

EDITORIAL HIGHLIGHTS

23-10-2026

GS 2: INTERNATIONAL RELATIONS THE HINDU PAGE: 08

Tied by geography, divided by politics

With speculation rife that Bangladesh's recently elected Prime Minister Tarique Rahman (and also Bangladesh Nationalist Party (BNP) Chairman) will be visiting New Delhi in November or December, it is time to assess the state of India-Bangladesh relations and analyse the roots of the problems between the two countries.

The seeds of their current tension lie in the liberation war of 1971 itself. From the very beginning, the attitude of Bangladesh's elites toward India has wavered between gratitude and resentment – gratitude for India's crucial role in the liberation of their country and resentment against the fact that India had to play the role of liberator – a role they should have performed themselves.

An ambivalence

Nations cherish narratives in which they are the principal authors of their own liberation. Bangladesh is no exception. The contribution of the Mukti Bahini notwithstanding, the decisive military blow against Pakistan was delivered by India. What was initially the source of immense gratitude with the passage of time became a source of grave discomfort.

Moreover, from the very beginning Dhaka was worried that India's policy towards Bangladesh would be mediated through a Hindu-majority West Bengal next door which has strong cultural and linguistic affinities with Bangladesh that could threaten the development of Bangladesh's independent identity. The open borders in the immediate aftermath of the liberation war also revived memories of the socio-economic dominance of the Hindu bhadralok in pre-Partition Bengal.

This was compounded by the fact that Bangladesh was virtually surrounded by India, sharing a border of more than 4,000 kilometres. Its principal rivers flowed through or originated in India. Its economic and strategic room for manoeuvre appeared constrained by geography. Consequently, the fear of Indian domination



Mohammed Ayooob

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India and Bangladesh must overcome mistrust and pursue pragmatic neighbourhood cooperation

became an important component of Bangladesh's nationalism.

The honeymoon between Dhaka and New Delhi was indeed short. Sheikh Mujib and Indira Gandhi shared a great deal of goodwill. But the governments that succeeded Mujib deliberately distanced Bangladesh from India. Under Ziaur Rahman, Bangladeshi nationalism was redefined in overtly Islamic terms in contradistinction to the linguistic nationalism that had provided the ideological foundation of the liberation movement.

Dhaka's foreign policy

This had important foreign policy consequences. Dhaka sought closer relations with Pakistan, China, and the United States to counterbalance India. What New Delhi often interpreted as gratuitous anti-Indianism was, from Dhaka's perspective, an assertion of strategic autonomy by a much weaker state living in the shadow of an overwhelmingly powerful neighbour.

This pattern became deeply embedded in Bangladesh's domestic politics. The Awami League remained identified with the secular and Bengali-nationalist legacy of 1971 and generally favoured close relations with India. The BNP and its allies were much more suspicious of New Delhi. India consequently ceased to be merely a foreign policy issue; attitudes towards India became part of the contest over Bangladesh's national identity.

But this success contained the seeds of the subsequent backlash. India increasingly identified its interests not merely with Bangladesh but with Sheikh Hasina and the Awami League. As criticism mounted within Bangladesh over the increasingly authoritarian character of her government, New Delhi was widely perceived as placing its own security interests above Bangladesh's democratic evolution.

Ms. Hasina's overthrow in August 2024 therefore produced not merely a change of government but a profound crisis for Indian policy. Her flight to India reinforced suspicions

that New Delhi was the external pillar of the political order just overturned. India's continuing refusal to extradite her has ensured that the Hasina question remains a major bilateral irritant.

The road ahead

The election of Mr. Rahman and the return of the BNP to power in February 2026 have opened a new chapter. Both New Delhi and Dhaka have compelling reasons to avoid permanent alienation, and functional engagement has resumed. But substantial mutual suspicion continues to bedevil bilateral relations.

The lesson that New Delhi should draw from the turbulent history of the relationship is that India cannot expect gratitude for 1971 to constitute the permanent foundation of Bangladeshi foreign policy. Gratitude is a transient sentiment; national interest especially when linked to issues of national identity is enduring.

Indeed, repeatedly invoking India's role in Bangladesh's liberation can be counterproductive because it reinforces precisely the Bangladeshi psychological trauma that has troubled the relationship from its inception.

Dhaka, for its part, cannot wish away geography. No relationship with Beijing, Islamabad or Washington can substitute for a workable relationship with the country that surrounds Bangladesh on three sides, shares its major river systems and is indispensable to its regional connectivity.

India must learn to exercise its preponderant power with restraint and sensitivity and abjure demanding reciprocity for any magnanimity it shows towards its smaller neighbour especially on the sharing of river waters. Bangladesh must recognise that strategic autonomy need not be defined through knee-jerk opposition to India. Only then can the two countries finally move beyond the burdens of the past while preserving its most important legacy: the recognition that their security and stability are inextricably intertwined.

GS 3: Energy

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Canary in coal mine

Core sector data indicate impending growth slowdowns

The latest data on the performance of the core industrial sectors show the economy may be facing an industrial uptick, but questions about its sustainability remain. Growth in the Index of Core Industries rose to a series-high of 7.9% in September 2026, the second consecutive month of accelerated performance. Any such improvement is to be celebrated, but a deeper look at what is driving it is also warranted. The coal sector saw growth suddenly shoot up to 10.7% in September. The unexpected and unusual nature of this rapid acceleration can be borne out by the fact that the sector contracted by 1.1% over the longer April-September 2026 period. The growth in coal in September was likely a temporary blip aided by a statistical low base and, more importantly, pressure from power plant operators over rapidly depleting coal stocks amid the heat wave. The electricity sector grew 11.4% in September, capping off a half-year dominated by double-digit growth. This surge in electricity-related demand for coal will likely wane, especially since the El Niño factor that drove the heat wave will also result in a milder winter. The other sector that results in high coal usage, the steel sector, did accelerate in September, but not by enough to sustain the coal sector's September output. The uptick in steel did, however, result in a return to double-digit growth for the iron ore sector, which should bode well for the mining component of the larger Index of Industrial Production.

