



UNLOCK THE POTENTIAL OF INDIA: PART 1

UK INDIA
BUSINESS COUNCIL

ART OF THE POSSIBLE

Including India in their supply chains lets companies achieve scale, agility, and innovation.

INDIA'S SUPER POWER



India is becoming a destination for advanced manufacturing and a strategic supply chain partner. A frugal mindset—the ability to do more with less—is central to its case.

INDIA STEPS UP AS A POST-PANDEMIC SUPPLY CHAIN PARTNER



The case for India, as a supply chain destination and as a source of advanced manufacturing, is multi-pronged. There are strong supply side factors, growing local demand, and government support.



LABOUR, LAND, LAWS, AND LIQUIDITY



Investors seek certainty. Four 'L's offer a firm footing.

MAKE IN INDIA TO GROW GLOBALLY



Covid and Brexit have disrupted business for T.Forrest, an 85-year-old family firm. It is investing in India to solve its supply problems and build scale so that it can grow in other large markets.

FRUGAL INNOVATION LEADS TO EXPORT SUCCESS



TVS Motors innovates in India and exports two-wheelers to more than seventy markets.

SNAPSHOT — INDIA IN NUMBERS



It's huge: Putting the India opportunity into context.

HIGH FLYERS



BON V Aero is making India's first AI-powered, multi-utility electric air vehicle.

LOOK BEYOND THE OBVIOUS



There are many Indias and multiple ways companies can integrate India into the operations. The key to success lies in finding the right partners.

IS INDIA'S FRUGAL MINDSET ITS SUPER POWER?

Disruption is a chance to redesign. Two years of lockdowns, closed borders, broken supply chains, market volatility, and Brexit, have changed our perspectives on everything. Old orthodoxies no longer hold true. War, climate change and sky-high energy prices add to our concerns. Throw into the mix an exponential rise and reach of digital technologies and talent shortages, because the rate of training cannot keep up with their rate of adoption. Simultaneously, we see the rise of Asia Pacific—home to more than half the world's population—as the driver of economic growth.

Welcome to the VUCA world of volatility, uncertainty, complexity, and ambiguity (see sidebar).

Companies must respond to these forces of disorder. Doing so can give them a competitive advantage.

“THE ONGOING POST-COVID REBALANCING OF GLOBAL VALUE CHAINS OFFERS INDIA'S GOVERNMENT AND BUSINESS LEADERS A UNIQUE OPPORTUNITY TO TRANSFORM AND ACCELERATE THE TRAJECTORY OF THE MANUFACTURING SECTOR”

Viswanathan Rajendran, Partner, Kearney, while presenting a World Economic Forum's 2021 white paper 'Shifting Global Value Chains: The India Opportunity'

Where in the past, companies sought speed and efficiency, many now look for resilience. Where cost was once a driver, innovation is taking precedence. Agility is the Holy Grail. Frugality has become a virtue. Businesses are reassessing their balance of risk and reward.

Many think tanks, advisors and business executives see India as part of the answer to these challenges.

A huge, fast-growing, rapidly-urbanising and business-friendly market excites many business folks. Its complexity instils fear in others. The country's geographic location makes it appealing. Competitive higher education institutions turn out cohorts of highly trained and innovative engineers,

sought after by companies looking for scale. There's a deeply rooted mindset, a super power perhaps, which makes the most of limited resources, and finds innovative solutions to tricky problems. The art of the possible is thriving.

The Indian government wants companies to 'Make in India'. It has a National Policy for Advanced Manufacturing and is simultaneously making it easier for foreign companies to invest. A Free Trade Agreement with the UK is in the pipeline.

“AMBIGUITY IS NOT, TODAY, A LACK OF DATA, BUT A DELUGE OF DATA.”

