trump rolls out the red carpet, but follow-throughs will be crucial

by India Inc. Staff

The Indian Prime Minister's September 2019 US visit, which concludes with an address to the UN General Assembly, is historic in many ways but there is a lot of real groundwork required to build on it and create a win-win India-US trade and investment partnership.

The optics could not be any better – a first-of-its-kind and largest mass rally for a foreign leader in the southern American state of Texas, with President Donald Trump seen hand-in-hand with the visiting Indian Prime Minister, Narendra Modi. Howdy Modi can be declared a success on many counts, not least for Trump by virtue of the 50,000 largely Indian American crowds turning out ahead of the US presidential race next year.

And, the election backdrop was hard to miss as Trump addressed the crowd with: "You enrich our culture, you uphold our values, you uplift our communities and you are truly proud to be American — and we are proud to have you as Americans."

Modi, on the other hand, described the US President as a "true friend" in a deft diplomatic move to calm brewing trade tensions after the US imposed tariffs on Indian steel and aluminium.

"His name is familiar to every person on the planet. He was a household name and very popular even before he went on to occupy the highest

US-India Trade Stats

$7.5bn
US-India goods trade (July 2019)

14%
hike year-on-year

21%
hike in US exports to India

10%
imports hike from India

Source: US Census Bureau

US-India EXIM Stats

EXPORTS

India is the **13th largest** goods export market for US in 2018

US goods exports to India in **2018** were **$33.1bn**, up **28.9%** ($7.4bn) from 2017 and up **87.3%** from 2008

US exports to India account for **2%** of overall US exports in 2018

US exports of services to India were an estimated **$25.8bn** in 2018

Leading services exports: Travel, IP (computer software, audio and visual related products), and transport sectors

IMPORTS

India is the **10th largest** supplier of goods imports to the US in 2018

US goods imports from India totalled **$54.4bn** in **2018**, up **11.9%** ($5.8bn) from 2017, and up **111.7%** from 2008

US imports from India account for **2.1%** of overall US imports in 2018

US imports of services from India were an estimated **$28.8bn** in 2018

Leading services imports: Telecommunications, computer, and information services, research and development, and travel sectors

Source: Office of the US Trade Rep

office in this great country. From CEO to Commander-in-Chief, from boardrooms to the Oval Office, from studios to global stage, he has left a lasting impact everywhere," noted the Indian Prime Minister in praise of his host.

Personal chemistry

The dynamics between two of the world's most well-known political leaders were unmistakably on the right footing. There was no hint of some of an unpredictable Trump's previous barbs on India being unwilling to fully open up its markets to the US, as he declared: "India has never invested in the United States like it is doing today...we're doing the same thing in India."

Modi, on his part, reiterated Trump's own political slogan of "make America great again" and said the event reflected the "heartbeat" of the great India-US partnership and a celebration of the world's two largest democracies.

HOWDY MODI CAN BE DECLARED A SUCCESS ON MANY COUNTS, NOT LEAST FOR TRUMP BY VIRTUE OF THE 50,000 LARGELY INDIAN AMERICAN CROWDS TURNING OUT AHEAD OF THE US PRESIDENTIAL RACE NEXT YEAR.

The 2010 US census shows that Texas is home to the fourth-largest Indian-American population in the country after California, New York and New Jersey. Analysis of voting patterns shows the community tends overwhelmingly to support the Democrat party and Trump would be understandably hopeful that his "true friend" tour with Modi would go some way in changing those figures in his favour for the future.

The bear hug and hand-holding were all in place for an event billed as a win-win for both leaders, as they were expected to inch towards what had been categorised as a "mini" trade deal.

Trade pact

But the road to any India-US trade deal has never been smooth, most recently due to the tit-for-tat tariff war triggered by the Trump administration. Back in June, the US ended duty-free access for about $5.7 billion worth of Indian exports under its Generalised System of Preferences (GSP) programme, designed to help developing countries that dates from the 1970s. India responded with higher retaliatory tariffs on 28 US products, including almonds, apples and walnuts.

However, a new kind of agreement has been under discussion which would lower some tariffs on US produce and restore preferential treatment for some Indian exports to the US.

US-India Trade & Investment

Trade Balance

- US goods trade deficit with India was **$21.3bn** in 2018, a **7.1%** decrease ($1.6bn) over 2017
- US has a services trade deficit of an estimated **$3bn** with India in 2018, down **32.5%** from 2017

Investment

- US FDI in India was **$44.5bn** in 2017, a **15.1%** increase from 2016
- US direct investment in India is led by professional, scientific, and technical services, manufacturing, and wholesale trade
- **India's FDI** in the US was **$9.8bn** in 2017, up **11.5%** from 2016
- India's direct investment in the US is led by professional, scientific, and technical services, manufacturing, and depository institutions

Source: Office of the US Trade Rep

THE DYNAMICS BETWEEN TWO OF THE WORLD'S MOST WELL-KNOWN POLITICAL LEADERS WERE UNMISTAKABLY ON THE RIGHT FOOTING.

"We've been talking to the Americans, we have engaged them for many months now. My expectation is that some of the sharper edges, they would be addressed in some forms in the not too distant future," Indian external affairs minister, S. Jaishankar, told reporters recently.

Trump has made no secret of his resentment of India's high tariff rates, including a 50 per cent tariff on Harley Davidson motorcycles. He is also unhappy with India's new investment rules on e-commerce that limit how companies like Amazon and Walmart-backed Flipkart can do business in a rapidly growing online market set to touch $200 billion by 2027.

Bilateral US trade with India, at $142 billion last year, is just a fraction of the $737 billion in US-China trade, which has often been flagged as a huge area of potential as ties between the US and China get more and more strained.

Diplomatic triumph

But whichever way things go on the mini or not-so-mini trade deal, Modi's visit to the US will be hailed a diplomatic triumph on just the sheer numbers he attracted to the Howdy Modi event at the start of a week-long tour ending with his address to the United Nations General Assembly.

His address to the UN Climate Action Summit once again established his credentials as a world leader keen to tackle some of the toughest crises faced by the global population, setting India on a leadership footing on complex issues such as climate change. The symbolism of his gift of the $1-million Gandhi Solar Park to the UN will not be lost, with the 193 solar panels of the 50kwh roof-top solar park each representing a member of the multilateral body.

At the end of the high-profile visit, all eyes will once again revert to the bigger picture to see how the US and India build on the undoubtedly successful tour to convert into deliverables for a true partnership on the ground across all sectors.

European and Asian firms eye India expansion

From entertainment to tech, India remains an attractive market for overseas investors.