The performance of the crude oil, natural gas, and refinery products sectors also highlights the fiscal problems India faces. At a time when the crude oil and natural gas sectors have both contracted continuously since 2024, refinery output rose to 10.3% in September. This means that the refineries were increasingly processing expensive imported oil. India's oil imports in September were up 7% by volume but jumped 47% in terms of value due to the high price of oil. This is set to worsen. The attacks on Saudi Arabia's energy infrastructure have already pushed global oil prices above \$112 a barrel, almost a six-month high. The reprieve from the U.S. on potential tariffs linked to imports of Russian oil provide India a reliable source, but the days of discounts are long gone. It is the time of premium pricing, and each barrel imported is eating into India's foreign exchange reserves, which are also being used to defend the rupee. Cement and steel are the only sustainably growing core sectors, and those too are based on government infrastructure spending. At a time when industrial output is only temporarily propped up, the government's fiscal space is fast shrinking.

GS 3: Science and Technology

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Is a sugar-rich diet while on antibiotics a threat to the gut microbiome?

Recent research suggests that what we eat while taking antibiotics may determine just how badly our gut microbial ecosystem is disturbed; the emerging challenge for medicine is how to kill harmful bacteria while preserving the microbial communities that help keep the human body healthy

Biju Dharmapalan

Antibiotics are among modern medicine's greatest lifesaving discoveries. They have transformed once-dangerous bacterial infections into treatable conditions and remain indispensable in cancer care, surgery, and infectious disease management. But antibiotics come with side effects – the primary being they do not always distinguish between harmful bacteria and the enormous community of beneficial microorganisms living inside our gut.

Recent research suggests that what we eat while taking antibiotics may determine just how badly this microbial ecosystem is disturbed. In particular, sugar-rich foods may worsen antibiotic-induced damage to the gut microbiome.

A study published in *Nature* examined the relationship between diet, antibiotics, and the gut microbiome in patients undergoing allogeneic haematopoietic cell transplantation. The researchers analysed an unusually detailed dataset – 9,419 meals consumed by 173 patients, alongside more than 1,000 stool samples from 158 patients.

Their findings point to an important question. Could the food we eat while taking antibiotics influence how quickly our microbial ecosystem recovers?

The invisible ecosystem inside us
The human intestine is home to trillions of microorganisms.

The gut microbiota, comprising bacteria and other microorganisms, constitutes a vital ecology for digestion, metabolism, and immunological control. A population of 'good bacteria' alone, however, does not determine a healthy microbiome; other factors such as equilibrium, diversity, and the interrelations among myriad microbial species play a major role as well. When this ecological equilibrium is disrupted, it may result in dysbiosis, a condition characterised by reduced microbial diversity and the proliferation of a few other organisms.

Antibiotics are a major cause of such disruption. This is especially evident in patients undergoing intensive medical treatments such as blood or bone marrow transplantation, where antibiotics may be combined with chemotherapy, radiation, and other interventions that further stress the intestinal ecosystem. The new study reveals that diet can become an



Vibrant system: The human intestine is home to trillions of microorganisms, constituting a vital ecology for digestion, metabolism, and immunological control. GETTY IMAGES

important additional factor.

Studying diet and the microbiome is notoriously difficult. People eat different foods every day, and conventional dietary questionnaires often depend on memory. The researchers overcame some of these limitations by studying patients who were hospitalised for haematopoietic cell transplantation.

Because their meals could be recorded repeatedly and stool samples collected over time, the investigators could examine diet and microbiome changes almost day by day.

They recorded thousands of individual meals and classified foods into groups such as grains, vegetables, fruits, meats, milk, oils, and sweets. They then compared dietary intake with changes in the gut microbiome.

One pattern stood out. When broad-spectrum antibiotics were being used, higher consumption of sweets and sugars was associated with a sharper decline in microbial diversity.

The researchers estimated that for every additional 100 grams of sweets consumed following broad-spectrum antibiotic exposure, mean microbial diversity decreased by about 24% compared with samples without previous antibiotic exposure.

A separate analysis based on macronutrients similarly found an additional decrease of about 20.6% for every 100 grams of sugar. In other words, sugar appeared to act less like an independent villain and more like an amplifier of antibiotic-induced disruption. The most intriguing finding involved

seriously ill patients undergoing intensive cancer treatment, not healthy adults taking a short course of antibiotics for a routine infection.

The researchers themselves point out several limitations. Almost all patients initially received prophylactic antibiotics, while broader-spectrum antibiotics were introduced when clinically indicated. The need for these antibiotics could itself reflect greater illness severity. Dietary information outside hospital-provided food was also incomplete, and treatment-related symptoms could influence what patients chose to eat.

Therefore, the findings should not be interpreted as a reason to discontinue medically necessary antibiotics – or to impose restrictive diets on vulnerable patients without medical supervision. Instead, they open an intriguing area for further research.

