

A lunar fuel to power the Earth

Several govt space agencies and private concerns are interested in mining the moon for Helium-3. This could also spark a new space race



QUANTUM LEAP

DEVANGSHU DATTA

Delos David Harriman, (DDH) is a name familiar to science fiction buffs. In Robert Heinlein's classic, *The Man Who Sold the Moon*, DDH persuades the United Nations to appoint him the agent for selling lunar real estate.

The possibility of commercial exploitation of lunar resources is now being discussed in several quarters.

Several government space agencies, including apparently Indian Space Research Organisation (ISRO), are interested in lunar mining. China has also announced its plans to try and mine the moon for Helium-3. Sivathanu Pillai of ISRO said India could, in theory, meet its entire energy requirements by using Helium-3 sourced from the moon. Pillai even set a date, claiming that the technical process for mining could be solved by 2030.

Private concerns are also interested. An American company, Moon Express, has raised around \$45 million for a moon mission. Moon Express, co-chaired by Indian-American Naveen Jain is one of many contestants targeting the Google Lunar XPRIZE, by putting a robotic lander on the moon.

The Bengaluru-based TeamIndus is also in the running for the XPRIZE. The lander must navigate 500 metres across the moon's surface and send

back high-resolution video. The XPRIZE also sets conditions to ensure maximal private contributions in both financing and design of the lander.

Moon Express' long-term goals go beyond trying to win the prize. It hopes to mine the moon for valuable resources such as Helium-3, gold, platinum group metals, rare earth metals and water. It also hopes to kick-start research on human space colonies.

Helium-3 or He-3 is a rare isotope of the gas, helium. He-3 contains two protons and one neutron whereas normal helium (He-4) has two neutrons and two protons. The quantum-mechanistic properties of He-3 and He-4 are different. He-4 is practically inert whereas He-3 features in certain nuclear reactions, while being chemically inert. He-3 is used as a neutron detector since it absorbs and converts neutrons easily. It is used in MRI scanners and in specialised equipment to detect plu-

tonium, a radioactive element that can be used in nuclear weapons.

He-3 is not naturally abundant on Earth though it is abundant in space. It is produced by nuclear reactions in the sun and is also found in gaseous giant planets such as Jupiter, Saturn, Uranus and Neptune. But the Earth's thick atmosphere and magnetic belt prevent much He-3 getting to the Earth. It can be produced in nuclear reactors via the radioactive decay of an isotope of hydrogen, tritium.

Production of He-3 has declined as the world has become safer. Tritium is used in nuclear weapons and the explosive power of the war-head reduces as the tritium decays to produce He-3. Hence, the He-3 is removed from weapons. As nuclear arsenals have reduced, He-3 production has dropped.

The "killer app" is that He-3 can be used in reactors to generate power. In fact, He-3 is a safe, clean fuel. Deployed in fusion reactors, He-3 produces clean power and water with no carbon footprint and no radioactivity. Thus, it would be an important alternative fuel if it was easily available.

The moon doesn't have an atmosphere or a magnetosphere to prevent

He-3 from being deposited from space. It is believed that He-3 is captured in huge quantities in the thick layers of dust on the moon's surface. If lunar dust is heated to sufficient temperatures, the He-3 could be released and captured.

Mining the moon would involve setting up solar panels to provide power to heat the dust. Robots could then heat the dust to 600 degree C or higher to release He-3, which would then be collected in special containers and transported to Earth. Just 40 tonnes of He-3 would be enough to power the USA for an entire year and about 160 tonnes could meet annual global needs. A single space shuttle can carry around 20 tonnes. It is estimated the moon has enough He-3 to power the Earth for thousands of years.

There are formidable engineering challenges to pulling off such a mining operation. But it might be possible to do this, and to do it economically. There may be legal issues as well since the United Nations Outer Space Treaty suggests that lunar resources are owned by all mankind. This is an intriguing prospect that could spark a new space race and perhaps, a space war to control such resources.

CHINESE WHISPERS



Communication drive

The Uttar Pradesh Assembly election result seems to have rattled the ruling Congress in Karnataka. With by-elections around the corner and senior Congress leaders complaining that the party lags behind the Bharatiya Janata Party only in PR and marketing, Chief Minister Siddaramaiah (pictured) is using every opportunity to highlight the work done by his party in the state. He started off the presentation of this year's state Budget with a blow-by-blow account of his government's achievements over the entire span of four years before moving on to the announcement of new sops.