Paris-based Believe buys Entco for India expansion

French technology and artist services company Believe has acquired Entco, an Indian live music production company, and will now offer its roster of artists more comprehensive services and revenue opportunities in one of the world's fastest-growing music and entertainment markets.

Entco will be rebranded as Believe Entertainment, to be based in Mumbai, where it will closely align live music experiences for brands and consumers with Believe's growing music distribution, label services and artist services operations in the market.

Denis Ladegaillerie, CEO, Believe, said: "We have been growing quickly to a leadership position in the Indian market, and with Entco's expertise, Believe will have unparalleled ability to help creators in India build audiences, careers and revenue opportunities."

Subramanian Iyer, Co-founder and Managing Director, Entco, said: "This strategic move will bring our artists and brands unprecedented access to the expertise and scale of Believe's 44 global offices and more than 1,000 professionals."

Investment app Groww raises $21.4mn

Bangalore-based start-up Groww said it has raised $21.4 million in a Series B financing round that was led by US-based VC firm Ribbit Capital. Existing investors Sequoia India and Y Combinator also participated in the round.

The two-year-old start-up users to invest in mutual funds, including systematic investment planning (SIP) and equity-linked savings. The app, which maintains a very simplified user interface to make it easier for its largely millennial customer base to comprehend the investment world, offers every fund that is currently available in India.

Lalit Keshre, Co-founder and CEO of Groww, said the market of mutual funds is increasingly widening in India and the start-up is hoping to accelerate its growth with the fresh capital. Additionally, he plans to double Groww's headcount to 200 in the coming months.

Groww has amassed about 2.5 million registered users, two-thirds of whom are first-time investors, Keshre said. Groww is currently free to use and does not charge any commission on transactions. The start-up eventually plans to offer a paid service as it looks to monetise its user base. It will also soon begin to offer the ability to purchase stocks from its eponymous app.

Lebanon's geo-tech firm acquires two Indian companies

Lebanon-headquartered Advanced Construction Technology Services, a geotechnical engineering, materials testing and consulting firm, has acquired 51 per cent stake in Pune-based CQRA and Durocrete Engineering Services for an undisclosed amount.

Khaled Awad, Chairman, ACTS, said that the demand for testing the quality of bridges, roads and infrastructure being built in India is increasing at a tremendous pace and the company would bring its overseas expertise to India.

He said: "We would be investing about $10 million over the next three years, besides sharing our knowledge with the Indian company. As per the latest study, there are about 163,000 bridges in India that need to be tested for their longevity."

Currently, CQRA and Durocrete work with leading infrastructure companies such as L&T, Hyderabad Metro, Reliance Group, Godrej Properties and Tata Housing to test the quality of material and strengthen the construction.

The tie-up will also bring in a geo-investigative team from ACTS to investigate the condition of the soil before a project is executed.

What makes New Jersey an ideal hub for Indian investments?

Home to a sizeable Indian diaspora, New Jersey offers several existing and new opportunities for Indian entrepreneurs looking to enter the US. Tim Sullivan, CEO of the New Jersey Development Authority, highlights some of the key areas that hold great potential for a stronger bilateral connect.

As part of Governor Murphy's efforts to build a stronger and fairer New Jersey economy, the New Jersey Economic Development Authority (NJEDA) created an Office of International Trade and Investment last year to promote the Garden State as a premier business and investment destination. We are excited about our upcoming trip and look forward to the opportunity to highlight New Jersey's strengths as a destination for business investment.

New Jersey offers a wide variety of advantages for businesses seeking to expand in the United States. One major advantage of investing in New Jersey is our location. Not only is the Garden State located at the heart of the Northeast corridor, but we are also globally connected via the airports and shipping ports in our region. On top of that, New Jersey is home to advanced digital infrastructure and the most connected population in the United States. All this means New Jersey is at the centre of the American and global economies. With $2.8 trillion of GDP—15 per cent of the US GDP—produced within 150 miles of New Jersey and 38 million consumers in that same range, New Jersey is an ideal place for any growing business.

In addition to the state's incredible location, New Jersey is home to many of the world's largest companies. 20 Fortune 500 companies are located in the state, and five of the fastest-growing companies in the world are based here. Most important, Governor Murphy's pro-growth agenda and commitment to creating a leading business environment means companies that invest here will have the support they need from the State. Locating in New Jersey also gives companies access to top talent from our diverse, highly educated workforce, which includes the most scientists and engineers per square mile in the world, as well as one of the best talent pipelines in the country. New Jersey public schools were recently ranked best in the nation and we're number one in physics, number two in chemistry, and a large portion of our students study at least one foreign language.

Additionally, the Garden State has the eighth largest economy in the United States and is home to 13 of the world's top pharmaceutical companies, and over 400 biotechnology businesses. It's easy to see why so many people choose New Jersey.

THE SINGLE LARGEST FOREIGN DIRECT INVESTMENT INTO NEW JERSEY OVER THE LAST FIVE YEARS HAS BEEN FROM AUROBINDO, A PHARMACEUTICAL COMPANY BASED IN TELANGANA, INDIA.

These factors have driven a significant amount of foreign direct investment (FDI) from India to New Jersey already. New Jersey receives more than 50 per cent of all greenfield FDI into the Northeast, which is more than New York, Massachusetts, Pennsylvania, and the rest. Additionally, the single largest foreign direct investment into New Jersey over the last five years has been from Aurobindo, a pharmaceutical company based in Telangana, India.

What are some of the sectors already well represented within the connect between India and New Jersey?

India is the New Jersey's fourth largest trading partner and the 17th largest goods export market for the Garden State. Trade between New Jersey and India generated over $8.3 billion in goods in 2018 and we expect our upcoming trip to increase that figure.

Over the last five years, nearly 80 per cent of Indian investments in New Jersey have been in the pharmaceutical sector. After this, information technology services and software and automotive original equipment are the industries that receive the most Indian investment.

What is the role played by the large Indian diaspora in the region?

New Jersey's Indian-born population is the second-largest in the United States and includes well-known political figures, medical professionals, engineers, lawyers, businesspeople, academics, and media personalities. Indian residents are a critical component of New Jersey's diverse, talented workforce, which is a major draw for businesses to the region. In addition to our thriving Indian population, the Garden State also leads the nation in Indian investments with more than $10.8 billion in investments coming from India in the last 10 years.

What are some of the new partnerships on the anvil since your delegation to India recently?