Rethinking antibiotic prescriptions
When doctors prescribe an antibiotic, the prescription traditionally focuses on the drug: which antibiotic, what dose, and for how long. Emerging microbiome science suggests we may eventually need to think more broadly. Perhaps an antibiotic prescription could one day include advice on how to protect the microbial ecosystem during treatment.

The new *Nature* study suggests that temporarily reducing foods rich in simple sugars could be one possible strategy. But prospective clinical trials must demonstrate whether this actually improves patient outcomes. The authors explicitly call for such studies.

The larger lesson extends beyond sugar. Our gut is an ecosystem, not merely a digestive tube. Medicines, food, and microbes constantly interact within it. An antibiotic may be prescribed to eliminate an infection, but it inevitably changes the microbial environment in which thousands of other organisms live.

The emerging challenge for medicine is therefore not simply how to kill harmful bacteria, but how to do so while preserving the microbial communities that help keep us healthy. And sometimes, the difference may lie not only in the medicine we take – but also in what we put on our plate while taking it.

Should we avoid sugar with antibiotics? Not really. Though the study signals a warning, it does not provide concrete evidence that everyone taking antibiotics will experience the same effect. The human participants in the study were

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THE GIST

The human intestine is home to trillions of microorganisms constituting a vital ecology

Several factors such as equilibrium, diversity, and the interrelations among myriad microbial species play a major role in maintaining a healthy microbial ecosystem

When this ecological equilibrium is disrupted, it may result in dysbiosis, a condition characterised by reduced microbial diversity and the proliferation of a few other organisms

Antibiotics are a major cause of such disruption: this is especially evident in patients undergoing intensive medical treatments where antibiotics may be combined with other interventions that further stress the intestinal ecosystem

GS 3: Science and Technology

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Chemical signatures could help detect diseases early, but accuracy and access remain challenges

Athira Elssa Johnson

Why does one person develop memory problems while another experiences seizures or changes in behaviour? And how do doctors find out whether these symptoms are caused by Alzheimer's disease, an immune disorder, or something else?

Sometimes, the answers may lie in tiny changes in the body's chemistry. Diseases can cause certain proteins and other molecules to appear in different amounts or behave differently. By measuring these changes, doctors can find clues as to what is happening inside the body, even when the cause is not immediately obvious.

These clues, called chemical signatures or biomarkers, are being studied to improve the diagnosis of several diseases, particularly those affecting the brain and nervous system.

The challenge is to establish what these changes mean, how reliably they point to a particular disease, and whether patients can access the tests.

What are chemical signatures?

A chemical signature is a unique pattern of molecules, elements, isotopes, or by-products identified in a sample by analytical instruments such as spectrometers or chromatographs.

"Chemical signatures are like the body's fingerprints," says Sreenivas U.M., consultant neurologist, Apollo Speciality



Chemical signatures or biomarkers, are being studied to improve diagnosis of several diseases, particularly those affecting the brain and nervous system. GETTY IMAGES

Hospitals, Vanagaram, Chennai.

When a disease develops, the balance of certain chemicals or proteins may change, providing clues to the problem, he adds.

In Alzheimer's disease, for instance, doctors and researchers look for changes in proteins called amyloid-beta and tau. Certain forms of these proteins can be measured in blood and cerebrospinal fluid, the liquid surrounding the brain and spinal cord. Tests measuring phosphorylated tau, particularly p-tau217, can help identify changes associated with Alzheimer's disease.

Researchers are also studying alpha-synuclein, a protein associated with Parkinson's disease. In another condition, autoimmune encephalitis, tests that detect antibodies directed against particular brain proteins can help identify an immune response affecting the brain.

This condition can cause

seizures, memory problems and changes in behaviour.

Detecting symptoms

Finding these changes also does not always mean an individual has, or is going to have a particular disease. The distinction is important: a test may identify changes associated with Alzheimer's disease, but doctors still need to consider the person's symptoms and overall health before deciding what those results mean.

Chemical signatures can also help distinguish conditions that appear similar. Autoimmune encephalitis, for example, may initially be mistaken for a psychiatric illness because it can cause behavioural changes and problems with memory. Identifying specific antibodies can help doctors recognise the condition and begin appropriate treatment. "In neurosurgery, examining the molecular

characteristics of a brain tumour can help doctors classify it and decide on treatment," says Aqib M., senior consultant neurosurgeon, Dr. Mehta's Hospitals, Chennai. Selected molecular tests are already used in specialist practice. Researchers are also studying markers such as neurofilament light, a protein that can indicate damage to nerve cells, he adds. However, not every promising test is ready for routine use. Some markers indicate damage that can occur in several diseases rather than identifying one specific condition.

Testing and diagnosis

A chemical signature cannot always give the full picture. Age, kidney function, medication and other illnesses can affect the levels of certain molecules. Doctors consider the patient's symptoms, medical history and examination findings, along with brain scans and other investigations when necessary.

Cost and availability pose further challenges in India. Specialised tests may not be offered at every hospital, and patients may have to travel to larger centres to access them. Differences in laboratory methods can also affect how consistently results are interpreted.

So, for patients, chemical signatures could mean clearer answers and shorter waits for a diagnosis. But their importance lies not just in detecting changes in the body, but in understanding what those changes mean.

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GS 2: POILITY

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Should children be involved in political campaigning?



