

The Hindu Important News Articles & Editorial For UPSC CSE

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Prime Minister Narendra Modi's five-nation visit—covering Ghana, Trinidad and Tobago, Argentina, Namibia, and Brazil (for BRICS Summit)—is aimed at strengthening India's engagement with the Global South, enhancing strategic partnerships, and fostering a multipolar world order through platforms like BRICS.

BRICS will create a balanced 'multipolar' world order: PM

PM lands in Ghana as he begins his five-nation trip; he says the visits will strengthen cooperation within Global South; Modi will also attend the BRICS summit in Brazil and hold meetings; he will receive state honours of Ghana, Trinidad and Tobago

Kallol Bhattacharjee
NEW DELHI

India and Brazil will discuss ways to advance the priorities of the Global South in the coming days, said Prime Minister Narendra Modi ahead of his five-nation visit beginning on Wednesday.

Mr. Modi, who will attend the BRICS summit to be held in Brazil's Rio De Janeiro during the trip, said the summit will help create a "balanced multipolar world order". He further said the five-nation visit will help strengthen cooperation within the Global South. The Prime Minister is expected to hold several bilateral meetings on the sidelines of the summit as well.

Argentina on itinerary
"As a founding member, India is committed to BRICS as a vital platform for cooperation among



Pleasant ties: Prime Minister Narendra Modi being welcomed by Ghana President John Mahama in Accra on Wednesday. ANI

emerging economies. Together, we strive for a more peaceful, equitable, just, democratic and balanced multipolar world order," said Mr. Modi in a departure statement as he boarded the official aircraft that landed in Ghana for a bilateral visit.

The Prime Minister will also visit Trinidad and Tobago, Argentina, and Na-

mbia, before concluding the trip on July 9.

According to Ghanaian news outlet *Graphic.com.gh*, the Foreign Minister of Ghana Samuel Okudzeto Ablakwa had announced that Mr. Modi will receive the country's highest state honour, the Companion of the Order of the Star of Ghana, during the visit. Previous reci-

ipients of the honour include the late French President Jacques Chirac, King Mohammed VI of Morocco, President Luiz Inácio 'Lula' da Silva of Brazil, former Nigerian President Olusegun Obasanjo, and former Namibian President Sam Nujoma.

Mr. Modi will hold talks with President John Dramani Mahama in Ghana. "Ghana is a valued partner in the Global South and plays an important role in the African Union and the Economic Community of West African States (ECOWAS)," said Mr. Modi, adding that his visit will build on India's historic ties with Ghana and help in opening up areas like investment, energy, health, capacity building and development partnership.

Mr. Modi will also address the Parliament of Ghana during the visit. Mr. Ablakwa has said that Ghana plans to emerge as the "vaccine hub" for Africa

and talks would be held with Mr. Modi during the visit regarding vaccine production in Ghana.

From Ghana, Mr. Modi will fly to Trinidad and Tobago where he will be hosted by Prime Minister Kamla Persad Bissessar.

"This visit will provide an opportunity to rejuvenate the special bonds of ancestry and kinship that unite us," said Mr. Modi. The Government of Trinidad and Tobago has announced that Mr. Modi will be conferred with the Order of the Republic of Trinidad and Tobago, the highest state honour of the Caribbean nation.

Following the BRICS summit, Mr. Modi will proceed to Brasilia for a state visit.

On the way back home, Mr. Modi will stop at Namibia. Mr. Modi will meet President Netumbo Nandi Ndaitwah and address the Joint Session of Namibian Parliament.

Context and Significance

Daily News Analysis

- **Global South Focus: India** has been advocating the cause of the Global South—developing and underrepresented nations in global governance. This visit reinforces India's leadership aspirations in this bloc.
- **BRICS Summit in Brazil:** BRICS is emerging as a strategic coalition of emerging economies seeking alternatives to Western-dominated institutions like the IMF and World Bank.
- **Multipolar World Order:** PM Modi's emphasis on a "balanced multipolar world" challenges the unipolar/hegemonic dominance and seeks a just international system rooted in equality, democracy, and peace.
- **Bilateral Strengthening:** The visit involves substantive bilateral talks in Africa and Latin America, regions critical for India's energy security, trade, and geopolitical outreach.