Over the course of our seven-day, six-city visit Governor Murphy and our delegation will visit Delhi, Agra, Hyderabad, Mumbai, Ahmedabad, and Gandhinagar.

The mission will focus primarily on the pharmaceutical, life science, information technology, clean energy, and financial technology sectors. We will also meet with leaders in the Indian film industry to tout the opportunities available for filmmakers to benefit from New Jersey's Film Tax Credit.

Finally, we will make the case for studying in New Jersey to Indian students interested in going to school in America.

Is the Trump administration's perceived anti-immigrant, and at times anti-globalisation, rhetoric problematic in attracting more Indian investments to the region?

New Jersey still sees growth

in Indian FDI and every Indian company we have spoken with in the last six months have shared plans for expansion. Governor Murphy and the NJEDA are enthusiastic about engaging with the global economy and welcome investment and immigration from all over the world.

What are the top five reasons for Indian companies planning a US expansion to consider a New Jersey base?

1) **Unbeatable location and connectivity** – New Jersey's location at the heart of the Northeast corridor offers easy access to New York and its markets, as well Philadelphia, Boston, and Washington D.C. More than 40 per cent of the United States population and thousands of businesses are located within a day's drive of the state. Thinking on a global scale, Newark Liberty International Airport and nearby airports in New York and Philadelphia offer non-stop flights to a combined 270 international destinations and the Port of New York and New Jersey is the largest cargo port on the East Coast. We also lead the nation in connectivity, with the largest percentage of the population with access to wi-fi broadband.
2) **World-class higher education institutions** – New Jersey is home to 63 colleges and universities. In US News & World Report's 2018 Best Colleges rankings, Princeton University earned the #1 spot for the 7th consecutive year and several other New Jersey universities also are ranked among the Top 150 in the nation, including Rutgers, the State University of New Jersey; Stevens Institute of Technology; New Jersey Institute of Technology; and Seton Hall University. New Jersey also boasts the fourth-highest share of science, technology, engineering and mathematics (STEM) graduates in the nation. All of this means companies that invest in New Jersey have easy access to the talent they need to thrive in today's innovation economy.
3) **Talented workforce** – New Jersey's workforce is rich with highly-skilled professionals, which is why New Jersey has emerged as one of the fastest-growing biotechnology hubs in the country. We have more scientists and engineers per square mile than anywhere else in the world, which makes our state a particularly good destination for innovating companies looking to expand and continue pushing the envelope.
4) **Diversity and inclusion** – New Jersey is a welcoming environment for international residents. For many of these foreign families, raising a family in New Jersey is easier, because its diversity creates a culture of inclusion. Additionally, we have one of the highest concentrations of top foreign talent and the third-highest concentration of foreign-born residents in the United States.
5) **Follow the leader!** – New Jersey gets over 50 per cent of all Indian investment coming to the Northeast. Indians are the largest ethnic population in New Jersey, and Indian students are one of the largest populations in our institutions of higher education. The Indian diaspora has been in New Jersey for decades and are thriving. Don't listen to me – look at the hundreds of businesses and thousands of people who have come to New Jersey and found success.

India's talented workforce will play a key role in improving business solutions

Pratap Sarker, President, Global Commercial Solutions, Conduent – a US-headquartered tech-led business process services firm – talks 'India Global Business' through the organisation's work in smart solutions, current tech trends and the role his Indian heritage plays in his work life.

What are some of the cutting-edge tech solutions being embraced by companies worldwide?

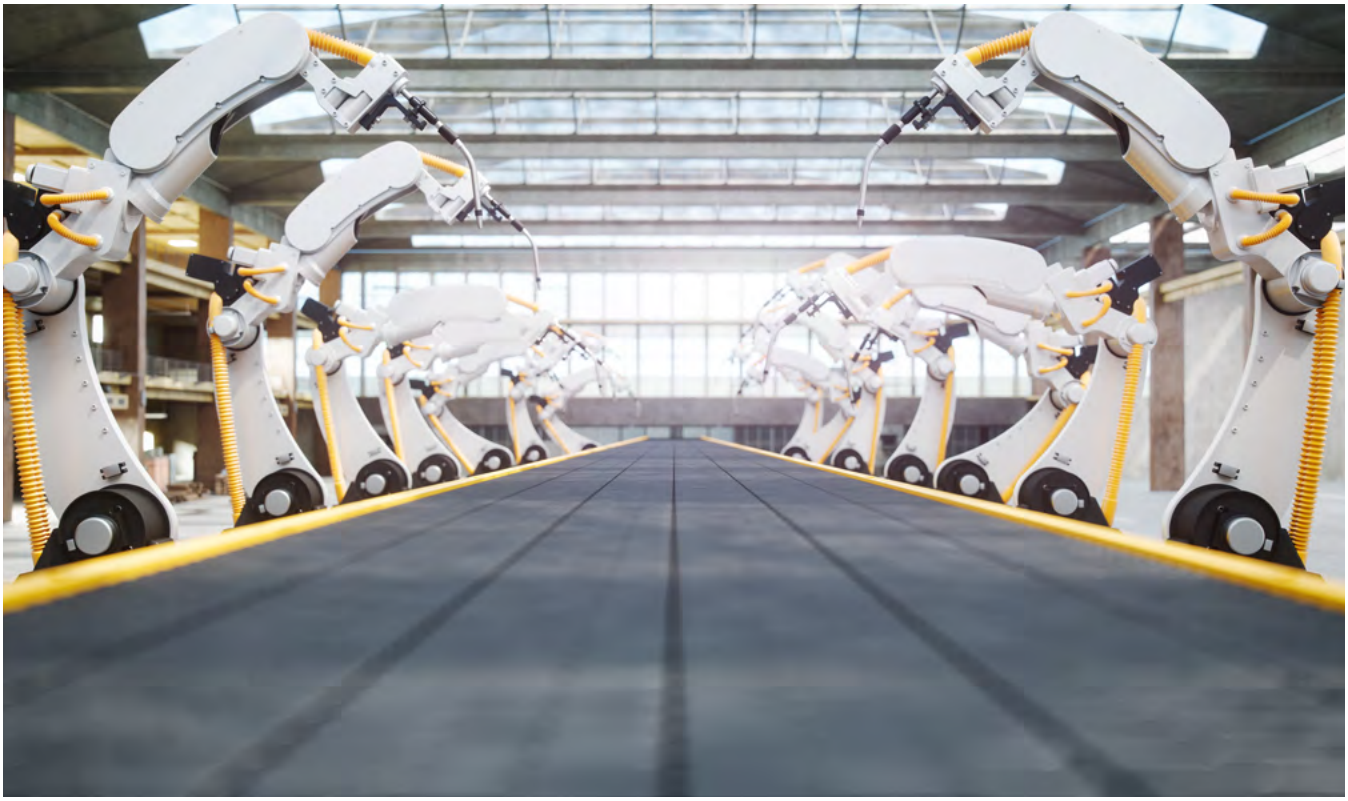
Companies around the globe are embracing automation, machine learning and blockchain technologies, and turning to Conduent to elevate their constituent interactions and deliver advanced digital experiences that are individualised, immediate and intelligent. Conduent is helping with this transformation in all the industries we participate in. For this response, however, I'll focus on companies in the financial industry who are adopting innovative solutions in the areas of payments and trade finance.