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PARLEY

Tamil Nadu recently witnessed a game-changing election wherein the brand new Tamilaga Vetti Kazhagam (TVK) party won the State elections in May, largely on the strength of its appeal among young people. The younger the people were, greater was their enthusiasm for the TVK and actor C. Joseph Vijay, the current Chief Minister of Tamil Nadu. In the run-up to the elections, many older voters told journalists that their children and grandchildren were telling them to vote for Mr. Vijay. Recently, a candidate from the Dravida Munnetra Kazhagam (DMK) went to court, arguing that Mr. Vijay had appealed to children to persuade their parents to vote for the TVK, and that this was wrong. The High Court dismissed the petition but made some very critical remarks about the trend. Justice D. Bhaskar Chakravarthy said that the entire act of involving tender children in elections "is in bad taste, and the tasks they are made to perform at home for making YouTube reels reflect poor parenting, besides being a cheap and politically motivated act." He said that it was for Parliament to consider whether such acts should be made a ground for setting aside the election of candidates. So, should children be involved in political campaigning? Andrew Sesuraj and Anil Pillai discuss the question in a conversation moderated by M. Kalyanaraman.

What is your immediate take on this issue?

Andrew Sesuraj: First of all, children do have the right to participate in politics. The UN Convention on the Rights of the Child makes this clear. The problem here lies in the last leg of the election campaign. After actor Vijay appealed to young people to insist that their parents vote for his symbol, the whistle, saying, in effect, "pester your parents and elders to vote for the whistle, just as you pester them for a well-known chocolate brand", I saw a large number of videos that same day of children at home arguing with their parents and the adults in their families that they should vote for Mr. Vijay and the whistle.

On polling day, I checked with some people about whom they had voted for. They said, "I voted for the whistle." When I asked why, they said, "My son asked me," or "My daughter asked me," or "My granddaughter asked me." They voted simply because the children pestered them. If my child speaks about school, about the food at school and at home, about the clothes she wears, the games she plays, or about going out to play on the playground, all of that matters, because these things affect her directly. What matters is whose voice they are speaking in. They should not be tutored.

Anil Pillai: This is a very common method in consumer marketing. You release campaigns



Young supporters School children at the TVK founder C. Joseph Vijay's political campaign at T. Nagar in April 2026. B. Jothi RAMALINGAM

and incentives aimed at children so that they will pester their parents and elders into making particular purchasing decisions for the household. What we are seeing now is a crossover from consumer marketing into electoral marketing, where a campaign tries to influence voters' behaviour this way. If you stop and examine the proposed influence pathway, it runs like this. The child has an attachment to a celebrity. That attachment produces enthusiasm in the child. The enthusiasm then leads to the pester effect, or "pester power" as it's usually called: repeated requests to the parents. And that, in turn, puts pressure on their voting choices. Such a campaign is not merely persuading a voter; it is recruiting someone the voter loves to carry forward the persuasion.

Should children be involved in political campaigning at all?

AP: To my mind, we must draw a useful distinction between helping children develop a political voice and using their voice to deliver an adult's predetermined message. The UNICEF's participation framework explicitly distinguishes between genuine participation and manipulation and tokenism. While children have a right to a political voice, they should not be turned into instruments of political persuasion.

I find this method of election marketing quite disturbing. Typically, a candidate goes to voters and says, "You should vote for me, and here are the reasons why. This is who I am today, this is what I will do tomorrow, and this is why you should support me." Here the route is indirect. The message is: "Someone you love wants you to support me." To my mind, that is highly manipulative and very problematic.



We must draw a useful distinction between helping children develop a political voice and using their voice to deliver an adult's predetermined message. The UNICEF's participation framework explicitly distinguishes between genuine participation and manipulation and tokenism

ANIL PILLAI

But isn't that fairly common in campaigning? With adults, too, it's the same thing, isn't it?

AP: No, it isn't, because adults have agency. In many households, siblings, spouses and parents vote for different candidates in the same election, because each of them has agency. A grandchild does not have the agency to convince their grandfather on the merits of a candidate. The appeal is purely emotional: "I love this person for X, Y and Z, so if you love me, you should support him." It's a kind of perverse law of transitivity at play.

AS: Democracy cannot be strengthened on emotions. It depends on informed choices; choices you actually believe in.

Section 123 of the Representation of the People Act deals with undue influence. The petitioner argued that telling children to persuade their parents to vote for the TVK or Mr. Vijay was an instance of undue influence. The law says it would amount to undue influence if it reached the point of tyranny over the mind, overpowering the volition (of the voter). However, the court said that adults had a choice.

AP: There are two parts to this. Part A is whether the election was manipulated in any way, which the court said it could find no evidence of. Part B is whether it is good for the child to be involved in such practices, which I think is what we are really discussing. It most certainly is not in line with best practices for child development.

AS: The point is that the way he put it is, in itself, undue pressure on children, because children are already connected to the actor through his films and songs. Even today you can see children who cannot recite nursery rhymes reciting songs from his films. As the judgment says, we cannot prove whether people voted the way they did because of it. I am speaking about the persuasion itself. Even if it had failed, the persuasion would be undue.

The day after the election, I saw more videos of children waking up and asking, "Has Vijay (uncle) won?" The parents would say,

"No, counting hasn't started yet." And the children would say, "I won't eat until mama becomes Chief Minister." This shows that the persuasion had an impact.

Mr. Andrew mentioned how Mr. Vijay referred to a particular brand of chocolate, is that the test for any campaign, commercial or political: making something so compelling that people ask for it, clamour for it? Is that easier to do with children?

AP: Yes, that is the holy grail for any product or person: to get into the consideration set of the audience in such a way that they crave it or endorse it. And it isn't only children; adults do it all the time too. To use a very unscientific term, if you know the right buttons to press, manipulating people who lack agency is much easier, whether they are children, people with Stockholm syndrome, or ideologically brainwashed people.