Major Highlights

- **BRICS and India's Strategic Role**
 - India sees BRICS as a "vital platform for emerging economies".
 - The summit could strengthen cooperation in finance, digital infrastructure, global governance reforms, and South-South cooperation.
 - Reinforces calls for UN Security Council reform, equitable global decision-making, and de-dollarization initiatives.
- **India–Africa Relations (Ghana & Namibia)**
 - Ghana is a member of AU and ECOWAS, strategic for pan-African outreach.
 - Talks on vaccine production, energy, capacity building, and investment—part of India's Africa-centric development model.
 - In Namibia, PM will address its Parliament—boosting political goodwill and historic ties (e.g., India's support to SWAPO during anti-colonial struggle).
- **India–Latin America and Caribbean Ties (Argentina & Trinidad and Tobago)**
 - Cultural and diaspora linkages with Trinidad and Tobago; PM to receive highest state honour.
 - India aims to expand trade and diplomatic outreach in Argentina, a G20 member and major agricultural power.
 - The region is essential for India's diversification of trade partners and food-energy security.

Strategic Implications for India

1. Leadership in Global South

- Positions India as a credible voice for developing countries.
- Enhances India's soft power and developmental diplomacy via health, technology, and education cooperation.

2. Multipolarity and Strategic Autonomy

- Promotes a world order that is not Western-centric.

Daily News Analysis

- Strengthens India's push for reformed multilateralism, BRICS New Development Bank, and currency cooperation.

3. Geopolitical Outreach

- Reinforces India's Africa and Latin America engagement, which have been relatively underutilized.
- Diversifies India's global partnerships amid evolving geopolitics (e.g., US-China rivalry).

Challenges and Considerations

- **China's Role in BRICS:** China may attempt to dominate the BRICS agenda; India must assertively preserve its own strategic space.
- **Diplomatic Bandwidth:** Engaging multiple new partners simultaneously requires robust follow-up mechanisms.
- **Goeconomics:** Translating diplomatic ties into trade and investment gains remains a persistent challenge.

UPSCMainsPractice Question

Ques: India's engagement with the Global South reflects a shift from regional leadership to global statesmanship." In light of PM Modi's recent five-nation tour, critically examine this statement. **(250 Words)**

The Union Health Ministry, backed by ICMR and AIIMS studies, has confirmed no direct link between COVID-19 vaccination and sudden unexplained deaths, particularly among young adults (18–45 years). Studies highlighted genetic, lifestyle, post-COVID, and pre-existing health conditions as possible contributors instead.

'No link between COVID-19 vaccines and sudden deaths'

Sudden cardiac deaths can be from a wide range of factors, including genetics, lifestyle, pre-existing conditions, and post-COVID-19 complications, says Union Health Ministry

The Hindu Bureau
NEW DELHI

There is no direct link between COVID-19 vaccination and reports of sudden deaths in the country, the Union Health Ministry said on Wednesday. The Ministry added that this conclusion was reached following investigations conducted by multiple agencies.

The Ministry said that studies conducted by the Indian Council of Medical Research (ICMR) and the National Centre for Disease Control (NCDC) found no major changes in the patterns of causes of death when compared to previous years. In the majority of unexplained cases, genetic mutations were found to be a likely contributing factor.

"Sudden cardiac deaths can result from a wide range of factors, including genetics, lifestyle, pre-existing conditions, and post-COVID complications," the Ministry said in a statement.

The Ministry noted that both ICMR and NCDC have been working together to determine the causes behind sudden unexplained



Fact check: COVID-19 vaccination does not increase the risk of unexplained sudden deaths in young adults, says study. VIJAY SONEJI

deaths, particularly among young adults aged between 18 and 45 years.

To investigate the phenomenon, two complementary studies were undertaken. The first, conducted by the ICMR's National Institute of Epidemiology (NIE), was a retrospective multicentric matched case-control study. Titled "Factors associated with unexplained sudden deaths among adults aged 18–45 years in India", it was conducted between May and August 2023 across 47 tertiary care hospitals in 19 States and Union Territories.