Twitterati rap Kejriwal charge

Aam Aadmi Party Convenor and Delhi Chief Minister Arvind Kejriwal was in the line of fire on Twitter after blaming "hacking" of electronic voting machines and "wrong predictions" by journalists for his party's poor showing in the Punjab and Goa Assembly polls. "People have used Aam Aadmi Party symbol broomstick on AAP itself," said a post on #CryBabyKejri. "By now Ekta Kapoor has already decided the next *bahu* for her next 30 serials," said another. Senior journalist Vir Sanghvi tweeted: "Great. Because ruling BJP and Akalis rigged the polls to ensure they would lose and Congress would win? Mad!"



Coffee with Paytm

A regular patron of a popular coffee chain was in for a surprise when he ordered his regular cuppa at an outlet near Paytm headquarters in Noida. When the steaming, frothing cup arrived at his table, instead of the usual heart or smiley face on the foam, on it was written: Paytm. The server said that was a new way to remind customers that they could pay for their coffee with the e-payments wallet. "Is this paid for?" the patron asked. "Of course," replied the server. "Why else would we do it?" Now that's one steaming, hot advertisement.

Getting India's women into the workforce

It is important to work around social norms about appropriate behaviour for women and how these are enforced by family members



ROHINI PANDE

Between 1990 and 2015, India's real gross domestic product (GDP) per capita grew from US\$375 to US\$1,572, but its female labour force participation rate (LFPR) fell from 37 per cent to 28 per cent. This gives us a puzzle to solve: Why isn't India following the same trajectory as most other countries at a similar level of growth, where female LFPR rises with GDP? Raising that rate is a high priority, not only because of the diverse benefits that increased economic autonomy brings women, but also because growth will likely be stronger when more working-age citizens of either gender are employed.

The answer to the low LFPR mystery isn't a lack of interest on the part of women. The 2011 National Sample Survey shows that over a third of women engaged primarily in housework say they would like a job. That number rises to close to half among the most educated women in rural India.

The answer isn't lack of apparent political will, either. The government of India has poured huge resources into girls' schooling, but that hasn't translated into higher female LFPR as it has in other countries. Initiatives such as Skill India and Make in India have quotas to include women, yet they struggle to recruit women, place them in jobs, and keep them in jobs once they are placed. Instead, a growing body of research

suggests that an important part of the answer appears to be social norms about appropriate behaviour for women, and the enforcement of these norms by women's parents, husbands, and parents-in-law. The 2011 Indian Human Development Survey shows that a very sizeable fraction of Indian women say they require permission from a family member even to go to the local market or health centre. In the end, it's pretty difficult to look for a job if you can't leave the house alone. A survey of men and women, who entered skills training programmes, shows that family pressures and responsibilities was by far the most common reason women didn't accept jobs or quit them, while low pay was the main reason for men.

When the stumbling block is social norms rather than, say, lack of resources or human capital, then it changes how we can make progress and calls for a smarter policy response.

Get the policies right

How do we provide economic opportunities for women when norms militate against women's work? I will describe two insights from my recent work with colleagues that give hints on how to change women's behaviour and draw women into the workforce.

Give women control over the money they earn

India's rural workfare programme Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) has achieved some success in targeting women, in part because it provides them employment close to home. But, until recently, the default was to pay wages into the bank account of the head of the household, usually male. My colleagues and I ran a large-scale experiment in Madhya



ECONOMIC INDEPENDENCE The rural workfare programme, Mahatma Gandhi National Rural Employment Guarantee Act, has achieved some success in targeting women, in part because it provides them employment close to home

Pradesh to test the effect of several combinations of interventions: providing them with their own bank account, having their MGNREGA payments directly transferred there, and giving them basic financial literacy training so they know how to use the account. The study is still underway, but we already have some remarkable results.