Paul Gibbons, Author of 'The Science of Successful Organizational Change: How Leaders Set Strategy, Change Behavior, and Create an Agile Culture'

This report looks at how India is rising to the challenges of 21st century advanced manufacturing and its potential role in global supply chains. It spotlights innovation and best practices from market-leading companies who use India as a stepping stone to Asia's other exciting markets. It considers the various motivations for foreign companies to look to India as a market, source of talent, hub for manufacturing, and a place to innovate and scale. Business leaders who are already reaping the returns share their unique perspectives. ■

IT ALL ADDS UP TO VUCA

VUCA—volatility, uncertainty, complexity, and ambiguity—was coined by the US military as a way of describing the post-Cold War world. In the past two decades, several trends have added to those features. Technology such as mobile telephony, cloud computing, and the Internet has heralded the arrival of Industry 4.0. This has added complexity. Changing climate conditions, the earth's warming, and rising sea levels mean more uncertainty. War in Ukraine, conflicts in places such as Syria and Afghanistan, fluctuating stock markets and energy prices add volatility. All combine to add ambiguity and risk to our lives.

India is a huge and complex country, and its people are used to dealing with ambiguity, so they may already have a head start in the VUCA world.

INDIA TAKES ITS PLACE AS A POST-PANDEMIC SUPPLY CHAIN PARTNER

Kevin Holland has Pune on his mind, even though it is 4,500 miles from his base in Hampshire, in the south of England. He oversees [Albright International's](#) global manufacturing from factories in the UK, Lithuania, and China. The company makes DC contactors and emergency disconnects that are used in a host of applications across sectors, including telecom, marine, electric vehicles (such as forklift trucks), and wind turbines. Soon, he will have an engineering team in India too.

Pandemic-induced lockdowns put massive pressure on his supply chain. For months, he had tens of thousands of switches stuck in Shanghai. These delays spurred him to reconsider a decade-old plan to establish a base in India. "Twelve years ago, it was easier to do business in China than in India, so we put that plan on hold. That has changed," he says.

Now, India is a priority. In the past year, the company registered a legal entity in India, interviewed and appointed a local general manager, and started looking for land for a factory—all via Zoom. Holland is now visiting India in person to check the progress and finalise the factory site and its setup.

For Albright International, India has become part of a 'China-plus-two' strategy and its appeal goes beyond wage arbitrage. Says Holland: "Our overseas operations have grown significantly since they were established in 2009. Lithuania gave us a low-cost base in Europe. China gave us a means to expand and grow our market share there, and in South Korea, Malaysia, Japan, and Australia. Now India will help us achieve several goals. We already have a presence with two dealer relationships, so we know there's demand. The tag that says 'Made in India' will give us a much more powerful hand in the market, where we'll initially bring established products into the electric vehicle and solar energy markets. India also lets us build at a lower cost and, importantly, it gives us access to some brilliant engineering talent. I must admit, despite 30 years in the trade, I was shamefully ignorant of India's engineering capabilities until recently. I bought a machine made in India and was so impressed I ordered a second one. The fact that there's a bias towards British engineering standards and British law makes doing business easier."

He also sees this investment as an opportunity to grow intra-company trade and networks. "We'll be shortening lead times because the shipping times are closer", says Holland. That reduces risk and

dependency on other parts of the world that may be compromised by geo-political unrest or local lockdowns. "We're giving ourselves a contingency plan and other strings to our bow," he adds.

Albright International is in good company. Risk mitigation has become a major factor in supply chain planning. Management consulting firm McKinsey reports that 95 per cent of respondents to its 2021 supply chain survey now have a formal supply chain risk management process. 'The pandemic pushed risk to the top of virtually every corporate agenda' says the [report](#).

"I BOUGHT A MACHINE MADE IN INDIA AND WAS SO IMPRESSED I ORDERED A SECOND ONE."

Kevin Holland



Albright International is following in the footsteps of other pioneering companies such as construction equipment giant JCB, which has been making and selling products in India since 1979. It has built a powerful brand and enviable market share in a country hungry for infrastructure. JCB Chairman Lord Anthony Paul Bamford, speaking in Gujarat in April 2020, said that India accounts for almost one-third of the company's global sales. Its newly inaugurated GBP 100 million factory in Vadodara, Gujarat, has been established to export components to JCB facilities in the UK, USA, and Brazil.



Korean car company Hyundai has been making in, and exporting from, India for a quarter of a century. India is the global hub for its hatchback range. Jeep manufactures its Compass SUV in India. Not only is the car a big hit in India, the Indian-made model is also exported to Japan, home to some of the world's largest car companies.