If you do not have a sense of agency and cannot make decisions on the basis of data, informed choices and comparisons, you can be brainwashed rather easily.

But can there be a law banning political parties from campaigning among children? Adults have choices. Would getting children to persuade the adult voter, their parent, amount to tyranny over the voter's mind?

AS: Yes, we should have a law, but it has to be very precisely drawn. We cannot say children should not participate or should not have a voice, because that is their right. But who makes use of that voice? That is what matters.

AP: The behavioural concern is not that children have political opinions. It is that adults may be recruiting children's affection to influence another adult's vote. Helping children develop a voice certainly strengthens their agency. But scripting them as campaign messengers serves the campaign's agenda. So it is not so much about tyranny over the mind as it is about agency, which is the inalienable right of every human being on this planet, small or big, old or young. If you impinge on that sense of agency, that is problematic. If you have child labour laws, why can't you have child campaigning laws?

Picture this scenario: a child features in a video. The child grows up, becomes an adolescent or an adult, and regrets that video. But the internet never forgets; the video is there forever.



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GS 3: ECONOMY

THE HINDU PAGE: 10

Economics beyond the individual

Mainstream macroeconomics' focus on individual choices overlooks how business investment, driven by profit expectations and uncertainty, shapes economic growth and instability. Keynesian economics shows why saving does not guarantee investment and why economic structure matters

ECONOMIC NOTES

Rahul Menon

Robert Hall and Michael Woodford's work modelling the macroeconomy based on individual agents' decisions has significant implications for monetary policy. Despite being hailed as providing a rigorous foundation for stabilisation policies, focusing on the individual blinds us to the way the macroeconomy actually works. It may seem paradoxical: John Maynard Keynes's insight was that the aggregate economy cannot be understood simply as the sum of individual actions. Heterodox economics, by focusing on the structure of the broader economy rather than its individual components, provides a much better framework for understanding the economy.

Investment and interest rates

The work of Keynes in the wake of the Great Depression led to the development of the study of the aggregate economy, as opposed to studying demand and supply of individual commodities.

Microeconomics focuses on the optimising behaviour of the individual, while macroeconomics focuses on statistical relationships to characterise aggregate behaviour.

Hall and Woodford provided rigorous models that rooted the study of macroeconomic aggregates, such as consumption, investment and employment, in the behaviour of individual agents. A key contribution was linking consumption to interest rates and the future. Individuals chose to smooth consumption over their lifetimes rather than base it solely on their current needs.

When interest rates were high, savings yielded greater returns. Individuals therefore had an incentive to defer some consumption to earn more and consume more in the future. Higher interest rates could reduce current consumption and hence lower current demand, and vice versa. Macroeconomic dynamics could consequently be derived from rigorous formulations of how individuals



GETTY IMAGES

responded to market signals and policy variables such as interest rates.

This provided a framework within which Central Bankers could target an interest rate that was 'neutral' to the real economy – one that neither excessively stimulated nor depressed aggregate demand – greatly aiding the development of sophisticated stabilisation paradigms for monetary policy.

However, this approach collapsed the distinction between consumption, savings and investment. By viewing consumption inter-temporally, and by making it the main component of demand, the microfoundations methodology relegated the importance of volatile investment expectations to the background. Whatever was not consumed currently was saved, and automatically translated into future consumption demand. This was the framework followed by classical economics, which Keynes contested. He cautioned that not all saving is necessarily undertaken for future consumption.

In contrast, investment is fuelled by expectations of business owners as to prospects of profit. There is no necessity for the savings behaviour of individuals to always imply a demand for future consumption, and hence investment, by businesses. How can businesses determine whether an act of individual

savings is to spend on a house for the future, or to ward against a future health emergency that may or may not occur? In such a situation, the interest rate cannot serve as an indicator of the extent of future consumption.

Keynes further suggested a radical intervention. It was not the interest rate that equated savings and investment, but income. Investment raised income, and generated an equal amount of savings.

This is not merely a technical insight, but an important way in which to view policy. It is not savings or inter-temporal consumption demand that affects output growth and employment, but business investment. To understand why economies are prone to instability, one must examine the investment behaviour of companies rather than the consumption demands of individuals.

Class and macroeconomic policy

According to Keynes, investment being done for profit in an environment of uncertainty is the chief source of economic instability. In uncertain situations, it is rational for investors to follow the herd, investing during a boom for fear of missing out on speculative returns, and withdrawing investment in a recession for fear of loss. This is the reason why booms and recessions get

amplified. The work of Keynesians such as Hyman Minsky and Jan Kregel offers great insight into how the financial behaviour of firms brought about the boom in housing construction and finance, as well as the recession in 2008. Much of the current stock market gains in the U.S. economy are being driven by AI hyperscalers, giving rise to concerns of a new bubble that might eventually burst. Such outcomes can be clearly discerned when viewed from a Keynesian lens.

Some might argue that it does not matter how one views the economy, if the framework designed to bring about stability is effective. Moreover, in centering the actions of individuals, so the argument goes, this framework takes into account the reality of a complex economy being driven by individual choices.

Keynes's genius was in going beyond what appeared at first glance. In a capitalist economy, it is not individuals that drive the economy, but the decision of businesses to expand the stock of productive machinery. The point stressed by Keynes is that individual welfare is harmed by an economic system driven by subjective expectations of the future made by businesses focused on profits rather than societal welfare.