Payment processing has long been an area that has lagged behind the world's move to true digitisation; so, creating the ability to move payments, from initiation to final settlement, faster than ever before is gaining traction with Straight-Through Processing and Real-Time Payments. The underlying technology uses universally understood message formats so that banks can communicate with each other and settle both high-value and low-value payments instantaneously. The technology opens up a plethora of uses in both retail and B2B settings. A few other production-grade networks worth mentioning are those powered by Ripple and IBM's foray via World Wire, built on Stellar. We are certainly moving towards a world where there will be multiple options for businesses and consumers alike to send and receive money faster.

Similarly, trade finance continues to be a largely paper-based process. There are many different verticals within the trade finance domain, but the open account market is the one area that is embracing cutting-edge technology solutions. Who could have believed that banks like Nordea would allow a trade finance transaction, backed by a blockchain solution, to be initiated directly off their website, eliminating all the paper processing that the transaction required? R3 is creating meaningful ecosystems for this industry that are region-specific but can then eventually interoperate with each other.

How do you see the role being played by a country like India, known for its software expertise?

India's diverse and talented workforce will play a key role in the advancement of these business solutions. In fact, today for



Conduent, almost half of our global technology workforce is based out of India. Our team of experts is developing solutions based on the latest technologies for mobile and IoT, human-computer interaction, machine learning, text and multimedia analytics.

Our India operation is among the company's three largest outside of the United States. The skilled technology workforce that India has to offer is a key element in Conduent's overall growth strategy and forms an integral part of our technology agenda. Our talented workforce is at the centre of our Accushoring philosophy where we perform work in locations where we can deliver the greatest value – from a talent standpoint.

We have also invested in global innovation teams based out of the United States and India. Bangalore, India is home to one of our two global innovation centres – where we work on Automation, Analytics, Blockchain, IoT, Mobility and Customer Experience solutions. We have invested in cutting-edge infrastructure for Artificial Intelligence (AI) and Machine Learning (ML). Our scientists and engineers work closely with Conduent businesses and customers to enable the successful application of technologies from the lab to the marketplace.

Every business service Conduent provides – from robotic process automation for financial organisations to patient-centric data analytics for health providers – is centred on innovation based on leading-edge technologies of this nature.

How has blockchain transformed the business processing scenario?

With many Business Process Outsourcing (BPO) services, there is a significant challenge of connecting businesses processes across siloed organisations with the right level of security, access and transparency. Blockchain technology is uniquely able to function in such scenarios by securely providing the right information to the right parties at the right time, resulting in exceptional efficiencies. As such, I envision a future state wherein the BPO service industry will continue to exist, but its role will be materially changed. It will be responsible for managing (1) the rules that govern process orchestration and data standardisation and (2) the technology stack that is required for blockchain-powered networks. As more and more banks move to blockchain technology, initiatives such as DTCC's Trade Information Warehouse, and IOI Capital and Markets prove the viability of the technology and hence, the traditional capital markets' back office function will undergo dramatic change.

What is the big tech idea/concept that excites you the most?

In this digital transformation era, we have many cutting-edge technologies that are being embraced by companies across industries. The top ones, in my opinion, are automation, analytics, machine learning and blockchain, and these technologies are impacting businesses in their own way.

What particularly excites me is the convergence of two or more of these

technologies; the business outcomes from such integrated solutions are simply astounding.

For example, our next generation patient assistance platform introduces efficiencies through the latest technologies in blockchain for provider credentialing and couples that with automation and machine learning results in order to determine the "next best action" to the agent based on the patient's history, and thereby providing a personalised experience.

Similarly, when we bring together the core capabilities of automation and machine learning based analytics, we can create smart solutions to augment and enhance human work. Such integrated smart solutions help clients automate document classification and significantly drive contract compliance by assessing the real risks inherent in contracts, proactively identifying contractual and counterparty risk, maintain compliance with contractual relationships and quickly respond to regulatory demands.

How would you explain some of the tangible impacts on people's lives of Conduent's offerings?

As one of the largest business process companies in the world, we manage mission-critical interactions at a massive scale. Every day, our clients count on us to deliver exceptional experiences for the patients, consumers, employees, travellers or the citizens they serve.

For example, our Healthy Communities Institute (HCI) platform analyses data across numerous demographic and healthcare dimensions to help state and local health agencies identify at-risk communities and citizens and improve the distribution and quality of care. One of our clients used the data to determine that mental health, care coordination, health literacy and place-based care were the biggest priority areas in their community. The insight helped the client make decisions about where they should focus their time and efforts, implement strategies that made a difference and empower organisations within their network to facilitate change.

There are many more examples like this across the twenty industries that Conduent services – from healthcare and medical claims management to human resource services and government solutions.

How does being a Global Indian influence your decisions (professionally and personally)?

Having been raised in India, I was taught at an early age of the value of education, honesty and hard work. These values, combined with the tenets of entrepreneurship, excellence and continuous innovation that I have imbibed over the last 20 years in the US, have shaped the approaches I take on both personal and professional levels. They have influenced and continue to have an impact on my deep passion for learning, informed decision making, diligent work ethic and transformational leadership style.

Indian companies venture down South

Tech and digital solutions enterprises remain the frontrunners in global expansion.

Wipro to collaborate with Brazil's financial services body

Wipro plans to develop an online platform, Noomis, for the financial services industry in Brazil. The Bengaluru-based software services provider has tied up with Febraban, an industry body representing the Latin American country's financial services industry.

Febraban also organises CIAB, an information technology trade show for financial services in Latin America. Noomis will serve as a meeting point and a discussion platform for the finance professionals in Brazil who participate in CIAB FEBRABAN.

Built with digital cloud technologies, the platform is envisaged to change the way companies collaborate and share information. Noomis will provide reliable, analytical, and unbiased information via news reports, biogs, videos, and newsletters that will enable participants to stay up to date on financial market trends.