The case for India, as a supply chain destination and as source of advanced manufacturing, is multi-pronged. There are strong supply side factors, plenty of local—and growing—demand, and government support. >



**"HAVING MORE HUMAN
MINDS ON HAND CAN
BE A HUGE ADVANTAGE"**

Richard J. Schonberger, Author

PRO-BUSINESS GOVERNMENT

In the past eight years, the Indian government has been busy encouraging economic development and foreign investment. The BJP is seen as a pro-business party.

The National Institute for Transforming India, known as NITI Aayog, is the government's think tank and policy department. Established in 2014 as Prime Minister Modi took office, NITI Aayog replaced the 65-year-old Planning Commission, a relic of the post-Independence command economy. Its broad remit stretches from agriculture to technology. Until June 2022, it was led by Amitabh Kant, author of 'Branding India: An Incredible Story', a blockchain advocate, and an avid user of social media. His fingerprints are on many of the initiatives promoting India's role in supply chains.

Make in India has been the BJP government's flagship policy. Launched in 2014, it is part of a bold agenda to make India a design and manufacturing hub. Allied to Make in India are changes that allow greater foreign investment in key sectors such as railways, defence, insurance, and medical devices.

The National Policy for Advanced Manufacturing seeks to boost manufacturing's share of GDP from 16 per cent in 2016 (when it was announced) to 25 per cent by 2025. The policy encourages the implementation of Industry 4.0 smart technologies such as robotics, Artificial Intelligence (AI), Internet of Things (IoT), and process digitisation, to make Indian manufacturing globally competitive.

VOCAL FOR LOCAL

Atmanirbhar Bharat Abhiyaan (self-reliant India), announced in May 2020, was a government response to the Covid crisis, seeking to reduce reliance on imports. The initiative also uses the phrase 'vocal for local', and made headlines when it featured in Prime Minister Modi's annual Independence Day speech. Many business executives and commentators viewed the self-reliant ambition as protectionism, but the BJP government has been keen to stress that its objective is instead to launch India on a 'quantum leap' in the global economy.

Growth in the manufacturing sector will be boosted by a series of Production Linked Incentives (PLI), announced in 2021 and designed to add USD 520 billion of incremental production over the next five years. The focus is on sunrise industries such as semiconductors, where India is an importer. "Once you create the basic essence of semiconductors in India, we will be able to do a lot of that manufacturing in India. The aim through PLI in semiconductors is really to give a major boost and thrust to manufacturing in India," Kant told [The Economic Times](#).

MANY FORMS OF SUPPLY CHAIN INTEGRATION

Policy support is important but it is largely private companies, whether domestic or foreign, which deliver goods and services. Investing in physical assets and establishing company-owned factories in India is by no means the only way for international enterprises to integrate the country into a supply chain. Plenty of supply chain partners are geared to help those looking to India—whether as sourcing partners, logistics providers or contract manufacturers. Pharmaceutical, textiles, chemicals, automobile, mobile phone, and aerospace companies have long contracted out parts of their manufacturing.

[TVS Supply Chain Solutions](#)

(TVS SCS) is prominent in this realm. Part of the South Indian TVS Mobility Group, it offers what it calls Integrated Supply Chain Solutions. Sukumar K, TVS SCS India CEO, explains: "We source and procure on behalf of customers. Our logistics operation centres are either an implant within the customer's premises or an external logistics operations centre. We offer finished goods warehousing, transportation and aftermarket support, and fulfilment as well. In addition, we have free trade zone warehousing operations in Chennai. Customers can import, store, and do value-addition, and either re-export or import into India for domestic consumption".



The company is present in more than 25 countries, including the UK, where it is based in Chorley in Lancashire. It has customers from North America, Europe, Asia Pacific, and Australia, serving businesses as diverse as vehicle manufacturers, ATMs and PoS machines, and medical devices.

Sukumar sees TVS SCS as more than a local logistics partner. It is an enabler of growth and innovation. He cites a couple of examples. "We're working with a British smart meter company which provides solutions in the UK, and we're now helping to bring that technology here to pitch to utilities in India. For office automation, we created a solution in the Indian market that's now being duplicated in foreign markets."

