



Blue-sky visions

The ambitions of the Economic Survey depend on the implementation of its ideas

The Economic Survey for 2018-19 reflects the views of its principal author, Chief Economic Adviser (CEA) Krishnamurthy Subramanian. And the CEA has made bold to use the new government's first economic assessment-cum-agenda setting exercise to posit a range of ideas that he attributes to "blue sky thinking". From an embrace of a "world that is in constant disequilibrium", and the need therefore to adapt to it, to the stress on drawing upon Richard Thaler's work in the behavioural economics of 'nudge' for addressing issues including gender equality, savings and tax compliance, the survey attempts to reset multiple paradigms. The broad goal is to help drive economic strategy to achieve sustained real GDP growth of 8% so as to enable fulfilment of the government's grand vision of making India a \$5 trillion economy by 2025. For that, the first task is to take stock of the economy's current state. The CEA is cautiously confident that the slump in investment, which he rightly identifies as the key driver of growth, jobs and demand, has bottomed out. Setting the huge electoral mandate for the government as an enabler that would "push the animal spirits of the economy", the survey projects real GDP growth to rebound to 7% in 2019-20. But the CEA doesn't shy away from flagging 'consumption' as being crucial in determining the growth trajectory in the current fiscal year, and in pointing out its vulnerability to the health of the monsoon-dependent rural economy. With rainfall as on July 3 about 28% less than average and large parts of southern and western India in the grip of a crippling drought, clearly the circumsppection appears well warranted.

On the fiscal front, the survey is even less optimistic. It lists several challenges to achieving the fiscal deficit target of 3% of GDP by March 2021: the "apprehensions of slowing of growth" and the implications for revenue collections; the shortfall in GST collections and the imperative that it places on revenue buoyancy this year; the hunt for resources to fund the expanded PM-KISAN scheme, Ayushman Bharat and other government initiatives; and the impact on oil purchase prices due to the U.S. sanctions on import of crude from Iran. It is, however, on the policy prescriptions front that the CEA comes into his own. Central to the recommendations is the focus on triggering a self-sustaining "virtuous cycle" of savings, investment and exports. To achieve which, he suggests, presenting data as a 'public good', ensuring policy consistency and reducing the cost of capital. Micro, small and medium enterprises must be nourished, especially firms that are most likely to boost both job creation and productivity, and labour laws made flexible. Ultimately, it is the implementation that may well decide how "blue sky" these ideas are.

Raising the bar

Rahul Gandhi has forced a churn in the Congress that might lay the basis for a revival

With Rahul Gandhi stating categorically that he would not continue as Congress president, one uncertainty that had gripped the party has ended. But this culmination does not end the disorder and chaos in the party, which is in a state of paralysis since its rout in the parliamentary election. Mr. Gandhi's letter of resignation is part self-reflection, about the Congress in general and his own personal role in it, and part a critique of the state of affairs of Indian politics. Mr. Gandhi felt the need for introspection and accountability, and restated his long-held position that he was in politics not for power but social change. By sticking to his decision to quit as party chief, he has thrown a challenge at his colleagues to find a life outside the shelter of the Nehru-Gandhi family. The coterie that flourished around his mother and predecessor Sonia Gandhi had reduced politics to manipulation and turned the party into an instrument of vested interests. A small club of self-seekers who reinforce one another and don't face the electorate had taken over the Congress years before Mr. Gandhi came on the scene. His letter is an indictment of these leaders, whose personal fortunes never waned, even as the party's plummeted.