We found a range of financial benefits from the different interventions, but women who received all three showed the biggest changes: They were more likely to have worked more, both under and outside MGNREGA; they reported 25 per cent higher earnings and 60 per cent higher bank balances, and were more likely to make household purchases with their own money. ■ Foster women's social networks

In a recent study, my co-authors and I worked with Self-Employed Women's Association (SEWA) Bank, the largest women's bank in India, to offer women customers a two-day course in business skills and how to set goals. In the treatment group (those who were offered the course), half of the women received the offer for them alone, and the other half were invited to bring a friend. We found that, while both sets of women were more likely later to take out a loan than women who didn't take the course, those who had a friend along were even more likely to do so. Furthermore, those who came with a friend were more likely to use their loans specifically for business purposes, while the women who were invited alone mostly used them for home repair — largely unrelated to their businesses.

Most strikingly, women who were invited to the training with a friend had significantly higher household income and consumption levels four months later, and were less likely to report their occupation as housewife.

When women have little bargaining power in the household, they need to revert to their networks with other women to effect change. We've seen this happen in the temperance movement, where women cooperate to influence a household decision, that is, whether their husbands drink. Women can tap into that power to influence other household decisions — what kind of investments to make, and whether or not to work.

Synthesising knowledge

While across South Asia, men participate in the labour force at the same rate of around 80 per cent, women's participation varies widely. Pakistan's female LFPR is lower than India's at 25 per cent, but it is rising, while in Bangladesh and Nepal, female LFPR has hovered well above the international average for decades. On March 23-24, 2017, the research group I co-direct, Evidence for Policy Design (EPoD), in collaboration with International Growth Centre and IFMR LEAD, will bring together international scholars and policy actors from across South Asia in Kathmandu, Nepal, to share research on how government initiatives to increase financial access and economic opportunities are affecting the region's women.

The author is the Mohammed Kamal Professor of Public Policy at Harvard Kennedy School and Co-director of Evidence for Policy Design. Published with permission from Ideas For India (www.ideasforindia.in), an economics and policy portal

BUSINESS LIFE

Provincial life of the digital nomad

Remote-work plans help techies see the world, not actually live in it

LINDA KINSTLER

One recent evening, real estate executive Micki McNie stayed late at the office to close a deal with a new client looking to buy a home. Business was booming at the Denver-area company she runs, 33 Zen Lane, but she still couldn't afford to push the contract to the morning — that would ruin the tour planned for Cambodia's Angkor Wat.

McNie has spent the past six months coordinating the team of brokers at her extremely brick-and-mortar business from abroad — first from the island of Jeju in South Korea, then from Chiang Mai, Thailand — courtesy of Hacker Paradise, a "travelling community for creative types". Some unfortunately timed phone calls aside, it's been healthy for her three-year-old company. Going abroad "was a choice to step into a more managerial role, or to walk away", says McNie, who sought out Hacker Paradise on the advice of a business coach. These days, she's closing deals from Jávea, across from Ibiza on the coast of Spain.

Should you desire a similar experience, it'll cost you. A handful of companies will set you up with shared workspaces in far-flung locales for about \$2,000 a month, which may or may not include living quarters. Trips last anywhere from a few weeks to the rest of your life. The patriarch of the roving office clan is two-year-old Remote Year, whose co-founder, Greg Caplan, attributes its sudden popularity to the ballooning of the "odyssey years" between college graduation and settling down. "That period of time used to be about



Some of those who are part of the roving office clan say the concept has increased their productivity and enriched their professional lives PHOTO: ISTOCK

three to six months, but now it can be 10 to 15 years," he says.

If hordes of wanderlust young workers are one key component, then the broadening of broadband access is another. "Over the past five years, the soaring infrastructure around the world has made remote work more common and more feasible," says Hacker Paradise founder Casey Rosengren. While many companies limit their nomads to wired cities such as Prague, Hong Kong, Tokyo, and Madrid, part of the allure to travellers lies in going farther afield. WiFi Tribe Co co-founder Bejarano Gerke says he warns clients headed to less reliable locales: "It won't be perfect, it won't be like at home, but we're setting up fail-safe systems" — that is, mobile 4G hotspots — "so your work doesn't need to be affected."

One irony of the remote-work concept is that constant connectivity winds up throwing barriers between you and the places you've travelled so far to inhabit. Some remote workers

have to be online at the same time as colleagues in San Francisco, Austin, and New York, meaning they're often working and sleeping when locals are socialising and going about their days. Sleep deprivation makes it that much harder to adjust to a new culture. "Amid the onslaught of scooters, stray dogs, and seemingly orderless traffic in South-east Asia, small tasks like buying contact solution had become near-Olympian feats," said Mashable writer Stephanie Walden in a post about her experience as a part of Remote Year's first beta-testing cohort.