As in all areas of life, technology plays an increasing role in supply chains. PwC's 2020 report '[Connected and autonomous supply chains ecosystems 2025](#)' says: "Supply chains are becoming more integrated with multiple value chain partners. They're also becoming not just automated but autonomous—able to act with limited human intervention—and ultimately self-orchestrating." >

Sukumar says TVS SCS is augmenting its services with IoT, robotics, and other Industry 4.0 technologies. “These are optimising inventory planning and streamlining machine handling processes for our global customers,” he says.

PROBLEM SOLVING IS A BIG DRAW

It's clear that technology will play an ever-bigger role in supply chain as well as in advanced manufacturing. But one of India's assets is its human resources—an abundance of talent. Daniel Wallbank of pet food company T.Forrest highlights this, along with access to cheap raw materials, as a key factor for his company's investment in India.

Back in 1987, long before the world was talking about digital transformation, business guru Richard J. Schonberger made the case for human hands and minds in manufacturing. Writing in Harvard Business Review, he said: ‘Doing without robots and computers keeps line employees on the payroll. And—need this be said?—having more human minds on hand can be a huge advantage. [...] A problem-solving atmosphere is always present.’

So, while companies rightly look for technology integration, it is worth remembering that in India the problem-solving atmosphere is often present.

GST AND GATI SHAKTI REDUCE FRICTION

India's scale and diversity is a challenge for any company. Shifting goods is a complex business, and geography doesn't discriminate between domestic and foreign firms. The introduction of a Goods and Services Tax in 2017 has gone some way to taking out friction, by streamlining taxation between states. But logistics remains a costly activity.

In 2021, the Government of India announced a National Logistics Policy, the Gati Shakti programme. This is designed to improve multi-modal linkages. Says TVS SCS's Sukumar: “The combination of GST and Gati Shakti is helping to expedite logistics, and that adds to India's appeal as a manufacturing destination.”

Explaining the initiative, Amitabh Kant says: “In the proposed plan, all the existing and proposed economic zones have been mapped, along with the multimodal connectivity infrastructure, in a single platform. Gati Shakti will bring synergy to create a world-class, seamless, and multi-modal transport network in India. A GIS-based Enterprise Resource Planning system, with 200+ layers for evidence-based decision-making, is one example. The use of satellite imagery for monitoring is another. Digitisation will play a big role in ensuring timely clearances and flagging potential issues, and in project monitoring as well.”

UK AND INDIA REBOOTING

All this is taking place as India and the UK are negotiating a Free Trade Agreement (FTA). This is part of the UK's post-Brexit strategy to build trade with fast-growth Asian markets. India is already a major inward investor to the UK (the second largest, behind the USA) in terms of number of projects. During Prime Minister Johnson's visit to India in April 2022, there were optimistic noises from both sides and a target for an FTA to be inked by Diwali in October 2022.

Reports suggest this could double UK-India bilateral trade to GBP 50 billion by 2030. Reduced tariffs on imported alcohol and medical devices, and mutual recognition of professional and educational qualifications are on the table.



Photo: IndiaTimes

Defence and security are key areas under discussion. Cooperation is already being boosted in a sector in which the UK is a world leader.

From an advanced manufacturing perspective, there is interest in innovation and joint research and development in cyber security, space, counter-terrorism, and maritime. An agreement between the UK's Defence Science and Technology Laboratory and India's Defence Research and Development Organisation is nearing completion. A joint [statement](#) by PM Modi and PM Johnson stressed ‘the importance of robust defence industrial collaboration for manufacturing of defence equipment, systems, spare parts, components, aggregates, and other related products and key capabilities, under the Make in India programme through co-development, indigenisation, transfer of technology and setting up of joint ventures for meeting the needs of the Armed Forces of India and other countries’ >



**NATIONAL MASTER
PLAN FOR MULTI-MODAL
CONNECTIVITY, GATI
SHAKTI, WILL CREATE
A WORLD-CLASS,
SEAMLESS TRANSPORT
NETWORK IN INDIA.**

LONG-STANDING DEFENCE LINKS

Since the Government of India prohibits the import of much military equipment, local manufacture in India, often in partnership with a local firm is the only way to access the market. **Rolls-Royce** (R-R) is one UK company long present in India's aerospace and defence industry. The aero-engine maker first came to India in 1932. R-R engines have been made in India under license by Hindustan Aeronautics Limited (HAL) since 1956, starting with the Orpheus

its MT30 marine engines as the country looks to upgrade its marine security.