The study reviewed cases of individuals who ap-

peared to be healthy but died suddenly between October 2021 and March 2023.

Its findings confirmed that COVID-19 vaccination does not increase the risk of unexplained sudden deaths in young adults.

The second study, titled "Establishing the cause in sudden unexplained deaths in young," is a prospective investigation currently under way at the All India Institute of Medical Sciences (AIIMS), New Delhi. The study is being conducted in collaboration with the ICMR.

Preliminary findings from this study suggest that myocardial infarction

(heart attack) continues to be the leading cause of sudden death in this demographic.

"Together, these two studies offer a more comprehensive understanding of sudden unexplained deaths in young adults in India. It has also been revealed that COVID-19 vaccination does not appear to increase the risk, whereas the role of underlying health issues, genetic predisposition and risky lifestyle choices does play a role in unexplained sudden deaths," the Ministry said.

Scientific experts have reiterated that claims linking COVID-19 vaccination to sudden deaths are "false and misleading" and not supported by scientific consensus. "Speculative claims without conclusive evidence risk undermining public confidence in vaccines, which have played a crucial role in saving millions of lives during the pandemic," the Ministry said. "Such unfounded reports and claims could strongly contribute to vaccine hesitancy in the country, thereby adversely impacting public health," it added.

Key Highlights of the Issue

- **Government Response:**

The Health Ministry clarified that vaccine-related fear is not grounded in evidence. Both retrospective and prospective studies were conducted to examine the cause of sudden deaths.

- Study Details:

1. **ICMR-NIE Study:**

Retrospective, multicentric case–control study at 47 tertiary care hospitals across 19 states (May–August 2023).

- Finding: No link between vaccination and sudden deaths.

2. **AIIMS-ICMR Study (Ongoing):**

Prospective study focusing on determining causes of sudden death.

- Finding: Myocardial infarction (heart attack) is the leading cause, not vaccines.

- **Risk Factors Identified:**

- Genetic mutations
- Post-COVID-19 complications
- Pre-existing medical conditions
- Unhealthy lifestyle practices (diet, smoking, lack of physical activity)

Implications for Public Health Policy

1. Vaccine Confidence and Hesitancy

- Misleading narratives associating vaccines with sudden deaths can reduce public trust in vaccination programs.
- Vaccine hesitancy could hinder immunisation drives and pandemic preparedness.

2. Importance of Evidence-Based Communication

- Reinforces the need for transparent, scientific communication from credible institutions (ICMR, AIIMS, NCDC).
- Helps counter misinformation on social media and prevent panic-based policy responses.

3. Strengthening Epidemiological Surveillance

- India's move to launch nationwide case–control and prospective studies shows growing institutional capacity for real-time public health investigation.
- Sets an example for other developing nations.

4. Role of Institutions

- Highlights the critical function of apex health institutions like ICMR, AIIMS, and NCDC in:

- Post-vaccine surveillance
- Public risk communication
- Policy feedback for immunisation and health strategies

Challenges Highlighted

- Misinformation and Public Trust Deficit: False correlations (e.g., between vaccines and death) can cause vaccine refusal and distrust in government health campaigns.
- Need for Genetic and Lifestyle Screening: A large number of deaths among seemingly healthy adults indicate a gap in preventive health and early diagnosis mechanisms.
- Media Accountability: Amplification of unverified claims can seriously affect public perception and undermine years of public health efforts.

UPSC Mains Practice Question

Ques: Scientific communication and trust in public health institutions are key to effective pandemic response. In the context of vaccine misinformation and sudden deaths in India, critically examine this statement. (250 Words)



ISRO has announced that the Axiom-4 (Ax-04) mission, featuring Indian Air Force Group Captain Shubhanshu Shukla, will provide critical experiential data for India's indigenous human spaceflight mission — Gaganyaan. This mission also showcases India's cultural heritage by sending Indian handicrafts to space.