Mr. Gandhi's limitation is not in his understanding of the challenges before the party or the country, or in his vision for both. His inexact articulation is not reflective of any insurmountable weaknesses. His real failure has been his inability to free the party from the clutches of what his father Rajiv Gandhi had famously called power-brokers. In calling for accountability, he is effectively asking a group to self-destruct for the larger cause of the party, which in turn must fight for the larger cause of the country. By refusing to be the façade for their parasitical existence, Mr. Gandhi might have forced a productive churn at all levels. Any moral appeal could only have had a limited impact on the seasoned veterans, but the example Mr. Gandhi set by accepting responsibility for the defeat while reiterating his commitment to the larger cause might help inspire a resuscitation of the party. But questions abound. Mr. Gandhi himself will remain active in politics, as he has made clear, but how much authority he would want to exercise remains an open question. His insistence on stepping aside also comes from a realisation that the dynasty tag is more a drag than a booster for his politics, and the party, in the current environment. The process of reducing the Congress to a family enterprise had started with Mr. Gandhi's forbears and their supporters as much as their opponents. Only a family member could have sought to challenge the notion that the Congress cannot survive without the dynasty. If the absence of a Nehru-Gandhi at the helm was a precondition for the reconfiguration of the Congress and the formation of a viable alternative to Hindutva, Mr. Gandhi has created that situation.

Expanding India's share in global space economy

ISRO should embrace a civilian identity and, aided by legislation, form partnerships with the industry and entrepreneurs



RAKESH SOOD

From a modest beginning in the 1960s, India's space programme has grown steadily, achieving significant milestones. These include fabrication of satellites, space-launch vehicles, and a range of associated capabilities.

Today, the Indian Space Research Organisation (ISRO)'s annual budget has crossed ₹10,000 crore (\$1.45 billion), growing steadily from ₹6,000 crore five years ago. However, demand for space-based services in India is far greater than what ISRO can supply. Private sector investment is critical, for which a suitable policy environment needs to be created. There is growing realisation that national legislation is needed to ensure overall growth of the space sector. The draft Space Activities Bill introduced in 2017 has lapsed and the government now has an opportunity to give priority to a new Bill that can be welcomed by the private sector, both the larger players and the start-ups alike.

ISRO's thrust areas

Since its establishment in 1969, ISRO has been guided by a set of mission and vision statements covering both the societal objectives and the thrust areas. The first area was of satellite communication, with INSAT and GSAT as the backbones, to address the national needs for telecommunication, broadcasting and broadband infrastructure.

Gradually, bigger satellites have been built carrying a larger array of transponders. About 200 transponders on Indian satellites provide services linked to areas like telecommunication, telemedicine, television, broadband, radio, disaster management and search and rescue services.

A second area of focus was earth observation and using space-based imagery for a slew of national demands, ranging from weather forecasting, disaster management and national resource mapping and planning.

These resources cover agriculture and watershed, land resource, and forestry managements. With higher resolution and precise positioning, Geographical Information Systems' applications today cover all aspects of rural and urban development and planning. Beginning with the Indian Remote Sensing (IRS) series in the 1980s, today the RISAT, Cartosat and Resourcesat series provide wide-field and multi-spectral high resolution data for land, ocean and atmospheric observations.

A third and more recent focus area is satellite-aided navigation. The GPS-aided GEO augmented navigation (GAGAN), a joint project between ISRO and Airports Authority of India, augmented the GPS coverage of the region, improving the accuracy and integrity, primarily for civil aviation applications and better air traffic management over Indian airspace. This was followed up with the Indian Regional Navigation Satellite System (IRNSS), a system based on seven satellites in geostationary and geosynchronous orbits.

It provides accurate positioning service, covering a region extending to 1,500 km beyond Indian borders, with an accuracy greater than 20 metres; higher accuracy positioning is available to the security agencies for their use. In 2016, the system was renamed NavIC (Navigation with Indian Constellation).

With growing confidence, ISRO has also started to undertake more ambitious space science and exploration missions. The most notable of these have been the Chandrayaan and the Mangalyaan missions, with a manned space

mission, Gaganyaan, planned for its first test flight in 2021. These missions are not just for technology demonstration but also for expanding the frontiers of knowledge in space sciences.

None of this would have been possible without mastering the launch-vehicle technology. Beginning with the Satellite Launch Vehicle (SLV) and the Augmented Satellite Launch Vehicle (ASLV), ISRO has developed and refined the Polar Satellite Launch Vehicle (PSLV) as its workhorse for placing satellites in low earth and sun synchronous orbits. With 46 successful missions, the PSLV has an enviable record. The Geosynchronous Satellite Launch Vehicle (GSLV) programme is still developing with its MkIII variant, having undertaken three missions, and is capable of carrying a 3.5 MT payload into a geostationary orbit. Compare this to the French Ariane 5, which has undertaken more than 100 launch missions and carries a 5 MT payload, with an Ariane 6 in the pipeline for 2020.