Government support is key to success in the defence procurement side of R-R business. The UK and India have in place a Defence Equipment MoU. "They are two large countries and it's a strategic relationship. But we must remember that there's plenty of other people also interested in India's defence sector. We must differentiate ourselves. We must explain our vision and how our proposition will be the best," he says.



engines. Today, 10 different R-R engine types power 750 aircraft for the Indian armed forces. In 2010, R-R entered a joint venture with HAL to make compressor components for civil aircraft. Made in India, those parts are exported into the R-R supply chain and used in R-R engines made in the UK and Germany. In addition to civil and defence businesses, R-R is also present through its power systems business.

INDIA IS A HOT TOPIC

Jayaraman's point is important. India is an appealing prospect. Plenty of suitors are lined up, not just for her defence contracts, but across all sectors. The hotels of New Delhi, Bengaluru, Mumbai, and Pune are awash with foreign business and government delegations. Competition is hot.

Either directly or through its JVs, which include a recent civil engine power generation and railways application partnership with Force Motors in Pune, R-R employs around 800 people. Through outsourced partners there are another 2,000 working on R-R projects. The Indian subsidiary is led by its President, Kishore Jayaraman, an India- and US-educated systems engineer and former GE business leader who joined the company a decade ago and was this year given an honorary OBE for services to international trade. His focus is on co-creation, co-development, and co-manufacturing in India with Indian partners. "If you're not willing to do that, you'll not have much luck in India. It's important that not only purchases are made here, but the whole lifecycle of an engine can be managed within India. To that end, we are well integrated into the ecosystem. We work with Infosys, TCS, Bharat Forge, L&T, Infotech, and a host of smaller supply chain partners", he says from his base in the capital.

Working with local partners and jointly investing in feasibility studies and market visits are a way to build relationships. The UK may have longstanding ties with India and the so-called Living Bridge that connects the two nations. But in the 21st century, 75 years after the country gained Independence, the past is no guarantee of future success. Post-pandemic, our world order is changing. Economic power has shifted east. More than half the world lives in Asia. The needs of Asia's consumers must be met locally with products and services tailored to their current phase of development.

India is bordered to its west, south and east by more than 7,500 kilometres of coastline. Marine technologies are a growth area for R-R in India, and it signed a 2021 MoU with HAL to introduce

JCB's success in India, over more than 40 years, has largely been due to its willingness to cater to local needs and build a relevant portfolio of products. Bamford, its Chairman, famously spent long periods of time on the ground in India early in his career to understand the unique needs of India's construction sector. JCB now exports from India to over 100 other markets in part because of its supply chain investments. "We encourage our vendors to be suppliers for JCB, not just JCB India," says managing director and CEO, JCB India, Vipin Sondhi. That's the 'art of the possible'. ■



LABOUR

India has an abundance of talented workers. As well as making its labour market more flexible, India is focused on developing a workforce that has the skills of the future. This means a focus on STEM, digital, and creative skills.



LAND

Manufacturers need land that is close to efficient ports and to skilled workers. The National Logistics Policy is addressing the connectivity of road, rail, and ports. This is vital for supply chain efficiency.



LAWS

UK companies gain comfort from the fact that Indian law is based on the UK's legal structures. The UKIBC's [Doing Business in India](#) report repeatedly highlights that legal and regulatory issues are the main barriers to investment. Recent adoption of digital technology in this space is to be welcomed.

WHAT COMPANIES NEED IN INDIA

Indian companies and in-bound investors need the same things: Labour, land, laws, and liquidity.



UK India Business Council is advocating on all these points, says Managing Director Kevin McCole: "India has been an important manufacturing base for UK companies for decades. Rolls-Royce, BAE Systems, and JCB are just a few examples of UK businesses that have long been

making in India. What is particularly encouraging now, is that alongside the emergence of regional supply chains and the growing importance of resilience, it is becoming easier for businesses to establish operations in India, and to enjoy a variety of benefits. The four Ls of labour, land, laws, and liquidity are vital—and India is strengthening in each, thanks in part to a government that is welcoming of foreign investment and a dramatically improved ease of doing business. Much of the world's growth in the next couple of decades will continue to take place in India, or other Asian markets accessible from India, so establishing a presence now will clearly bring an early mover advantage in what is a fast-growing but still largely untapped market from a global standpoint."