Axiom-4 trip to the ISS will provide valuable inputs for Gaganyaan mission: ISRO

The Hindu Bureau
BENGALURU

The Indian Space Research Organisation (ISRO) said the Axiom-4 (Ax-04) mission to the International Space Station will provide valuable inputs for India's upcoming Gaganyaan mission. Group Captain Shubhanshu Shukla is part of the Axiom mission.

"The Ax-04 mission will provide valuable inputs for ISRO's upcoming Gaganyaan mission. It offers hands-on experience about the nuances of international crew integration, medical and psychological preparation, real-time health telemetry, experiment execution, and crew-ground coordination," the ISRO said. It added that these insights will directly influence mission planning, safety validation, and



Shubhanshu Shukla is carrying a selection of the finest Indian handicrafts to ISS, says ISRO.

astronaut readiness for India's first indigenous human spaceflight mission.

"This is one small step in orbit, but a giant leap in India's pursuit of human spaceflight and scientific discovery," it added.

The ISRO said preparations are in progress for abort missions of the Gaganyaan mission and the first uncrewed test flight is targeted for the fourth quarter of 2025.

It added that the first crewed flight of the Gaganyaan mission is expected by the first quarter of 2027.

The ISRO said that as a tribute to India's rich cultural heritage, Mr. Shukla is carrying a selection of the finest of Indian handicrafts to the International Space Station. "These symbolic items, designed by students of the National Institute of Design, Ahmedabad, reflect the diversity, craftsmanship, and timeless beauty of India's traditional art forms, carefully curated to represent different regions and materials. These pieces serve as cultural ambassadors in space. Their journey aboard the ISS not only celebrates India's artistic legacy but also honours generations of artisans who continue to keep these traditions alive," it said.

Why It Matters: Strategic Relevance of Axiom-4 for Gaganyaan

1. Capacity Building for Human Spaceflight

- First direct crew experience by an Indian astronaut aboard the International Space Station (ISS).
- Hands-on lessons in:
 - International crew collaboration
 - Health monitoring & psychological preparedness
 - Microgravity experiment execution
 - Communication with ground control

2. Feedback Loop for Gaganyaan Design and Execution

- **Will help validate:**
 - Astronaut training modules
 - Safety systems and emergency protocols
 - Mission simulation procedures
- Bridges gap between Indian simulation-based training and actual international space operations.

Cultural Diplomacy in Space

- Indian handicrafts curated by students of NID Ahmedabad being carried to ISS:
 - Representing India's artistic legacy, regional diversity, and traditional craftsmanship.
 - Promotes soft power and cultural identity in global scientific domains.
 - Acts as "cultural ambassadors in orbit".

Wider Implications

For Space Technology & Diplomacy:

- Enhances India's standing in global human spaceflight programs.
- Fosters ISRO–NASA/Axiom collaboration and technical exchange.
- Establishes India as an aspiring human spaceflight nation beyond satellite launches.

For Science & Public Engagement:

- Sparks youth interest in STEM through real astronaut involvement.
- Connects science with culture, showing how tradition and innovation can co-exist.

For Cultural Promotion:

- Expands India's soft power in space diplomacy by showcasing handicrafts on a global stage.
- Pays tribute to artisans and India's intangible cultural heritage.

Challenges Ahead

- **Technical complexity of Gaganyaan** – Safety systems, re-entry mechanisms, and life-support tech must be perfected.
- **Training ecosystem** – Needs robust astronaut training infrastructure in India.
- **Budget and timeline management** – Delays must be minimized to maintain credibility.

UPSC Mains Practice Question

Ques: India's participation in international space missions like Axiom-4 is a strategic milestone towards self-reliance in human spaceflight." Discuss in the context of the Gaganyaan mission.



Page 07 : GS 3 : Science and Technology

A groundbreaking genetic study has revealed that the Sinhalese people of Sri Lanka share a close genetic relationship with South Indian Dravidian-speaking populations and Sri Lanka's Adivasi (Indigenous) communities. The research, based on whole-genome sequencing, challenges older assumptions about Northern Indian ancestry and supports a Southern Indian origin of the Sinhalese gene pool, dating back around 3,000 years.