Over the years, ISRO built a strong association with the industry, particularly with Public Sector Undertakings (PSUs) like Hindustan Aeronautics Limited, Mishra Dhatu Nigam Limited and Bharat Electronics Limited and large private sector entities like Larsen and Toubro, Godrej and Walchandnagar Industries. However, most of the private sector players are Tier-2/Tier-3 vendors, providing components and services. The Assembly, Integration and Testing (AIT) role is restricted to ISRO, which set up Antrix, a private limited company, in 1992 as its commercial arm to market its products and services and interface with the private sector in transfer of technology partnerships.

Today, the value of the global space industry is estimated to be \$350 billion and is likely to exceed \$550 billion by 2025. Despite ISRO's impressive capabilities, India's share is estimated at \$7 billion (just 2% of the global market)



covering broadband and Direct-to-Home television (accounting for two-thirds of the share), satellite imagery and navigation. Already, over a third of transponders used for Indian services are leased from foreign satellites and this proportion will rise as the demand grows.

Developments in Artificial Intelligence (AI) and big data analytics has led to the emergence of 'New Space' – a disruptive dynamic based on using end-to-end efficiency concepts. A parallel is how the independent app developers, given access to the Android and Apple platforms, revolutionised smartphone usage. New Space entrepreneurship has emerged in India with about two dozen start-ups who are not enamoured of the traditional vendor/supplier model but see value in exploring end-to-end services in the Business-to-Business and Business-to-Consumer segments. However, these start-ups have yet to take off in the absence of regulatory clarity.

'New Space' start-ups

The New Space start-ups discern a synergy with government's flagship programmes like Digital India, Start-Up India, Skill India and schemes like Smart Cities Mission. They see a role as a data-app builder between the data seller (ISRO/Antrix) and the end user, taking advantage of the talent pool, innovation competence and technology know-how. They need an enabling ecosystem, a culture of accelerators, incubators, Venture Capitalists and mentors that exists

Talking sanctions, endangering peace

The Trump administration's successive punitive actions against Iran can only be interpreted as a desire for direct conflict



SUVRAT RAJU

More than a year ago, the U.S. unilaterally abrogated the Joint Comprehensive Plan of Action (JCPOA) and began to squeeze the Iranian economy using sanctions. The latest round of sanctions were announced in June. Iran announced a week later that it had exceeded a limit set by the JCPOA on its stockpile of nuclear fuel.

The U.S.-Iran conflict is often portrayed in the media as one that involves two flawed actors struggling for supremacy on a complex West Asian stage. But a closer look reveals a simpler underlying reality: the Donald Trump administration is using the U.S.'s clout in an old-fashioned attempt to assert the country's hegemony; Iran is just doing whatever it can to resist U.S. pressure.

The Shah connection

The roots of this dispute can be traced back to 1953, when the Central Intelligence Agency orchestrated a coup to remove Iran's elected Prime Minister, Mohammad Mossadegh. After instituting the rule of Shah Mohammad Reza Pahlavi, the U.S. encouraged him to establish a nuclear programme.

The U.S. built Iran's first nuclear reactor in 1967. The Shah was clear that his ambitions went beyond nuclear energy, and extended to nuclear weapons. In 1974, he explained that Iran would acquire nuclear weapons "without a doubt, and sooner than one would think." Nevertheless, the West continued to provide nuclear technology to his government.

After the Shah was toppled in 1979, the new government, under Ayatollah Ruhollah Khomeini, cancelled his plans for a large nuclear-energy sector, retaining only those facilities that had already been established. Khomeini also declared that nuclear weapons and other weapons of mass destruction (WMDs) were *haram* – forbidden in Islam. Whatever one may think about Khomeini's government, his spiritual injunctions were taken very seriously. When Iraq attacked Iran with chemical weapons, with the tacit support of the Ronald Reagan administration, Tehran refrained from responding in kind despite having the requisite technology.