Others are unfazed, saying they increased their productivity and enriched their professional lives. "I feel like I talk to my team more now that I'm away," says Thomas Dempsey, 26, who's travelling in Brazil with We Roam while serving as chief operating officer of a New Orleans venture capital firm.

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LETTERS

Old wine in a new bottle

The launch of Trade Infrastructure for Exports Scheme (TIES) by Commerce Minister Nirmala Sitharaman — it was earlier announced in the Budget — is simply old wine in a new bottle. This scheme was earlier called Assistance to States for Infrastructure Development of Exports (ASIDE); it was discontinued in 2015 when states' shares of the Centre's net tax revenue increased from 32 per cent to 42 per cent, in line with the recommendations of the 14th Finance Commission.

TIES now envisages an outlay of ₹600 crore with an annual allocation of ₹50 crore and the Centre funding 50 per cent of projects focusing on export infrastructure from the first mile to the last.

The changes made in the new scheme are welcome and should play a vital role in boosting competitiveness of exports by providing a necessary infrastructure base unlike ASIDE. What is needed is seriousness on the part of all stakeholders — the Export Promotion Councils (EPC), Commodity Boards (CB) and other agencies — to implement the scheme in letter and spirit.

Grant-in-aid under this scheme, in addition to Market Development Assistance given to EPCs/CBs, should have targets and achieve export performance levels; progress must be reviewed periodically so that the objectives of the scheme are achieved in toto. Bottlenecks in the implementation of ASIDE such as cost overruns due to delays should be removed now. The thrust of the scheme should be on bringing in big export projects so as to gain in terms of visibility and impact. Amara Sathya via email

Need for succession plan

With reference to the editorial, "Not a part-time job" (March 16), the absence of transparent and efficient succession



Legislators go back to acting in films or anchoring TV programmes, central ministers concentrate more on solving problems in their respective parties at the state level or devoting their entire time to electioneering when polls are announced. The present arrangement gives bureaucrats an upper hand in governance, affecting the democratic functioning of government.

While conduct rules, it seems, can't be enforced on public figures, there should be some self-regulation to ensure that those in public office do justice to their jobs. Continuity in incumbency ensures accountability.

Political parties should maintain a talent pool for smooth succession. This will also help prospective candidates to prepare themselves for their expected assignments.

The time is ripe for parties to recruit candidates from the market instead of depending solely on the "catchment area" comprising ground-level workers, students, trade union leaders, lawyers and family members of current leaders.

M G Warriar Mumbai

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HAMBONE

BY MIKE FLANAGAN



An expected hike

Fiscal protectionism in the US is a bigger concern than the Fed rate

Given tight labour markets, strong gross domestic product (GDP) growth and rising inflation, it was no surprise that the US Federal Reserve raised the so-called Fed Funds policy rate for the second time in succession. The 25 basis points hike was in line with the market consensus. Despite two successive hikes, rates remain low in historic terms. The Federal Open Market Committee said, "The Committee expects that economic conditions will evolve in a manner that will warrant gradual increases in the federal funds rate." The market took heart from the "gradual" bit and the statement is not being interpreted as hawkish. However, Fed Chairperson Janet Yellen said that the Fed's outlook did not take changes in fiscal policy into account, and there was "great uncertainty" about that. President Donald Trump's promises to increase government spending, combined with tax cuts, plus import tariffs could add to inflationary pressures and force the Fed to make another hike soon. The more hawkish among the analyst community are also advocating that the Fed start "quantitative tightening" by selling off the vast portfolio of bonds that it accumulated during several years of quantitative easing.

The hike was expected and, therefore, there was little in the way of immediate reaction across global markets. The rupee strengthened and most equity markets ignored the hike. But tighter American monetary policy always has far-reaching consequences in the long run. India appears to be favoured in relative terms. There will be no problems about the balance of payments so long as crude prices stay low. Given the tag of being the fastest-growing emerging economy, India will also continue to receive foreign portfolio investment even if the pace slows. Exports appear to be pulling out of a long trough, given the expansion across the last six months. A stronger dollar could certainly contribute to higher exports, assuming that the US does not put up barriers. However, a stronger dollar will also increase the burden on companies with overseas debt. Hence, the hike will trigger abundant caution on the part of the Reserve Bank of India (RBI), which held rates steady in the last two policy reviews even as domestic inflation eased to below targeted levels. The central bank is carefully monitoring the difference between sovereign yields and it seems to be nervous about sudden, sharp changes in exchange rates. If the US dollar yields rise and the differential with rupee yields narrows, the rupee will experience downward pressure in the long term. While a weaker rupee might not be a bad idea, the RBI will have to carefully calibrate its responses to the Fed policy to ensure volatility remains within acceptable limits.