Sinhalese migrated from Southern India, mixed with Adivasis: study

The formation of the Sinhalese genetic pool is dated to about 3,000 years ago, falling within the range of dates displaced broadly by Indian and other Sri Lankan populations and around the time of the proposed migration date of Sinhalese to their present homeland in the island chronicles.

R. Prasad

Analysis of whole-genome sequencing data of 100 Sinhalese and two indigenous groups from Sri Lanka, which live in geographically separated regions of the country, have shed light on the migratory history of these populations and their genetic relationship to each other and to many Indian populations. The study, published recently in the journal *Genetic Biology*, found that Sinhalese and Adivasi are genetically closest to each other and to South Indians, but at a regional and fine-scale level, the two Adivasi clans are genetically distinct.

For the study, whole genomes of 100 Sinhalese individuals and 19 individuals from two indigenous Adivasi clans were sequenced. Of the 19 members of Adivasi clans that were sequenced, five were from among the Adivasi and 14 were from among Coastal Adivasi.

A genetic perspective
The sequencing and data generation were possible due to the outreach efforts of Sri Lankan scientists at the University of Rangoon, Sri Lanka. In addition, the whole-genome data of 100 Sri Lankan Tamils sampled in the U.S., which were already sequenced as part of the 1000 Genomes Project, were included in the analysis.

Sinhalese chronicles and previous genetic studies had proposed that the Sinhalese people had migrated from northern or north-east India around 100 BC, though their exact origin and migratory history are still debated. That the Sinhalese speak an Indo-European language, Sinhala, whose present-day distribution lies primarily in northern India, further supported the idea of their migration from northern India. But the current study contradicted the findings of the previous studies from a genetic perspective.

"The genetic ancestry and their proportions in the Adivasi and Sinhalese are most similar to Dravidian speaking populations, which live in southern India today," says Rajat Choudhary, a senior research scientist at the Centre for Cellular and Molecular Biology, Lucknow, and one of the corresponding authors of the paper. He adds, "Even among South Indian populations, we find that the Sinhalese are genetically closest to those communities that have higher proportions of the so-called 'K1' or 'K2' haplogroups, which are associated with the 'K' haplogroup in the Indian population."

Support from anthropological studies
The time of formation of the Sinhalese genetic pool was dated to the study to about 3,000 years ago, falling within the range of dates displaced broadly by Indian and other Sri Lankan populations and around the time of the proposed migration date of Sinhalese to the island chronicles (1000 BC).

"The date our analysis revealed is interesting. It implies that the Sinhalese genetic pool was formed in the island fairly close in time to the dramatic genetic changes that were occurring about 2,000-4,000 years ago in India that created the ASI (Ancestral Indian) and ASI (Ancestral South Indian) populations."

The study also suggests that when the Sinhalese people migrated from India to Sri Lanka about 3,000 years ago, the Adivasi were already living in Sri Lanka. This is also supported by anthropological studies that propose that the Adivasi are descended from early hunter-gatherers in the region. The Adivasi are in fact traditionally hunter-gatherers and the indigenous people of Sri Lanka.

"As a broad-scale, Adivasi today look genetically very similar to the Sinhalese and Sri Lankan Tamils. The most recent that the Sinhalese, Sri Lankan Tamils, or other groups originating from South India have met the Adivasi, mixed with



Geneticist's collecting with Affinity and Genetic and cultural studies can have different implications. (Image courtesy of R. Prasad)

biological and cultural evolution can have different trajectories. They have speculated that the genetic linguistic distance may have been caused by the Sinhalese population having migrated from somewhere in North India geographically, but genetically speaking, the migration may have come from a group that resembles more South Indian Dravidian ancestry today.

An alternative explanation is that a small group of Sinhalese people, perhaps representing the elite, might have migrated to Sri Lanka and maintained the language but not the genes.

"If the Sinhalese were derived from a North Indian genetic cluster with higher Dravidian ancestry, mixing had to have happened with ASI populations to dilute their genetic ancestry and find them genetically closer to South Indian populations in our analyses. More anthropological studies are needed to fully understand these differing genetic and cultural affinities of the Sinhalese," Rajaguru said.