It is possible that during the Iran-Iraq war, some elements within the Iranian establishment started exploring the possibility of developing a nuclear deterrent. Even if this was the case – and the evidence on the matter is far from conclusive – these activities were definitely stopped by 2003. In the same year, Khomeini's successor, Ayatollah Ali Khamenei, issued an



unambiguous fatwa against nuclear weapons.

Soon after invading Iraq on the false pretext that it had WMDs, the U.S. attempted to build a similar narrative around Iran, which had established a modest programme to enrich uranium to fuel its existing reactors. The U.S. alleged that the fuel was intended for a bomb. These allegations were undercut by U.S. intelligence agencies themselves who reported that "in fall 2003 Iran halted... nuclear weapons... activities". In 2015, after a multi-year investigation, the International Atomic Energy Agency (IAEA) went further, declaring that "activities relevant to... a nuclear explosive... did not advance beyond feasibility and scientific studies" and, as a "coordinated effort", were only carried out "prior to the end of 2003".

In spite of these facts, successive U.S. administrations imposed sanctions on Iran, demanding that it completely halt uranium enrichment. It was only during President Barack Obama's second term that the U.S. sought a temporary truce,

leading to the JCPOA.

The JCPOA recognised Iran's right to maintain a civilian nuclear programme, but placed significant restrictions on its size and scope for 10 to 15 years. Most importantly, Tehran reiterated that "under no circumstances" would it "seek... nuclear weapons." The IAEA was granted unprecedented powers to inspect Iran's nuclear activities, and has repeatedly verified Tehran's compliance.

So, when the Trump administration ceased to abide by the JCPOA last year, this could only be interpreted as a message that the U.S. was not interested in arms control, but rather in initiating a direct conflict with Tehran.

An economy devastated

Over the past year, the U.S. has made threats, mobilised troops and warships, and provoked Tehran by flying military planes dangerously close to its border. However, Washington's primary strategy has been to use economic measures as a weapon. It has prevented foreign entities from trading with Iran, devastating the Iranian economy.

India has also been hurt by these policies. Until recently, Iran was one of India's largest oil suppliers. Even though Iranian oil came with discounts on freight, and favourable terms of payment, the Indian government obeyed Washington's dictates and stopped purchasing oil from Iran in May.

in cities like Bengaluru which is where most New Space start-ups have mushroomed.

Equally, clear rules and regulations are essential. ISRO can learn from its 1997 SatCom policy which neither attracted any FDI in the sector nor a single licensee. A similar situation exists with the Remote Sensing Data Policy of 2001, amended in 2011, which too has failed to attract a single application. The 2017 draft Bill raised more questions because it sought to retain the dominant role of ISRO/Antrix as operator, licensor, rule-maker and service provider.

Another revolution under way is the small satellite revolution. Globally, 17,000 small satellites are expected to be launched between now and 2030. ISRO is developing a small satellite launch vehicle (SSLV) expected to be ready in 2019. It is a prime candidate, along with the proven PSLV, to be farmed out to the private sector. This requires giving it responsibility for AIT activities.

Years ago, ISRO launched the idea of Village Resource Centres to work in collaboration with local panchayats and NGOs but only 460 pilots have begun. Expanding this for rural areas is a formidable challenge but has the potential to transform rural India if properly conceived as a part of the India Stack and the Jan Dhan Yojana.

With the Ministry of Defence now setting up a Defence Space Agency and a Defence Space Research Organisation, ISRO should actively embrace an exclusively civilian identity. A new Space law for India should aim at facilitating growing India's share of global space economy to 10% within a decade which requires a new kind of partnership between ISRO, the established private sector and the New Space entrepreneurs.

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India's investments in Iran's Chabahar port are nominally exempt from U.S. sanctions, but they have been damaged anyway since suppliers are reluctant to deliver equipment. The sanctions have also prevented ONGC Videsh, which discovered the Farzad B gas field off Iran's coast, from pursuing its investments there.