Wipro said the project development would include design and delivery of the first phase of the online platform. The company would also be responsible for creation of workflows and the editorial publisher module for content management in the platform.

Cloud computing firm Zoho eyes Australia

Software company Zoho has invested $15 million to open two onshore data centres in Sydney and Melbourne. Zoho's chief strategy officer Vijay Sundaram believes Australia and New Zealand are key growth markets for the cloud software computing company.

The Indian multinational previously catered to the Australian and New Zealand market through offshore data centres, but the local expansion is the company's first step in setting up this type of infrastructure in the region.

The company, which services clients such as Qantas, BHP and Netflix, has a customer base in the "tens of thousands" in Australia and New Zealand.

Part of Zoho's rationale for opening these centres is to be able to compete for government clients, which are subject to more stringent rules when they outsource or offshore data, as well private companies like consulting companies which do government work.

Zoho has a broad software offering and counts American company Salesforce and ASX-listed HR-based software company ELMO, as well as Microsoft Office Suite and Google Suite among its competitors.

Zensar expands operations in Cape Town, South Africa

Zensar, a leading digital solutions and technology services company that specialises in partnering with organisations across industries on their digital transformation journey, announced a new larger office in Cape Town, South Africa.

Sandeep Kishore, CEO and MD, Zensar said: "South Africa is a critical region for us and we hope to collaborate more closely with our key customers based in and around Cape Town from here. We have been focused on expanding to meet our customers' needs and investing in Cape Town to add to our global business."

The new office can seat many more people with interactive spaces to encourage collaboration as well as serve as the centre for the Skills Development Program initiatives in Cape Town. Interns in Cape Town will be trained in cutting edge IT technology such as Cloud computing, Robotics, etc., which are the skills needed by our customers and the local market today. Additionally, the selected candidates will also be trained in soft-skills to make them job-ready.

There is a high demand for Indian organic food products

In this interview with 'India Global Business', Rohan Grover, Director of Nature Bio Foods, discusses India's thriving position in the global organic produce arena in a time when healthy, sustainable living seems to be the mantra.

Is the Indian organic sector making its global presence felt?

The Indian organic food industry is growing at a tremendous rate. The country exported organic food products worth more than $500 million in the year 2017-2018, up by 39 per cent from the previous year. Considering the current market size, yes, the growth is humongous. The nation supports more than 10 million organic farmers – making us the largest in the world. Surely that's a number the globe cannot ignore. Today, we are counted among the top 10 countries with maximum organic land, ranking third in the wild collection. The sector is booming, the global demand for Indian organic food products is on a constant increase. The country is exporting tonnes of organic oils seeds, cereals and millets, sugar, fruit juice concentrates, tea, spices, pulses, dry fruits, medicinal plant products etc. every year. The domestic market might be at a nascent stage, but India makes for one of the biggest suppliers of organic to the markets in the world. The Indian organic rice ranks second when it comes to exports to Europe. Nature Bio Foods comprises 59 per cent of the total organic basmati and 77 per cent of the total organic non-basmati rice exports to the world. And all of this has been supported by our more than 60,000 farming families. With the continuing demand, it wouldn't be unfair to foresee days when the Indian organic industry is ruling.

Is a lead in the ingredient space important for future-proofing growth in the industry?

Definitely. For years to come, it will play a vital role. The increasing numbers and the growing demand for organic food is what will drive our businesses too. Our leadership and exponential growth aren't only about numbers. A lot that goes behind achieving these numbers. Consistency in quality, organic traceability, all-organic integrated

OUR CULTIVATION PRACTICES BACKED BY A UNIQUE BUSINESS MODEL, INFRASTRUCTURE AND AN ALL-ORGANIC SUSTAINABLE SUPPLY CHAIN HAVE MADE US THE PIONEERS.

supply chain and sustainable business goals – combined are reaping the benefits. Due to this, we have been able to make our presence worldwide and through which we have learnt a lot. This has led us to aim for world-class quality benchmarks and here we are. The numbers had huge calculations and formulas behind them. These numbers will surely push us in the future but the formulas are the ones which will sustain us. We (Nature Bio Foods) started with rice as our main ingredient back in 1993 when the first seed was sown. Year by year, the passion has only been seen rising. We have now added new varieties. Our portfolio has expanded, from basmati rice to the addition of more grains and cereals, millets, oil and oil seeds, flour, lentils and pulses etc. We (Nature Bio Foods) lead with the highest number of farming families associated with us; they count up to 60,000 and 80,000 Ha organic land.

What sets certain Indian products apart in the global arena and why?

When it comes to agriculture, there is nothing better that comes to one's mind than India. We belong to a country where 70 per cent of our population had businesses dependent on agriculture. Indians have been practising farming since time immemorial. We have one of the largest organic lands with the world's largest number of organic producers.

The Indian subcontinent is bestowed with a lot of potential to produce varieties of organic products due to its various agro-climatic regions. In several parts of the country, the inherited tradition of organic farming is an added advantage. This holds promise for the organic producers to tap into a segment which is growing in the domestic and export market. The company (Nature Bio Foods) is practising 100 per cent organic. Our cultivation practices backed by a unique business model, infrastructure and an all-organic sustainable supply chain have made us the pioneers.

What are the challenges faced in terms of organic farming in India and maintaining a robust global supply chain?

The path hasn't been easy for us. We started when the wave of green revolution had hit Indian farmers. Since then, the toughest challenge has been convincing the farmer to not only adopt but also continue practising organic farming in a manner where organic traceability can be maintained at every step. The compliances are the other part of this traceability which need to be ensured.

Another thing being the geographic location of these farms. They are sparsely located and hence their management can be a little tricky at times.

Additionally, there's climate change and the dependency on rainfall to factor in. Monsoons have shifted and so have the sowing seasons. None have been spared. Some areas haven't had decent rainfall in a long time.

Modern times require climate-smart techniques. We (Nature Bio Foods) started with Land Laser Levelling this year. The technique reduces the amount of water used for irrigation and improves crop uniformity and growth, thereby increasing yield.

Like any other food company, the challenge is the same – maintaining product quality and timely deliveries.

What are the key global expansion markets for this sector going forward; is India well-equipped to compete with the best?

Undoubtedly, the US and Europe have been major markets for Indian origin organic exports. North America constituting for more than 60 per cent of exports made from the sub-continent. While others are still gaining momentum, more and more regions in the Asia & Pacific region are moving towards this change.