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Even though, and contributed to what is the present-day genetic structure of the Adivasi," Rajaguru said.

The Sinhalese and the Adivasi are close to each other and share broad-based genetic similarities. On a fine-scale demographic evolution, however, the study found that the two Adivasi clans are 10% different from the Sinhalese. The Adivasi have slightly higher levels of

ancient hunter-gatherer ancestry than the Sinhalese and Sri Lankan Tamils, and have maintained smaller population sizes over the course of their history, both of which support their traditional hunting and gathering lifestyle.

"The Adivasi genomes do display signatures of endogamy, which appear as long stretches of DNA inherited from a common ancestor. The study further reported that a consequence of the low population size and endogamy is that the genetic diversity among the Adivasi is lower than that in the other populations, which may have an impact on their health and disease states."

While both Adivasi clans have maintained lower population sizes compared to the Sinhalese and Sri Lankan Tamils, the authors found that the Adivasi Adivasi that seemed to have undergone a stronger reduction in daily population size compared to the Coastal Adivasi, leading to a greater loss of daily genetic diversity.

"We find the two Adivasi clans - the Coastal Adivasi and the Adivasi Adivasi - also have some differences in their genetic ancestry arising due to different geographic separation between them," Rajaguru said.

This, according to Rajaguru, indicated that the Adivasi Adivasi have undergone stronger pressures, perhaps social or environmental, to keep the population size lower compared to their Coastal counterparts. Implying how the two Adivasi clans are more similar to each other, but still have genetic differences at a fine scale, she said that this biologically means at some point in time, there was geographic separation, the genetic and

lifestyle attributes of the two clans started to drift apart.

Capturing the population history
In fact, the higher proportion of the Adivasi clans also required the study sampling strategy. While 10 individuals representing the two large groups Sinhalese and Sri Lankan Tamils - have been included in the analysis, the members for the two Adivasi populations were small (five from among the Adivasi and 14 from among the Coastal Adivasi). Though it would be ideal to keep matched sample sizes of different populations for genetic analysis, the reason for including only small numbers for the two Adivasi clans was because the Adivasi communities today are very fragmented.

"Historical, anthropological, as well as our genetic results all suggest that these communities live in small sizes and practice endogamy," Rajaguru said, "because of endogamy, a lot of these individuals tend to be quite related to one another. Having only high relatedness in a group impacts the genetic analysis, because then everybody is going to look like each other, so that's why our sample sizes were lower for the two Adivasi clans."

Despite the number of individuals representing the two Adivasi clans being small, the researchers were able to reconstruct the entire population history of these two groups. The study was able to address the questions that the researchers set out to do despite the Adivasi sample sizes being small, according to Rajaguru.

"Since every individual genome is a mosaic of their ancestors' genomes, even a small number of individuals can represent their population's genetic history. However, we don't find any genetic outliers within the Adivasi clans. So, all the sampled individuals fit into the model that we propose," Rajaguru said.

"This is the first time that high-resolution genomic data have been sequenced for two small populations in Sri Lanka, including the indigenous Adivasi and Sri Lankan Tamils, to understand the deeply rooted ancestries and their population history," Rajaguru said.

Finally, the study has important implications for how humans moved across South Asia and highlights the high degree of intercommunalities between India and Sri Lanka over millennia. ground.southindian@thehindu.co.in

A group of Adivasi men photographed in Sri Lanka in 1870-1900. (Public domain)

Key Findings of the Study

1. Southern Indian Genetic Affinity:

Daily News Analysis

- Sinhalese and Sri Lankan Adivasis show highest genetic similarity with Dravidian-speaking South Indian populations.
- Genetic profile matches ASI (Ancestral South Indian) ancestry more than ANI (Ancestral North Indian).

2. Timeline of Migration:

- Sinhalese genetic pool formation: ~3,000 years ago.
- Matches the chronicles that record Sinhalese migration to Sri Lanka around 500 BCE.