LIQUIDITY

India's domestic consumption—household and corporate—is important. GDP per capita growth means higher disposable incomes. Companies that Make in India will also want to sell there.

UK PET FOOD PLAYER SEES INDIA PLANT AS KEY TO GROWTH

“INDIA OFFERS A CHANCE TO CREATE SCALE THAT’S NOT POSSIBLE IN THE UK”

Daniel Wallbank

T.Forrest is an 85-year-old family firm making and selling natural dog treats. It began life in the north of England, supplying corn to the agricultural industry. Over the intervening decades, it has evolved into a leading pet food brand.

Daniel Wallbank is part of the fifth generation to work in the business. He joined the company

India won, hands down. Says Wallbank: “India scored well particularly on the exchange rate, which is very stable. That risk was too big in the other destinations. Ease of doing business is a big factor.”

With the support of UKIBC, T.Forrest has managed to establish a company, find premises, and identify a general manager—all without setting foot in India.

“We have gone as far as we can with UK manufacturing. By making in India, we can build a bigger product range. In the past, we’d used Indian contract manufacturers. We liked the price, but quality wasn’t great, so establishing our own facility makes sense.” Some refrigeration will be imported, but all other equipment can be sourced locally. T.Forrest’s is a sourcing strategy to achieve scale. The company does



a decade ago and now, as head of Business Development, is looking for growth ahead of its centenary. His ambitious plans for the next phase of expansion includes boosting sales in the huge North American pet care market. To crack the USA, he is setting up a plant in India.

Says Wallbank: “India offers a chance to create scale that’s not possible in the UK. We want to grow market share in Europe and the USA, but can’t until we have supply in place. We had talked about overseas manufacturing in the past, but found the motivation only now. One of the recent problems has been lack of supply. Covid has caused supply chain disruption, including in abattoirs, and Brexit has meant a lack of labour.”

Wallbank and his colleagues assessed three possible markets: Brazil, Turkey and India. They looked at availability and cost of labour, population of cattle, and exchange rate fluctuation.

not currently see India as a market though it may serve other regional markets such as Japan. Says Wallbank: “The USA is our priority and expansion there, through mega chains such as Walmart, can’t be achieved without the scale that India offers. ■



ART OF THE POSSIBLE TAKES TO THE STREETS

Car sales may be up in India, but its bustling Tier-2 cities are largely two-wheeler cities. Before being hit by the pandemic, sales of scooters and motorcycles hit a record 21 million in 2019, with India overtaking China as the world's largest two-wheeler market in 2017. There are an estimated 215 million such vehicles on India's roads today.

TVS Motors—a Bengaluru-headquartered multinational with a new state-of-the-art bike factory in the UK's West Midlands region—is India's third largest maker of two-wheelers, producing more than three million vehicles each year. "We produce one every seven seconds," says Sharad Mishra, President of Group Strategy at TVS Motors, from his Singapore base.

The company has three plants in India, and a manufacturing presence in Southeast Asia, with a capacity to make 200,000 units annually in Indonesia. Around one third of TVS Motors' output is destined for around 80 overseas markets. To succeed, its products must be suitable for varying needs, catering to a difficult terrain in Africa or addressing more aspirational product choices in Asia and Latin America—all while driving a more sustainable future for global mobility. "We focus on constantly innovating our products as per changing local conditions and technological advancements," says Mishra.

Today, the company has products across the two-wheeler market—from entry-level mopeds built as basic utility products, through a range of commuter vehicles to suit a variety of budgets, to new-age electric scooters and racing bikes such as the hugely popular Apache RR310 platform designed in India in partnership with German auto giant BMW.