In a broader sense, as dollar yields rise, money tends to move out of high-risk emerging market assets and into the ultra-safe US bond market. That leads to a stronger dollar and often to weaker commodity prices in dollar-denominated terms. The shift to dollar-denominated assets can also lead to downtrends across global equity markets. The stronger dollar generally encourages American imports, including service imports, and the resulting American consumption stimulates the global economy. The Asian Tigers, for example, have been beneficiaries and so has India's IT and ITES sector. The difference now is that Mr Trump may impose import tariffs on goods and non-tariff barriers on services, including tighter quotas for H1B visas. That will interfere with the normal linkages between enhanced US activity and global growth. Hence, fiscal protectionism is a bigger concern compared to tighter monetary policy.

The renewables era

Promise and perils of ever lower solar and wind prices

India's renewable energy capacity, and the dynamism of the sector, continues to grow. The country has hit 10,000 megawatts of installed capacity in solar energy, up from only around 2,650 megawatts in 2014. This came with the commissioning of the Kamuthi solar power plant by the Adani group, the world's largest with a capacity of nearly 650 Mw. Almost simultaneously, an auction conducted by the Solar Authority of India for 1,000 Mw of wind power capacity resulted in the winning bidders agreeing to sell wind power for 25 years to the Power Trading Corporation, or PTC, at ₹3.46 a unit. This is not just low; it suggests that, at least in terms of auction prices, wind power is converging with solar power, which, in turn, is converging with coal-based power. A recent auction of solar power capacity at Rewa in Madhya Pradesh resulted in power contracts at ₹3.30 a unit. In other words, solar and wind power have achieved "grid parity" with coal. The average coal tariff at the moment is between ₹3.30 and ₹3.50 a unit; more recently bid out coal tariffs may be slightly higher, starting at ₹4 a unit.

While this is certainly good news and increases the likelihood of India meeting its still distant target of 175 Gw of installed capacity in renewables by 2022, there are still major grounds for caution. On the one hand, in the wind auctions, prices declined sharply even during the auction, suggesting a "win at all cost" strategy might have been employed by some bidders. If so, then the concern — as with all auctions with sharply low or high price discovery — is that the successful bidders are looking to renegotiate in the future. To what degree will making profits at these prices depend upon policy stability in the sector, and what will the goods and services tax, for example, do to margins? These questions do not have firm answers. It is to be hoped that the mistakes made in the past in the thermal power sector — over-enthusiastic bidding followed by eager renegotiation — are not repeated in this sector.

In other words, the long-term health of the power sector continues to be something that needs watching closely. The effect of such cheap, long-term power purchase agreements on the distribution company (or discom) ecosystem in general and on the recent power restructuring scheme, UDAY, should be examined. The central reform in UDAY is shifting pricing to market rates at which discoms do not make losses. Many discoms have long-term power purchase agreements in place, and thus cannot easily reduce their cost of power. But raising prices when other sources of power are ever cheaper may be difficult as well. In general, the fact that solar and wind power are as cheap, according to the market, as new thermal projects, indicates that those who said that India had commissioned its last new coal-based power plant may have been right. Even the Central Electricity Authority says no new plants will be needed for a decade. The question really is, given this tectonic shift in technology and pricing, how much of the old — old power purchase agreements, old plants — can be carried over into the new era?

ILLUSTRATION BY BINAY SINHA



The obligation on India's Hindus

Pakistan honestly excludes its minorities from political agency through law; India has adopted more devious methods

On the Indian subcontinent, political exclusion of religious minorities is the norm though the methods vary. The Islamic Republic of Pakistan is honest and excludes through law.

No Hindu is allowed to be Pakistan's president [Article 41 (2)], and no Christian can become its prime minister [Article 91 (3)]. The country has not yet figured out how to handle minority participation in politics. Till 2002, it had separate electorates, meaning non-Muslim Pakistanis could not vote with the general population. That practice continues today, though it is specific to one apostatised community, the Ahmadiyyas.