3. Cultural-Linguistic Discordance:

- Despite speaking an Indo-European language (Sinhala), Sinhalese carry South Indian-type genes.
- Hypothesis: Language may have been introduced by a small elite group, without significant genetic imprint.

4. Adivasi Insights:

- Two Adivasi clans (Coastal & Interior) show:
 - Higher ancient hunter-gatherer ancestry
 - Genetic endogamy and lower population diversity
 - Geographically separated evolution, explaining genetic divergence

5. Sri Lankan Tamils & Adivasis:

- Also share genetic similarities, supporting common South Indian ancestry and historical intermixing.

Critical Implications of the Study

1. Rewriting Historical Assumptions

- Previous belief: Sinhalese migrated from northern India (based on linguistic affiliation).
- New evidence: Genetic structure aligns more with southern India.
- Highlights how linguistic and genetic evolution are not always congruent.

2. India–Sri Lanka Cultural Ties

- Strengthens the theory of millennia-old South Indian migration to Sri Lanka.
- Supports deep civilizational connections across Palk Strait.

3. Scientific Advancement

- First high-resolution genome sequencing of Sinhalese and Adivasi populations.
- Shows power of genomics in rewriting migratory histories.

4. Protection of Indigenous Knowledge

Daily News Analysis

- Adivasi clans reflect unique ancestral genetic signatures, lower diversity due to endogamy.

UPSC Mains Practice Question

Ques: The population history of South Asia is a complex interplay of migrations, cultural shifts, and biological mixing. In light of recent genomic studies, discuss the relevance of this statement in the context of Sri Lanka. **(250 Words)**



Despite formal recognition in policies and schemes, gig and platform workers remain statistically invisible in India's primary labour survey — the Periodic Labour Force Survey (PLFS). The 2025 PLFS has not yet introduced any classification mechanism that accurately identifies and tracks gig work, thus limiting the efficacy of policy implementation and social protection.

Are gig workers a part of India's labour data?

Though gig work is technically included under economic activity in the Periodic Labour Force Survey, without a specific classification, the survey fails to offer visibility into the unique nature of digital labour, characterised by multiple job roles, dependence on algorithms, lack of formal contract and absence of safety metrics

ECONOMIC NOTES

Durga Narayan

The 2025 Union Budget took several measures to formally 'recognise' gig and platform workers, and extended various social protection schemes to this growing workforce. Despite this recognition, the revised Periodic Labour Force Survey (PLFS), 2025 does not include substantive changes to account for the diverse forms of gig and platform work.

Gaps in labour classification

Gig workers were first incorporated into the legal framework through the Code on Social Security, 2020. Under Chapter I, Section 2(35), a gig worker is defined as "a person who participates in a work arrangement and earns from such activities outside of a traditional employer-employee relationship." Platform work, as defined in the Code, is "a work arrangement outside of a traditional employer-employee relationship in which organisations or individuals use an online platform to access other organisations or individuals to solve specific problems or to provide specific services or any such other activities which may be notified by the Central Government, in exchange for payment."

While this definition separates gig workers from both formal and informal categories, it doesn't clearly define who a gig worker is or the nature of gig work. According to NITI Aayog's 2022 report 'India's Booming Gig and Platform Economy', the gig workforce is expected to reach 23.5 million by 2029-30. Despite such projections and efforts to define gig work, India's primary labour statistics source, the PLFS, continues to subsume gig work under vague categories such as 'self-employed', 'own-account workers', or 'casual labour'. This statistical invisibility has direct consequences.

Clause 141 of the Code on Social



On the periphery: Gig workers prepare to deliver orders in New Delhi, in 2024. REUTERS

Security, 2020, "seeks to provide that the Central Government shall establish a Social Security Fund for social security and welfare of the unorganised workers, gig workers and platform workers." Similarly, the National Social Security Board, constituted under Section 6 of the Code on Social Security, 2020, is tasked with framing and overseeing welfare schemes for gig and platform workers. Such welfare boards and policymakers rely on the PLFS for 'evidence-based policy,' but the absence of a distinct category for gig and platform workers undermines its very intent. When classification itself is unclear in primary datasets, access to schemes becomes uneven and exclusionary.