Competition in the premium segment has become fierce as disposable incomes rise and consumers demand more than just a means to get from A to B. Royal Enfield—now owned by Delhi-based truck maker Eicher—pitches itself as an aspirational lifestyle brand, and is loved by India's affluent young riders. Its blend of rugged functionality, reliability, and aura of authority have made it a must have for millions of millennials. Seeing the huge appeal of classic bike brands, TVS Motors acquired the iconic British brand Norton in 2020. Mishra, who sits on Norton's board, stresses what he sees as complementary values around innovation, performance, and the quality of design. "Both Norton and TVS have a reputation for being unbreakable", he says.

Mishra says the company's success is helped by several factors, led by its entrepreneurial spirit and tech-savvy talent. "We have excellent integration of technology in our plants and high-quality supply chains."

The added ingredient, he says, is the challenger mindset of TVS Motors, combining experimental thinking with the agility required in uncertain times. This is visible through its pioneering efforts, such as launching the first connected Indian scooter in 2018, or becoming the first Indian two-wheeler company to join the UN Global Compact, the world's largest sustainability initiative in 2021. Innovation-led multinationals such as TVS Motors along with India's growing start-up ecosystem, are today fuelling its vibrant economy.

"INDIA HAS BECOME A HOTBED OF DISRUPTIVE IDEAS. WE LIVE BY THE ART OF THE POSSIBLE"

Sharad Mishra



TVS Motors is now applying the art of the possible to what Mishra terms 'future mobility'. The company is becoming a leader in electric vehicles and has made acquisitions in the UK and Switzerland. The strategy is, he says, to improve quality of life through mobility. "We're not wedded to one asset type. We're expanding our partnerships and product line to stay ahead and drive growth for the next 5-10 years." ■



FRUGAL ENGINEERING TAKES FLIGHT IN HIGH HIMALAYAS



An army marches on its stomach. A fighting force needs provisions. With around 200,000 military personnel stationed in the Himalayas, India's is the world's largest mountain force. Soldiers may be deployed at altitudes of up to 8,000 metres, where temperatures drop well below 0°C in the winter months. It is a brutal environment, making logistics and provisioning a gargantuan task.

An estimated 15,000 porters are hired each year to transport supplies. It is arduous, dangerous, and slow work with numerous deaths each year.

Much closer to sea level, in the state of Odisha on the flatlands bordering the Bay of Bengal, a tech start-up is building a solution to the Indian army's Himalayan logistics challenge. [BON V Aero](#) is making India's first AI-powered, multi-utility electric air vehicle. It is clean, smart, sustainable and safe—and has, according to the company, the world's smallest and lightest avionics footprint. This is frugal engineering in action.

FRUGAL ENGINEERING

The term is attributed to Carlos Ghosn, then boss of Renault and Nissan, who defined it as "achieving more with fewer resources". Frugal innovation or frugal engineering is used to describe innovation in highly resource-constrained environments.

There are numerous examples in India, where necessity is the mother of invention. Arun Cherian, a mechanical engineer, made prosthetic legs for amputees using cane, costing just a few dollars. Mansukh Prajapati, a potter, created an entirely clay fridge, which while using no electricity, keeps fruits and vegetables cool and fresh for days.

In his 2017 TED talk, Navi Radjou said that frugal innovation is not simply about making do; it's about making things better.

The prevalence and success of India-born executives in multinational companies may be attributed to the fact that they have grown up in resource-constrained environments and had to make do with what they had.



The problem it is solving is uniquely Indian—but the solution has many applications in a host of other environments. BON V Aero claims its airborne logistics are seven times cheaper than the current air transportation solutions available. Using 4G and 5G connectivity, its transporter will communicate and navigate autonomously. The company says: "Apply these gains in disaster relief, emergency medical supplies and commercial logistics, and an astonishing new vista opens before your eyes." As we feel the impact of climate change, more parts of our world will become inhospitable and difficult to reach. As cities become more densely populated, local policy makers will seek carbon-neutral solutions for urban transportation. More e-commerce means more deliveries.

The Bhubaneswar-based company is a product of the Indian Institute of Technology (IIT) Mandi business incubator (see below). ■

BREEDING TALENT

India produces millions of engineering and technology graduates each year. At the apex of the nation's higher education system is a network of premier institutes. Twenty three Indian Institutes of Technology (IITs) are spread across the country. Competition for admission is fierce.