Separate electorates guaranteed Pakistan's Hindus and Christians seats, however these minorities lobbied to become a part of the general electorate, even though they would apparently have a much smaller voice. The analyst Khaled Ahmed wrote that this was because elected representatives tend to take more seriously the views of all potential voters. What Pakistan's Hindus wanted was inclusion. General Pervez Musharraf is seen by Pakistanis as a liberal on such matters and he reversed the separate electorate rule for Pakistan's Hindus, though of course the law banning them from holding high office remains.

This Constitutional prejudice has become absorbed in Pakistani society. About 15 years or so ago, I was invited to speak at one of Lahore's most famous educational institutions, the Kinnaird College for Women. At the dinner after the talk, I was chatting with some of their women professors about

the discrimination brought about by the Islamisation of the state. To my surprise, some of them said it was only right that Ahmadiyyas be persecuted because they were deviant.

Today Pakistan has 342 members in its National Assembly (the equivalent of our Lok Sabha) and of these 10 are minorities. The Hindus, mostly in Sindh, are represented by Dr Ramesh Kumar Vankwani of Tharparkar, Bhawan Das of Sanghar, Dr Ramesh Lal of Larkana, Lal Chand Malhi of Umerkot, Sanjay Perwani of Mirpur Khas and Dr Darshan Pirbhu Mal of Kotki. The Christians, mostly in Punjab, are represented as also are Parsis.

Bangladesh is at the moment not an Islamic republic. A few years ago, their supreme court struck down some language that hinted at Islamism, but with a change in government that might again come up. Bangladesh has 350 members of Parliament of whom 16 are Hindu. Bangladesh has a 10 per cent population of Hindus, so proportionally that number should have been 35.

Pakistan is about 96 per cent or 97 per cent Muslim, depending on whom you ask (because the government does not legally consider Ahmadiyyas Muslim), so the reality is that it has better, much better, representation of minorities, particularly Hindus, in its Parliament, than does India.

India has 22 Muslims in a Lok Sabha of 543. With a population of 14.2 per cent of India, if they had been represented proportionally, that number would have been 77. In not a single Lok Sabha has this happened.



REPLY TO ALL

AAKAR PATEL

Carlos Ghosn's long wait

The runaway success of the Renault Kwid in the entry-level family car has come as a shot in the arm for Carlos Ghosn, the global chairman of Renault-Nissan. Till date, no car maker has been quite able to dent Maruti Suzuki Alto's stranglehold over the small car market. Not only has Kwid crossed the 100,000-unit milestone, it is now almost half of Alto's monthly volumes. And it has forced Suzuki to announce an upgraded version for 2018 in a clear bid to defend its turf.

It has taken the formidable Mr Ghosn, considered one of the shrewdest leaders in the global auto industry, an entire decade — and several missteps — to break into the list of the top three car makers in the country. The story of Kwid holds several lessons for global auto companies looking to build a meaningful business in India. I met Mr Ghosn twice during the early days of his journey in India. And he was always clear that the Indian market needed a car that was tailored for the Indian market. It couldn't be a copy paste of a sophisticated European hatchback model like the Micra — or indeed a cheap, no-frills Romanian model like the Logan. From the very outset, he was clear that his designers based in Paris would not be able to conceptualise a car that was aspirational and yet value for money. When the Nano was launched in 2009, Mr Ghosn was among the very few global auto chief executive officers (CEOs) who saw the value of the frugal engineering mindset at work — and actual-

ly took inspiration from it.

The fact that Indian customers are perhaps the most demanding in the world is now well known. First-time buyers want the best product at an affordable price. Kwid represents all that — it had a localisation component of 98 per cent at the time of launch. That meant working with Indian suppliers and bringing them up to speed. That is no mean task. Because when the made-in-India Nissan Micra was first showcased at the Geneva Motor Show in 2010, the end product was so shoddy that senior Nissan executives were specifically warned not to mention where it had been built. With the passage of time, local supplier standards have improved significantly. Besides, the Kwid design represents a big leap as well. Keeping rising aspirations in mind, the SUV-like styling makes the product stand out, compared to the boxy Alto. And the work was entirely done in design studios in India — in conjunction with Indian engineers. And the pricing was just right. Mr Ghosn has confirmed that a version of the Kwid will be launched in Brazil.