The mainstream focus on individual-level microfoundations implicitly assumes that every individual is similarly placed in the hierarchy of the economy, differing only in the values of a few key parameters determining economic action.

In dividing the economy into two classes, heterodox economics does not reduce complexity or resort to ad hoc explanations. Instead, it provides a better analysis of why the individual is often ill-served by prevailing models of unregulated capitalism where the holding of capital, and the ability to make decisions regarding its investment, is restricted to members of a certain class. The structure of the economy determines its dynamics, and these nuances are lost in a framework that begins and ends with the individual.

(Rahul Menon is associate professor at O.P. Jindal Global University)

THE GIST

▼ Hall and Woodford's microfoundations approach links individual consumption and saving decisions to macroeconomic outcomes and monetary policy

▼ Keynes argued that saving does not automatically translate into future consumption or investment, which depends on businesses' profit expectations and decisions

▼ Heterodox economics shows how class divisions and concentrated ownership of capital shape investment, economic instability, and individual welfare

GS 2: INTERNATIONAL RELATIONS

THE HINDU PAGE: 08

How significant is Alberta's referendum result?

Why Is Alberta's separatist movement growing? Can Prime Minister Mark Carney contain it?

Vighnesh P. Venkitesh

The story so far:

The majority of citizens of the Canadian province of Alberta, in a referendum on October 19, chose to push down a rising separatist movement, giving Prime Minister Mark Carney much-needed relief and a boost amid tension with neighbouring U.S. over trade policies and President Donald Trump's provocative ambitions. While official results of the non-binding referendum are to be announced on October 29, the vote, with more than 97% of votes counted by October 21 morning, has given overwhelming support for the oil-rich province to stay with the country.

Why is the province feeling separatist sentiments?

Alberta, with its abundant 'oil sands', is

home to the world's fourth-largest proven oil reserves, behind Venezuela, Saudi Arabia, and Iran. While neither the largest nor the most populous province in the North American country, Alberta accounts for more than 80% of Canada's crude oil production and contributes a disproportionate share to the country's economy among the provinces. This has long kept separatist sentiments alive along the fringes of the province's social fabric, with some believing that the province is not getting the same from the federal government as it is providing.

The environmentally friendly policies of liberal governments at the centre that aimed at putting curbs on oil extraction stoked the sentiments of the constituents of the conservationist province, which snowballed into a popular movement in recent years, helped along with resentment towards restrictions and regulations during the pandemic and

post-pandemic period.

The MAGA movement under Mr. Trump on the other side of the border also inspired conservatives in the province, who rallied towards secession and autonomy which would let Alberta decide what to do with the oil present in its territory, and collect and keep the income from oil for itself.

What did the latest referendum seek to settle?

The referendum was initially introduced as a pair of motions approved in March with 9 questions on immigration and welfare policies and constitutional questions on federal structure and inter-provincial cooperation. The 10th question, added to the 9 initial ones with a separate order approved in May, dealt with the separation. Instead of seeking yes or no answers like the previous 9 questions, the last question

gave voters two options.

Option one was that Alberta should remain a Province of Canada, while the second option called for the provincial government to commence the legal process to hold a binding referendum on whether or not Alberta should separate from Canada. In essence, the referendum wanted citizens of the province to either close the door on separation talks or urge the government to initiate a second referendum to decide on separation. With results from more than 97% of the voting centres, 15,44,284 votes out of a total of 20,60,524 counted, nearly 75% supported option one.

How have leaders reacted?

The votes against any separation referendum were a "large majority for Canada", Mr. Carney, who hails from Alberta, said after the unofficial results.

Alberta Premier Danielle Smith, who called for the vote in a sign of growing pressures from within her United Conservative Party, reacted to the early results as a vote for a "stronger Alberta in a united Canada".

However, separatist leaders have not given up. "We are not going anywhere", Jeff Rath, leader of the Alberta Prosperity Project and one of the faces of the separatist movement, said after the referendum results became apparent. Mr. Rath sees a silver lining in the 30% of

votes for his cause. Former Premier Jason Kennedy had pointed out before the referendum that separatist parties traditionally attracted less than 2% of votes in elections and referendums. The 30% vote on October 19 is an exponential growth for the movement and could be the way to the mainstream for Mr. Rath and his ideas, one of which is replacing Ms. Smith as the head of the UCP and getting a pro-separatist government for the province, which takes forward.

But with global uncertainties and trade wars with the U.S. under Mr. Trump who had demeaned Canada's sovereignty multiple times with public comments about making the country a 51st State of the U.S., Mr. Carney needs his country united and resources flowing. He would also find strength from the fact that leaders of the separatist movement had public meetings with U.S. lawmakers in the run up to the referendum and yet he had the overwhelming solidarity from his home province.

The support from the referendum will boost his ambitions to get a major pipeline out of Alberta that he hopes could revive the economy. As an economist who was in charge of the Bank of England during Brexit, not having to go through the economic fallout from the separation of one of the most profitable provinces in the country would be a relief.

GS 3: ENERGY

INDIAN EXPRESS PAGE: 12

Fossil fuel in the farm, and food as fuel — a double bind

WAR AND weather are exposing Indian agriculture's vulnerabilities from two fronts — "fossilisation" of farming and "fuelisation" of food.

In 1950-51, the country had hardly 8,500 tractors and its chemical fertiliser consumption was 69,800 tonnes in terms of nitrogen (N), phosphorus (P) and potassium (K). The only fertiliser products were ammonium sulphate (with 20.6 per cent N and 23 per cent sulphur or S content) and single super phosphate (SSP: 16 per cent P and 11 per cent S).