It's the product categories which have been expanded wonderfully. While to the layman organic cereals and grains and fruits and vegetables have been major concerns, the industry has come up with the likes of rice syrup and rice protein as well. Dairy products are largely getting replaced by plant-based organic milk like rice milk and almond milk. The demand has been growing owing to increasing dietary shifts and trend moving towards plant-based lifestyles.

Exports of oil cakes of various seeds like soy, mustard, sunflower etc. too have increased over time. Apart from these, plant-based herbal root powder and leaves are also shifting towards the major categories.

Increased choice and competition are good news for Indian consumers

by Ashish Bhandari

An oil industry chief weighs up the changing dynamics within the Indian energy sector and what this means for foreign investors.

The energy industry will see interesting times ahead. This is particularly true for India's downstream petroleum fuels market as the country balances the additional need from an upwardly mobile population with the urgency to protect the environment and maximise energy security. The coming decade will likely witness India emerging as the country with the highest growth in petroleum fuels consumption. India will also witness a major move to EV-based transportation with the government; one an example being the plan to manufacture only electric two-wheelers 2025 onwards.

It is the opportunity to participate in such a rapidly evolving marketplace that has international players interested in India's downstream market. In recent times, Rosneft, BP, and Total have all announced plans, through a mix of direct acquisitions and joint ventures, to enter the sector. The increased choice and competition are good news for Indian consumers as well and so, the moves are to be welcomed.

The immediate effect will be on the speed of deployment and on an increase in business models experimented upon by new entrants. India's fuel stations have not kept pace with advancements internationally. Smart integration with retail, incorporation of IoT based capabilities to enhance safety and availability, and specific business models for fleet and CNG users are all examples of new business models that are ripe for incorporation. These new models will provide additional revenue sources with the potential to decrease prices for consumers. Additional capital deployed by new entrants will also speed up access to fuel stations in Tier 2 and Tier 3 markets. Finally, improved project management from private players will expedite the rollout of ambitious government plans even in sectors such as city gas distribution.

The bigger, long-term effect will be felt in how India successfully navigates the impending energy transition. Switching to electricity-based transportation will require a huge change in our retail supply chain for energy. A massive charging infrastructure will have to be rolled out. Meanwhile, technology, standards, and costs will be constantly changing, and so, significant complexities will have to be managed by service providers. In many cases, retail footprint may be available for sharing with the existing fuel stations, but the mix and utilisation will change. Such change is best managed through nimble private players where the competitive pressures will ensure that consumer needs are put first. Also, many of the international players are already in the midst of this energy transition in several developed markets. These players will bring the best practices to India to aid the transformation of India's transportation last mile.

BHGE recently made an announcement to reduce C02 equivalent emissions to net zero by 2050 and partner with customers to advance low emissions technologies. BHGE will invest in its portfolio of advanced technologies to assist customers in reducing their carbon footprint. Oil and gas will continue to be an important part of the global energy mix, and BHGE is committed to investing in smarter technologies to advance the energy industry for the long-term.

Managing carbon emissions is an important strategic focus for our business. We believe we have an

important role to play as an industry leader and partner. BHGE has a long legacy of pushing the boundaries of technology and operating efficiency. Today, we take this to the next level by committing to ambitious new goals for ourselves, and to providing lower carbon solutions expected by customers and society.

The reason international and private players are looking at India's retail market for petroleum products is driven by market dynamics as well as government policies that now support the entry of private players. Foremost in these supportive policies is the decision taken in 2017 to allow the daily movement of fuel prices and the removal of any artificial price caps. Aggressive plans to develop a nationwide city gas distribution network and allow gas marketing freedom is another example of government action aiding entry of new players in the market. The big risk that exists is that under pressure of fluctuating prices, as was the case in October 2018, the government will be tempted to revert to price controls. The ability of private players to sustain extraordinary price controls is limited and so the government's ability to stay on the course, especially when the going gets tough, will determine the long-term attractiveness of the market. If anything, the government can further enhance the liberalisation of petroleum products by bringing the entire sector within the GST framework. There is an expectation that city gas and CNG may be brought in the GST regime in the near future. The opposition from state governments makes GST on diesel and petrol a tougher ask but this move will be a shot in the arm for the industry.

SMART INTEGRATION WITH RETAIL, INCORPORATION OF IOT BASED CAPABILITIES TO ENHANCE SAFETY AND AVAILABILITY, AND SPECIFIC BUSINESS MODELS FOR FLEET AND CNG USERS ARE ALL EXAMPLES OF NEW BUSINESS MODELS THAT ARE RIPE FOR INCORPORATION.

A look to the telecom industry offers a parallel discourse. A couple of decades ago, the telecom industry was in the midst of a massive transition as well. The move from landlines to mobile and the subsequent move from voice to data were game-changing shifts in telecom. Competition and choice in the telecom industry helped the Indian consumer considerably providing it with access to data quality standards that are comparable to the best globally, at a fraction of the cost. Market dynamics forced certain players out and it is not a place for the faint-hearted – all through though, the consumer has gained.

Such a dynamic is to be encouraged in the petroleum industry as well. The fuel station network in India will continue to grow rapidly in the near term and will be around for many decades to come. The eventual transition to electric though is also a reality that will need capital and technology in the near future. Opening up the market for downstream, as India is on a path to do, will ensure that the needs of India's customers are always met.

Ashish Bhandari is CEO, Oil & Gas, India & South Asia at Baker Hughes, a GE company.

Building impactful India-Scotland connections

by Jess Kemp

A senior executive at Social Enterprise Academy shares how the organisation is supporting leaders in India to make a difference.

There are currently up to 2 million social enterprises operating across India. That's 2 million changemakers stepping up, taking action and starting businesses that solve the social and environmental issues that matter to them.

However, people growing social enterprises often don't know what they need to know until they need to know it. Everything from; "How do we measure our social impact?" and "how do we become financially sustainable?" to "how can we motivate our team?"

Social Enterprise Academy helps answer these questions by delivering learning and development programmes for individuals and organisations working for social change. Launched in Scotland in 2004, Social Enterprise Academy has replicated internationally and is now sharing learning between 12 country teams in Australia, Canada, China, India, Malawi, Malaysia, Pakistan, Rwanda, Scotland, South Africa, Wales and Zambia.

Impact Link: Support for social enterprises in India

Social Enterprise Academy India, which is operated locally by MITRA, was launched in December 2017. The first learning and development programmes they have delivered have been through Scotland: India Impact Link – a support package for emerging social enterprises. The support package offered to five Fellows includes a leadership development programme, social enterprise mentoring by a social entrepreneur in Scotland, and funding support for growth.