On the face of it, the playbook might look simple, except that it isn't. In 2010, Toyota tried much the same gambit. It took more than five years for one of the world's most respected car makers to give birth to the Etios. Its Japanese chief designer, best known for designing the Corolla, made 60 trips to India to seize the large opportunity in the



STRATEGIC INTENT

INDRAJIT GUPTA

Globalisation in another age



BOOK REVIEW

VIKRAM JOHRI

Anand Pandian is an American anthropologist who, in *Ayya's Accounts*, has undertaken a fascinating journey into the past. Over several telephone calls and personal visits, Mr Pandian listened in on the life story of his grandfather, M P Mariappan, a fruit merchant in Madurai, resulting in the book under review.

Called Ayya, an affectionate term for an elderly gentleman in Tamil, Mr

Pandian's grandfather teases out an extraordinary story from within the folds of his seemingly ordinary life. Left motherless at a young age, Ayya was taken to Burma (as Myanmar was called then) by his father, where, together with his brothers, he opened a grocery store. As World War II approached, he was forced to return to Madurai, where he got married, had children, and became a prosperous businessman.

Mr Pandian wrote the book on his grandfather's insistence as an anthropological tract that details the history of the Nadar caste. A professor at Johns Hopkins, Mr Pandian travelled extensively through rural Tamil Nadu for his PhD thesis on the community.

Traditionally called "tree climbers", the Nadars are today one of the most prosperous castes of Tamil Nadu due to their

passionate flair for business.

Although the book started its journey in ethnography, it ended up much more than that — a deeply personal rendition of the life and often challenging times of a man who witnesses firsthand several tumultuous events. Ayya's account of his time in Burma, as he negotiated, albeit on a small scale, commercial deals and kept detailed accounts of his daily transactions, is reminiscent of the histories of other business castes such as the Marwaris.

The trauma of packing up a flourishing business in Burma to return to an unknown future in India is explained away by the impassive Ayya as an outcome of fate. Yet, the move involved several sacrifices, including the handing over of the shop to a local friend with the assurance that he would run it as his

own. Decades before the services-fuelled globalisation of today, *Ayya's Accounts* reminds us, there existed a vast network of "global" businesses that, on the one hand, thrived on trust and goodwill, and on the other, were far more vulnerable to external conditions.

Ayya's 1,700-mile journey in 1938 has close parallels with the other great migration that millions of Indians were forced to make in a few years' time, when a newly independent nation was brutally cleaved. From that grim time to America-born Pandian interviewing his grandfather in a comfortable home in Madurai, the transformation was a result of the toil that Ayya put into bettering his lot. With Paati, Mr Pandian's grandmother, he had eight children, most of whom settled in the United States, another familial migration but one that was born in privilege.

The book's first-person narration gives it an intimate feel that takes it beyond its anthropological premise. As

Ayya and Paati get old, their worries about their future are interspersed with their happiness at having raised a successful family. Their bond is presented as the simple alliance of a man driven to succeed in business and a woman who diligently kept home for him.

Ayya's detours about their bickering are a joy, since the book otherwise makes rather serious reading. Their visits to their children in the US are a time of great happiness as the old couple, used to a life of frugality back in India, partakes of the joys of unbridled American capitalism. Paati's death in 1997 marks a turning point in Ayya's life, a time of unrestrained grief, the likes of which he seldom experienced.

The book's first draft was issued in Tamil in 2013, and Mr Pandian has helpfully included detailed notes in this English version. At crucial moments, his benign voice is heard guiding the reader to make sense of the political underpinnings of as well as the personal lessons

from his grandfather's journey. Touching extracts from their letters to one another are strewn across the book, making *Ayya's Accounts* part-memoir, part-moral lesson.

Ayya died in 2014, after battling a lifetime of turmoil, displacement and, towards the end, disease. Yet, his voice shines through as one of contentment and, ultimately, wisdom. Repeatedly asked by his children to shift to the US in his old age, he refused. He was happy going through the motions of a life he had lived for half a century. "I want to die laughing," he told Mr Pandian after Paati's death. "When my life passes, my spirit ought to be laughing as it goes. It's this thought that keeps running through my mind these days."