That was a time when farmers overwhelmingly used bullocks for ploughing their fields, treading over harvested crops to separate grain from straw, pulling carts to transport produce, and powering the *rahat* or Persian wheel to lift water from wells for irrigation. Plant nutrients, too, were predominantly supplied by cattle as decomposed farmyard manure with an average 0.5 per cent N, 0.2 per cent P and 0.5 per cent K.

Contrast with the present, where India's tractor population has crossed 1.2 crore and a whopping 11.6 lakh units sold just in 2025-26 (April-March). These have rendered bullocks redundant in field operations and haulage. Harvesting and threshing is increasingly done by combines, while the *rahat* has given way to electric motor and diesel engine-driven pumps.

The same holds for fertiliser consumption, which reached 33.5 million tonnes of N, P and K in 2025-26. Roughly 67.5 per cent of that came from two fertilisers: Urea (containing 46 per cent N) and di-ammonium phosphate (DAP: 46 per cent P).

Fossilisation, moreover, isn't confined to tractors and nutrients. The building blocks for manufacturing most of the active ingredients in crop protection chemicals — insecticides, herbicides and fungi-

cides — are benzene, toluene, xylene, ethylene and propylene, which are, in turn, derived from naphtha. The solvents, emulsifiers and surfactants, which dissolve, blend and stabilise these ingredients to create uniform sprayable formulations, are also largely petroleum-based.

The West Asia and Black Sea region conflicts have pushed up the prices of liquefied natural gas — the primary feedstock for urea and other N-containing fertilisers — delivered ex-ship to Northeast Asian markets from around \$11 to \$30 per million British thermal units, and that of Northwest European naphtha cargoes from \$515-520 to \$910-915 per tonne, over the past year.

Equally significant is sulphur. No production of DAP, SSP or any other fertiliser with P is possible without this byproduct of oil refining and natural gas processing.

Till 2021 or so, sulphur was imported into India at below \$300 per tonne — even sub-\$100 in 2019 and 2020. Landed prices rose to \$400-\$500 per tonne during March-June 2022 after Russia's invasion of Ukraine. As Ukraine has stepped up drone and missile strikes on Russian refineries and gas complexes, and Iran targeted the energy infrastructure of its Persian Gulf neighbours, prices of the once-throwaway product have soared to \$1,000-1,100 levels.

The risks from agriculture's heavy reliance on hydrocarbons wouldn't have been evident when India embarked on the Green Revolution in the mid-sixties. The iconic 'Mere Desh Ki Dharti' song from Manoj Kumar's 1967 blockbuster *Upkar*, indeed, had lines extolling traditional farming: *Bailon ke gale mein jab ghungroo jeevan ka raag sunate hain... Sunke rahat ki aawazen yun lage kahin shehnai baje* (when the bells hung around the bullock's neck sing the song of



HARISH DAMODARAN

life; the sound of the *rahat* seems like that from the *shehnai*).

But it isn't fossilisation alone. What we are also witnessing in parallel is the fuelisation of food. The longer Brent crude prices stay at \$100-plus per barrel, the more the incentive for diverting food crops towards bio-fuel production. This is reverse fossilisation, wherein agriculture becomes more a source than a consumer of fuel.

In India, we have ethanol produced from sugarcane, rice, maize and other starchy cereal grains being blended up to 20 per cent in petrol. Vegetable oils are, likewise, amenable for conversion into fatty acid methyl esters (FAME), which can be blended with regular petroleum diesel. Indonesia has, from July, made it mandatory for all diesel sold nationwide to contain 50 per cent palm oil-derived FAME.

If the ongoing wars are laying bare the vulnerabilities from fossilisation, the limits to the fuelisation of food could be tested by a prospective "very strong" El Niño. When the two supply shocks combine, it's agriculture that bears the brunt. The last time India experienced such a twin shock was in 1979-80, when the farm sector contracted by 12.8 per cent and its oil import bill doubled on the back of Iran's Islamic Revolution.

Indian agriculture is, of course, far more diversified now than in 1979-80, with a growing share of farm incomes coming from dairying, poultry, aquaculture and horticulture, as against normal field crops.

Also, about 56 per cent of its gross cropped area is under irrigation, whereas that ratio was 29 per cent in 1979-80 and 171 per cent in 1950-51. The twin shocks from wars and El Niño are unlikely, then, to cause sharp farm output declines of the kind seen in the past.

That said, policymakers

would do well to learn lessons from the still unfolding energy-cum-climate shocks. The implications for agriculture cannot be ignored when India is an importer of oil and gas, fertiliser raw materials (ammonia, rock phosphate, sulphur and muriate of potash) and technical-grade active ingredients and intermediates in crop protection chemicals.

There is scope firstly to reduce the consumption of urea and DAP, especially given their low nutrient use efficiency. Only a third of the 46 per cent N in urea is absorbed by crops; the rest escapes into the air as ammonia gas or leaches underground after conversion into nitrate. Even with the 46 per cent P applied through DAP, three-fourths of it simply gets "locked up" in the soil and is unavailable to the plant roots during the growing season.

The focus must be on gradually replacing urea and DAP with ammonium sulphate and complex fertilisers having more balanced nutrient composition with lower N volatilisation/leaching losses and P lock-up. Nutrient uptake and absorption can be further enhanced by biostimulants that expand the root surface areas and modify the metabolic pathways of plants. A similar approach — to trigger the internal defence and adaptation mechanisms of plants (think vaccines) — can bring down chemical pesticide application. Irrigation, too, should progressively move to solar-powered pumps and drip systems.