The first was established in 1951 in Kharagpur in West Bengal. By the end of the 20th century there were six. In the past 22 years, a further 17 have been created, including five in 2016. In total, they produce around 16,000 graduates each year.

INDIA IN NUMBERS



Production-linked incentives will add
£415 BILLION
of production over five years

India's logistics sector will be worth more than
£255 BILLION
by 2025*



Manufacturing's share of GDP set for
25%
by 2025

943 MILLION
Indians of working age in 2025**



23 Indian Institutes of Technology produce around
16,000
graduates each year

17.7 MILLION
two-wheelers were sold in India in 2021



*McKinsey Global Institute
**Niti Aayog

LOOK BEYOND THE OBVIOUS



There are many Indias. It is a diverse and complex country—from the frozen peaks of the Himalayan mountains to the rugged ribbon of its more than 7,500 kilometres of coastline. The tech campuses teeming with software geeks in Gurugram and Bengaluru have little in common with the sparsely populated rural heartlands of Gujarat or the forests of Madhya Pradesh.

Diversity is one of India's great charms. Complexity is one of its great challenges.

The reasons why companies look to India vary greatly. Some see India as a source of talent. Others view it as a massive market, with a growing appetite for goods and services. Some think of it as a hedge against China or a stepping stone into Asia. Others see it as a hotbed of innovation where anything is possible. It is all of these, and more.

In this report we've heard from companies across sectors, at different stages of their growth, each seeing India through its own lens. Rolls-Royce has been in India for decades and earned its reputation as a trusted partner in the defence sector. T.Forrest is just setting up its first factory in India to 'Make in India' and export elsewhere. Having learned from its success in India's highly competitive two-wheeler market, TVS Motors has built an international footprint and is focused on creating a future mobility ecosystem centered on innovation. BON V Aero is solving a tricky Indian problem, in the shape of high altitude air transportation, and in doing so, building a machine with much wider applications.

India is also a catalyst. It offers new ways of working, digitally adept talent, policy support and growth-oriented mindsets—combining frugality with innovation, agility, and scale. Those mindsets help us respond to the volatility, uncertainty, complexity, and ambiguity that plague us.

India gives companies an edge. But dedication and patience are needed. It is not for the faint hearted. Things happen quickly and slowly simultaneously in India. Projects can be derailed by cultural differences. India's scale and complexity make it a tough market. Despite progress in recent years, India's bureaucracy can still be an enigma requiring a careful approach.

The first item on the agenda, for any business looking to India, should be to develop an entry strategy based on factual market insights, and identify the right partners. Networks, resources, and experience will be key in navigating the challenges. [UK India Business Council](#) has the knowledge, networks, and people to help you figure out which of the many Indias you should be looking at, and as importantly, which not. It will help you put a plan into action that lets you integrate India into your operations so that you get the most from its diversity, without coming unstuck because of its complexity.

To learn more about how UK India Business Council can help you, contact manufacturing@ukibc.com

UK INDIA

BUSINESS COUNCIL

WHO ARE WE?

The UK India Business Council is a strategic advisory and policy advocacy organisation with a mission to support businesses with the insights, networks, policy advocacy, services, and facilities needed to succeed in the UK and India. We believe passionately that the UK-India partnership creates jobs and growth in both countries, and that UK and Indian businesses have ideas, technology, services and products that can succeed in India and the UK respectively.

GET IN TOUCH

UK INDIA BUSINESS COUNCIL LONDON

105 Victoria Street,
London SW1E 6QT
manufacturing@ukibc.com
Tel: +44 (0)20 7592 3040

UK INDIA BUSINESS COUNCIL GURUGRAM

WeWork, DLF Forum, Cyber City,
Phase III, Sector 24,
Gurugram 122002,
Delhi-NCR
manufacturing@ukibc.com
Tel: +91 (0) 124 502 6059

DOING BUSINESS IN INDIA HELPLINE

For support call +44 (0)20 7592 3040

WEBSITE

www.ukibc.com

ART OF THE POSSIBLE

UK India Business Council

Gunjan Sharma
Kevin McCole
Kealan Finnegan
Rohit Singh

[teammagenta](#)

Mark Hannant
Needhi Bharmani
Ritika Arya