AYYA'S ACCOUNTS

A Ledger of Hope in Modern India
Anand Pandian & M P Mariappan
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The highest was 49 in 1980, giving them 9 per cent. Today it is 4 per cent.

Many states of India have no Muslim representation in Parliament. Uttar Pradesh (UP), Maharashtra, Gujarat, Rajasthan and Madhya Pradesh are large states with large Muslim populations and no Muslim MPs. The last time a Gujarati Muslim was chosen to represent his state in the Lok Sabha was 33 years ago (Ahmed Patel, in Rajiv Gandhi's sweep). Muslims are increasingly finding themselves politically excluded across India even in state Assemblies. Gujarati Muslims are among our most successful and productive communities. Names like Premji and Khorakiwala are renowned across the world. Out of 182 Gujarati MLAs only two are Muslim, M A Pirzada from Wankaner and G S Shekh from Ahmedabad's Dariyapur. Proportionally they should have got 18, but again this has never happened in history and it has only gotten worse. Today large cities like Surat (which is the headquarters of the Dawoodi Bohra community) and Baroda have no Muslim representation. In UP the Bharatiya Janata Party (BJP) did not want the Muslim's vote and it communicated this to her unambiguously through exclusion in the distribution of tickets. In civilised democracies, this should have been totally unacceptable. But here it has produced a triumph.

The Hindutva refrain is: Muslims are being appeased in India. This charge does not stand scrutiny. In what meaningful space does the effect of Muslim appeasement show in India? Public sector and government hiring? Armed forces recruitment (where Muslims are down to 2 per cent)? The fact is that the bigotry the Muslim faces in trying to get housing and employment in the private sector she also faces with the state and in politics. Other kinds of "appeasement", such as legislation on family law, are not something the community itself is united in favour of.

The facts are clear but then the charge against them is based not on fact but on belief and resentment. And this cannot be argued with. I raised the issue with the prime minister some years ago. He understood where the question was going and he cut me short to say that unless I understood the entirety of Muslim-Hindu relations (which presumably he did) I could not really understand the reality today. Perhaps not, but I am not blind to numbers and those are absolutely clear. The rise of the BJP in India has come at the cost of Indian pluralism. It was never good even under other parties, and that must be accepted, but it has become awful and open in the reign of Hindutva.

It is incumbent on India's Hindus in particular to make an issue of this. It is an obligation on them. A community demonstrates its secular and pluralistic credentials where it is a majority. As minorities, all communities make claims of tolerance because it's in their self-interest. On the Indian subcontinent, no country is really pluralistic and the numbers and the laws we have seen above prove that. It's just that Pakistan has done its exclusion institutionally and we have done it in more devious fashion, deluding ourselves with homilies and slogans removed from reality.

Sabka vikas is something which will ultimately need endorsement from Patidars and Jats, but *sabka saath* is a demonstrable lie.

small car market. Yet the hatchback never quite took off. It has now realised that building small cars for emerging markets isn't its forte. That's why Toyota is now looking to bring in Daihatsu, which has the requisite experience with small cars in Japan, to make another foray into emerging markets such as India. The anxiety is understandable, given that India could soon become the second-largest car market in the world, if its growth continues unabated. And Toyota is said to be exploring a partnership with Suzuki to build a better understanding of the supply chain, design and manufacturing challenges.

Mr Ghosn and his team have done well to learn from every setback — and stay the course. While Renault did well with the Duster, Mr Ghosn knew that the big volume opportunities would always be in stronger, better entry-level products. Yet, with the exception of Suzuki and Hyundai, most global auto companies have struggled to align their strategies to the market demands.

Contrast that with Indian auto makers like the Hero Group, Bajaj Auto and Tata Motors have brought in top-end global talent in R&D, product engineering and design from abroad to help build more sophisticated design sensibilities. Tim Leverton's long stint at Tata Motors is a good example of that. Its new generation of vehicles — including the Tiago and Hexa — are good examples of how the car maker has moved up the learning curve. However, these global designers need clear briefs. The leadership challenge is to align them to the right market opportunities. Or else, their sophisticated sensibilities can get the better of them — and they could end up racing too far ahead of the market needs. And, as Carlos Ghosn will tell you, finding that sweet spot in the Indian market can be a 10-year wait. If you have the patience to learn, the pot of gold will be within your reach.

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