As for fuelisation, the Modi government has already banned the use of sugarcane juice and B-heavy molasses for making ethanol. As El Niño bites, the turn of grains may also not be far.

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The West Asia and Russia-Ukraine conflicts, together with El Niño, are testing the limits of both fossilisation of farming systems and the growing fuelisation of food

GS 2: POLITY

INDIAN EXPRESS PAGE: 13

ECI's course correction is welcome, need for accountability remains



ASHOK LAVASA

I REMEMBER the first protest I witnessed. An instrument had been stolen from the Chemistry laboratory in school but no student admitted to doing it. The principal pleaded in the school assembly for the guilty to come forward but to no avail. He then announced that he would fast until the culprit confessed.

Within five hours of the protest, the culprit came forward. In the assembly the next day, the principal described the student as the "hero of our school" because he had the "courage to admit his mistake". The principal's protest turned culpability into courage, making a hero of a man who pleaded guilty. Could a similar fate await the Election Commission of India (ECI) or the Election Commissioners (ECs)?

In the past few days, the ECI has made some hasty decisions that amount to admitting to its mistakes and atoning for wrongs caused by previous decisions. Is this a "change of heart" by an institution/individuals accused of heartless disenfranchisement? Is this a trail of corrective measures meant to cover its tracks and blunt the unprecedented outrage it invited?

Almost immediately after *The Indian Express* investigation on September 23 ('14 times in 10 months, two Election Commissioners objected on record to poll panel steps'), with the initial bland denials cutting no ice, the ECI went about rolling back some of its controversial decisions.

The changes to Form 6, characterised by one of the ECs as "illegal and unauthorised", were admitted and dropped for non-Special Intensive Revision (SIR) states. Booth level officers (BLOs) were asked to visit the homes of those notified for logical discrepancy. Technical experts were engaged to confirm if ECINet was compliant with applicable laws. Chief Electoral Officers (CEOs) were directed to organise camps in the states where SIR was completed to ensure that those deleted earlier were readmitted subject to their eligibility, with the BLOs comparing the pre- and post-SIR electoral rolls to identify those deleted. (Remember, the ECI had not agreed to publish their names until ordered by the Supreme Court last year). The changes that would make Form 6 suitable for readmitting deleted electors are yet to be made. CEO Maharashtra has written to the ECI in this regard so that millions of citizens are not vulnerable to criminal liability for making a false undertaking as stipulated in the current Form 6.

Then came the order resuming the suspended Special Summary Revision (SSR), due to which millions of first-time voters were allegedly denied enrolment since the SIR exercise started. (Incidentally, the SSR is meant to "purify" and update electoral rolls by deleting the dead and those who have moved away, enrolling the "eligible" and inquiring into complaints against those allegedly "ineligible", the stated objectives of the SIR.) It is intriguing how those deleted a few months ago for "ineligibility" will now qualify for enrolment. One irrationality replacing another!

In the wake of the numerous allegations of the misuse of Form 7 by mischievous elements, the ECI has imposed restrictions on the number of objections that can be filed using this form. And finally, the ECI has accepted political parties' long-pending demand to provide machine-readable copies of the electoral rolls, something it long resisted.

These are welcome steps even if they seem like those of a warrior who retreats after inciting the battle. These may partially make up for the contentiousness of the SIR but do not account for the alleged illegalities exposed by the IE report. The mystery surrounding the over 16 lakh appeals in West Bengal remains unsolved. The ECI cannot evade responsibility for causing the disenfranchisement of millions. It spent billions on an ill-conceived and purposeless exercise that neither identified the "ineligible" nor increased the number of electors by including the "eligible", which it could have achieved following the normal revision process. What about the mass anxiety generated in ordinary citizens and BLOs engaged in an avoidable exercise at the cost of their routine work?

That still leaves us with decisions made unilaterally as opposed to the unanimous or majority decisions mandated by the law, of illegally amending Form 6 and designing a software that obstructed the Electoral Registration Officers (ERO) from performing their duties. The responsibility for these needs to be fixed. That now rests with the Court, which watched the SIR exercise unfold, occasionally providing palliatives but largely letting the ECI be a judge in its own cause.

The SC verdict on the alleged illegalities could "uphold" the decisions of the ECI as valid, frustrating the petitioners and leaving the aggrieved to find their own redress. It could rule the ECI decisions illegal and overturn them, leaving the ECI licking its wounds, a government bewildered about the next move, and a people fuming at their helplessness. Will the SC have fulfilled its responsibility by pronouncing the illegality just as it pronounced the Tamil Nadu Governor's actions unconstitutional? Will the government be willing or compelled to take note of the SC's verdict and act?

The matter now rests on collective will and individual sense of propriety. Will the CEC withdraw from official work till the Court exonerates him? Will the collective will of Parliament live up to the responsibility of acting against a constitutional authority held responsible by the SC for illegal decisions? Will the CEC/ECs continue to function in utter disregard of an adverse SC pronouncement? Equally, if exonerated by the SC, will they remain self-assured and indifferent to the unprecedented popular upsurge against them and the growing loss of trust it signifies? It was only Iago, the "deceitful wretch" in Shakespeare's *Othello* who could call reputation "an idle and most false imposition; oft got without merit and lost without deserving".

The writer is a former election commissioner



ILLUSTRATION: VIKAS AGARWAL