As a collaboration between the Scottish Government, MITRA and Social Enterprise Academy India, Impact Link was created to build the resilience, capacity and impact of India's social enterprises that are moving beyond the incubator stages of growth.

Impact Link also forms part of the Scottish Government's Internationalising Social Enterprise Strategy and India Engagement Strategy. Sam Baumber, Managing Director of Social Enterprise Academy International CIC, explains: "With Impact Link, we are delighted that the Scottish Government is helping build connections between a global team of people working towards Sustainable Development Goals, sharing challenges, advice and focusing our efforts on doing things differently. We have lots to learn from each other - and the world needs us to work together."

Building resilience amongst India's changemakers

Pooja Chopra and Shruti Venkatesan, Co-Founders of Khwaab Welfare Trust – a social enterprise based in Delhi – were two of the first Impact Link Fellows.

Khwaab financially empowers low-income community women by imparting livelihood skills. The social enterprise looks for avenues where women can market their products and add to their household income, which can then be directed towards their child's education and family's welfare.

Shruti Venkatesan, Co-Founder of Khwaab explains the impact that access to learning and development has had on her organisation: "If an entrepreneur is able to develop his or her leadership abilities, then he or she will be able to overcome any kind of leadership challenges that come while managing their social enterprise. A real 'aha' moment for me during the Social Enterprise Academy leadership programme was understanding my own working style, core strengths and that of my co-founder.

We approached things differently and there was a lack of communication between us – the programmes sparked a lot of interesting conversations on how we can communicate better and how we can work together more effectively to take Khwaab to a whole new level. I've become a much more confident individual and a much more confident entrepreneur since taking part in the programme."

AS A COLLABORATION BETWEEN THE SCOTTISH GOVERNMENT, MITRA AND SOCIAL ENTERPRISE ACADEMY INDIA, IMPACT LINK WAS CREATED TO BUILD THE RESILIENCE, CAPACITY AND IMPACT OF INDIA'S SOCIAL ENTERPRISES THAT ARE MOVING BEYOND THE INCUBATOR STAGES OF GROWTH.

While Albin Jose, Co-Founder of Lal10, a social enterprise which aims to revive the traditional creative art forms of India, said: "I believe it's very important for social entrepreneurs to develop their leadership skills in the current climate because social entrepreneurship can be a lonely road. It takes a lot of motivation and a lot of grit to follow that path, to solve a problem that affects a large section of the lower end of the population. You need to build a community that supports each other and motivates each other to move forward."

Connecting India and Scotland through social enterprise

Tribe Porty is a Scottish social enterprise which provides a space for nurture and growth of human potential through supporting local people in work, art and quality of life. This is done through practical opportunities and support and encouraging connections. As an Impact Link mentor, they were partnered with Khwaab Welfare Trust to encourage social enterprise sharing of knowledge between Scotland and India. Founding Director Danielle Trudeau said of being an Impact Link mentor: "Working with Pooja and Shruti of Khwaab was thoroughly enjoyable. They were both hugely energetic and passionate about their social enterprise and the experience gave me new insights into some of the challenges they were facing in India. Sustainability challenges seem to be universal but so is the drive to create positive change."

Since the successful launch of Scotland: India Impact Link in 2018, the collaboration has now been launched in Pakistan and China, as a partnership between the Scottish Government, Social Enterprise Academy and SEED Ventures (Pakistan) Capacity Building and Assessment Center (China).

The need for learning and development in Social Enterprise Ecosystems

During the 2018 Social Enterprise World Forum in Edinburgh, two of the key takeaways for delegates were; the need for collaboration and the need to build social enterprise ecosystems.

Creating space for reflection and safety to support peers and transform leadership practice is known to be a critical success factor in building a sustainable social enterprise ecosystem. It is vital that we develop emotionally intelligent, strategically aware and operationally resilient leadership - investing in our people, at all stages of career and organisational growth.

Shruti Venkatesan, 2018 Impact Link Fellow and Co-Founder of Khwaab, explains: "Nowadays it has become all the more important for entrepreneurs to not work in silos, but to engage with the entire ecosystem, which requires entrepreneurs to have extremely strong leadership abilities."

Through partnering with the Scottish Government and MITRA, the Social Enterprise Academy has been privileged to help develop people in the next generation of social change leaders in India. After two years of developing Impact Link, there is now the opportunity for corporations or philanthropy to match fund alongside Scottish Government.

Achieving the Sustainable Development Goals will need all of us working together, across organisations, sectors and countries. Enabling access to learning and development for changemakers who ordinarily cannot afford it, is an essential step towards making that change happen.

Jess Kemp is the Senior Partnerships Officer at the Social Enterprise Academy.

India expands mark in global university rankings

by India Inc. Staff

Indian universities made their mark in the 2020 global university rankings, but more work is needed as they slipped out of the top 300 bracket.

Indian universities have expanded their presence in the annual rankings of the world's leading educational institutions but dropped out of the top 300 bracket in the 'Times Higher Education World University Rankings' for 2020 released recently.

India's top-ranked university, Bangalore's Indian Institute of Science (IISc) declined, marking the first time that India is not in top 300 since 2012 in the tally once again topped by the UK's University of Oxford. IISc still ranks the highest for India but has dropped into the 301-350 bracket (from 251-300 cohort), due to what has been described as a significant fall in its citation impact score offsetting improvements in research environment, teaching environment and industry income.

"India has a huge amount of potential in global higher education, given its rapidly growing youth population and economy and use of English-language instruction. However, it is disappointing to see the country fall out of the top 300 of the rankings this year, with only a small number of institutions registering progress," said Ellie Bothwell, 'THE' rankings editor.

"THE INDIAN GOVERNMENT HAS STRONG AMBITIONS TO BOOST THE GLOBAL STANDING OF ITS TOP UNIVERSITIES AND ATTRACT FOREIGN STUDENTS, ACADEMICS AND RESEARCH COLLABORATION.

"The Indian government has strong ambitions to boost the global standing of its top universities and attract foreign students, academics and research collaboration. It now needs to back up these aspirations with high levels of investment – or risk declining further amid increasing global competition, especially from other parts of Asia," she said.

Overall, 56 Indian universities feature in the table, up from 49 last year. As a result, India holds on to its place as the fifth most-represented nation in the world and the third most-represented in Asia, behind Japan and mainland China. It has eight more universities than Germany, which is sixth in the country ranking, but 25 fewer than China.