Further, New Delhi has refused to explore several available strategies that could ameliorate the impact of sanctions. China has maintained some commercial ties with Iran by routing transactions through the Bank of Kunlun. U.S. sanctions on this bank have been ineffective since it is carefully insulated from the U.S. financial system. European countries have attempted to bypass sanctions through a special mechanism called INSTEX.

It is revealing that India has failed to join any of these initiatives or to develop its own solution. A few months ago, Prime Minister Modi boasted that India's foreign policy had become "fearless, bold and decisive". Is this fearlessness restricted to India's interactions with its smaller neighbours, or is his government also willing to stand up to the biggest bully in the room and protect India's interests from Washington's destructive policies?

Suvarat Raju is a physicist associated with the Coalition for Nuclear Disarmament and Peace. Views are personal

LETTERS TO THE EDITOR

Letters emailed to letters@thehindu.co.in must carry the full postal address and the full name or the name with initials.

Rahul bows out

Rahul Gandhi's resignation as Congress president is a rare instance of a leader accepting responsibility for his party's defeat in elections (Page 1, "Rahul Gandhi formally quits as party chief, makes letter public" July 4). The fact that his party won 19% of the national vote share attests to its political relevance. The need of the hour for the party is to choose a strong successor to Mr. Gandhi, someone who can help Congress regain the trust of the voters. Indira Gandhi lost the 1977 election following

the Emergency, but made a strong comeback in 1980 by winning back the people's confidence. Mr. Gandhi's successor can take a leaf out of Mrs. Gandhi's book.

JAYANT MUKHERJEE, Kolkata

■ The Congress should learn to sail through difficult times even without a captain from the Nehru-Gandhi family. It should go back to the leadership system it followed in the pre-Independence period, by electing presidents for a year and conducting sessions in different parts of the country. The party should

stand for the principles of truth and non-violence. The next president should also put all his efforts to bring back the breakaway parties like Trinamool Congress, the Nationalist Congress Party and the YSR Congress Party back into the Congress's fold. Finally, it should utilise the popularity of Mr. Gandhi to consolidate its presence across the country.

K. MUHAMMED ISMAVIL, Kodalvely, Kerala

Petition to EC

It is laudable that a group of former senior civil servants have listed out serious irregularities in the conduct

of the 2019 elections (News page, "Ex-officials cast doubt on poll result," July 4). The common man was a witness to blatant violations of the Model Code of Conduct by leaders and parties, transgressions ignored by the Election Commission. The poll body also did not make public the dissenting opinion of Ashok Lavasa. However, one wonders whether the petitioners can expect an honest reply from the EC.

THARUN S. FERNANDO, Chennai

Rayudu retires

Ambati Rayudu's decision to retire, after being snubbed

twice for the World Cup, does not come as a surprise. Mr. Rayudu, a reliable middle-order batsman, was all along tipped to fill the crucial No. 4 spot in the team and should have found a place in the original squad. But it was shocking that he was not considered even

after two players got injured. Of course, he is not the first victim of the cricketing body's whimsical selection process and, one fears, he will not be the last either.

N. VISWANATHAN, Coimbatore

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CORRECTIONS & CLARIFICATIONS: >>The report about Telugu poet and activist Varavara Rao being brought to Karnataka – "Karnataka police take Varavara Rao into custody in 2005 case" (South page, July 4, 2019) – talks about the 2005 naxal attack in Pavagada taluk of Kolar district. It should be Tumakuru district.

It is the policy of The Hindu to correct significant errors as soon as possible. Please specify the edition (place of publication), date and page. The Readers' Editor's office can be contacted by Telephone: +91-44-28418297/28576300 (11 a.m. to 5 p.m., Monday to Friday); Fax: +91-44-28552963; E-mail: readerseditor@thehindu.co.in; Mail: Readers' Editor, The Hindu, Kastur Buildings, 859 & 860 Anna Salai, Chennai 600 002, India. All communication must carry the full postal address and telephone number. No personal visits. The Terms of Reference for the Readers' Editor are on www.thehindu.com