Newcomer Indian Institute of Technology Ropar makes an impressive entry, pushing Indian Institute of Technology Indore, which remains in the 351-400 band, into third place. Overall, seven Indian universities fall into a lower band this year, while the bulk of the nation's institutions remain stable. But there

2020 Global Top 10

University	Country/ Region	2020 Ranking	2019 Ranking
University of Oxford	UK	1	1
California Institute of Technology	US	2	5
University of Cambridge	UK	3	2
Stanford University	US	4	3
Massachusetts Institute of Technology	US	5	4
Princeton University	US	6	7
Harvard University	US	7	6
Yale University	US	8	8
University of Chicago	US	9	10
Imperial College London	UK	10	9

Source: Times Higher Education (THE) World University Rankings 2020

is a small number of risers, including Indian Institute of Technology Delhi, Indian Institute of Technology Kharagpur and Jamia Millia Islamia.

The best Indian institutions are generally characterised by relatively strong scores for teaching environment and industry income, but perform poorly when it comes to international outlook in comparison to both regional and international counterparts, 'THE' rankings notes.

While Oxford tops the global rankings for the fourth year running, the California Institute of Technology (Caltech) rises from fifth to second. The University of Cambridge, Stanford University and the Massachusetts Institute of Technology (MIT) all drop one place to third, fourth and fifth respectively, while Princeton University and Harvard University swap places to finish sixth and seventh respectively. Yale University holds steady in eighth, the University of Chicago rises one place to ninth, while Imperial College London falls one place, rounding out the top 10.

The UK capital, however, claimed a major win with four universities in the city listed in the top 40 – more than any other city in the world. The news came as the UK government introduced a two-year post-study work visa for international students, allowing overseas graduates a significantly longer period of time to find work after their studies.

"This announcement from government is a tremendous boost for the UK capital, which will further enrich London's post-study offer for international students and provide exciting opportunities for employers here. Our institutions are committed to attracting and nurturing bright young minds from all over the world, who will go on to become global ambassadors for our city," said Lalage Clay, Director, Education and Talent at London &

Partners, the Mayor of London's official promotional agency London & Partners and home of Study London.

Imperial College London (10th), University College London (15th), London School of Economics and Political Science (27th), King's College London (36th), and Queen Mary University of London (110th) make up London's leading top-ranked universities.

'THE World University Rankings' are drawn from the 'Times Higher Education' database of university performance metrics, with over 170 separate data points on each of the world's leading research universities and two global surveys of senior, published scholars from its annual reputation survey: with more than 21,000 responses adding 250,000 items of data.

2020 India Top 10

University	2020 Ranking	2019 Ranking
Indian Institute of Science	301–350	251–300
Indian Institute of Technology Ropar	301–350	NR
Indian Institute of Technology Indore	351–400	351–400
Indian Institute of Technology Bombay	401–500	401–500
Indian Institute of Technology Delhi	401–500	501–600
Indian Institute of Technology Kharagpur	401–500	501–600
Institute of Chemical Technology	501–600	NR
Indian Institute of Technology Gandhinagar	501–600	NR
Indian Institute of Technology Roorkee	501–600	401–500
Amrita Vishwa Vidyapeetham	601–800	601–800

Source: Times Higher Education (THE) World University Rankings 2020

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Sitharaman wields the tax axe

By dramatically slashing corporate taxes, India's gritting Finance Minister has given a big boost to India's private sector and brings the country closer to becoming a low-tax, high-efficiency economy that the Modi government aspires for.

The recent cuts in corporate tax and minimum alternative tax rates by Indian Finance Minister Nirmala Sitharaman will provide a much-needed stimulus for companies in India. It may well also help the country attract companies that are looking at alternative destinations to set up manufacturing facilities in the wake of the US-China trade war by incentivising the setting up of new manufacturing facilities in the country.

On the flip side, the tax cuts could lead to fiscal slippage for the government and raise the fiscal deficit to up to 4 per cent, against the target of 3.4 per cent, if it is not accompanied by spending cuts. In the view of 'India Global Business', this will be a short-term issue and we anticipate the private sector will treat this as the confidence-building measure to reassure them that the Modi government is backing them to get the investment cycle moving again.

Early Diwali for India Inc.

On 21 September, Sitharaman wielded the axe on India's relatively high rate of corporate tax, cutting it from 34 per cent to a fraction over 25.17 per cent, thereby redeeming a promise made by former Finance Minister, the late Arun Jaitley five years ago. In her Budget on 5 July, the current Finance Minister had reduced the tax for companies with a turnover of up to $55 million. Now, the rate has become universal for all companies that do not take the benefits of any other exemptions. Such companies will not also have to pay any Minimum Alternate Tax (MAT). Now, the peak rate of corporate tax is comparable to the lowest rates charged by many other competitor countries.

"This is a massive trigger for revving up growth and, more importantly, resurrecting sentiments that were down in the dumps. The immediate benefit is increased cash flows to corporate India that will be either channelised into debt reduction or incremental investments in increasing capacity," says a report by Crisil, the Indian subsidiary of Standard & Poor's.

THESE TAX CUTS WILL INITIALLY LEAD TO A REVENUE LOSS OF MORE THAN $20 BILLION FOR THE GOVERNMENT, BUT IN DOING SO, PROVIDE A MAJOR STIMULUS TO THE INDIAN CORPORATE SECTOR.

Further, in a bid to boost the Make in India programme, attract foreign investment in the manufacturing sector and make India competitive compared to China and the ASEAN countries, the government has allowed any new company incorporated in India on or after 1 October 2019 and making investments in manufacturing to pay income tax at 17 per cent. These companies will, however, have to start production on or before 31 March 2023.

This move is expected to kick start the sputtering investment cycle that has been stubbornly refusing to pick itself up for the last few years.

These tax cuts will initially lead to a revenue loss of more than $20 billion for the government, but in doing so, provide a major stimulus to the Indian corporate sector.

Fiscal gap may widen

These tax giveaways are expected to widen the fiscal deficit, given the government's tight fiscal position and the absence of buoyancy in tax revenues. This could rise to as much as 4 per cent against the Budget target of 3.4 per cent, since the higher earnings and the accompanying rise in revenues will take place only after a lag.

Cut in public expenditure

As of now, the only way for Sitharaman to help balance her books seems to be a cut in the government's spending programme. But that could lead to a growth slowdown. She is obviously hoping that her incentives will kickstart the investment cycle and obviate the need for large government expenditure to keep the wheels of the Indian economy running.

She has done well to wield the axe on tax. She will now have to execute a careful balancing act over the next few months to ensure that the private sector gets charged up.

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