How the PLFS falls short

In response to a Rajya Sabha query on whether the government had updated PLFS methodology to capture the rise of

gig work, the Ministry of Statistics and Programme Implementation stated, "No updation in the PLFS Schedule has been undertaken with the objective of specifically identifying persons engaged in the gig economy. However, all market activities i.e. activities performed for pay or profit which result in production of goods and services for exchange are included under the domain of economic activity considered in PLFS. The activity situation of a person who is found to be working or being engaged in economic activity during a specified reference period is associated with employment in PLFS. Hence, even the persons engaged in 'gig economy' for pay & profit are covered in PLFS."

Though gig work is technically included under economic activity, without a specific category or classification, the survey fails to offer visibility into the unique nature of digital

labour, characterised by multiple job roles, dependence on algorithms, lack of formal contract and absence of safety metrics. In the survey, while the question on the type of job contract provides an option for 'no written job contract', it doesn't capture the hybrid nature of work.

Unlike traditional self-employment, gig work is shaped by platform algorithms, performed across multiple apps and are mostly task-based rather than time-bound. Workers have no stable contracts, and often rely on digital reach. Many lack access to benefits or protections available to formal workers, and don't fully own their work processes, making the "self-employed" label misleading. Employment uncertainties, income volatility and algorithm governance remain invisible within PLFS classification. A food delivery person working across platforms like Swiggy, Zomato, for instance, will be flattened into a category that does not reflect entirely on their employment conditions or social security needs.

Recognition without representation

Recent policy efforts like the e-Shram registration, the issuance of digital ID cards, and health coverage under the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana indicate the state's recognition of the gig and platform workforce. But unless statistical systems like the PLFS evolve, the data meant to support and monitor these interventions cannot be considered inclusive.

The 2025 PLFS revision introduced some important updates: a larger sample size, monthly estimates, and better rural representation. However, it still does not address the issues of how gig work is defined and understood. For inclusive policy making, India must update PLFS classification codes or introduce survey modules that distinctly capture gig work.

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THE GIST

Gig workers were first incorporated into the legal framework through the Code on Social Security, 2020.

According to NITI Aayog's 2022 report 'India's Booming Gig and Platform Economy', the gig workforce is expected to reach 23.5 million by 2029-30.

Unlike traditional self-employment, gig work is shaped by platform algorithms, performed across multiple apps and are mostly task-based rather than time-bound. Workers have no stable contracts, and often rely on digital reach.

Key Concepts & Definitions

- **Gig Worker (Code on Social Security, 2020):** Someone earning through work outside of a traditional employer-employee relationship.

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- **Platform Worker:** Engages in work via digital platforms to offer services or solve tasks — e.g., Swiggy, Uber, Urban Company.
- **PLFS (Periodic Labour Force Survey):** India's primary labour data source, used for employment trend analysis and policy formulation.

Major Issues Highlighted

1. Inadequate Labour Classification

- Gig workers are lumped into vague categories like "self-employed", "own-account workers", or "casual labour".
- Unique conditions of gig work — like multiple jobs, task-based work, algorithmic management, lack of contract/safety — are not captured.

2. Policy–Data Disconnect

- Laws and schemes (e.g. Social Security Code 2020, e-Shram portal, Ayushman Bharat) aim to include gig workers.
- But PLFS lacks distinct codes, causing gig workers to fall outside the data net, making inclusion in welfare schemes inconsistent.

3. Structural Blind Spots in PLFS

- PLFS considers all paid activities as "economic activity" but doesn't:
 - Ask about platform work.
 - Capture multiple app-based roles.
 - Consider algorithmic control or absence of employer accountability.

4. Recognition without Representation

- Despite policy attention, gig workers are not visible in datasets, making their rights and protections hard to monitor.

Way Forward / Recommendations

1. Update PLFS Survey Design

- Introduce specific classification codes for gig and platform workers.
- Capture multi-platform income, algorithmic control, contract status, and benefit coverage.

2. Develop a Gig Work Module

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- Standalone or embedded module in PLFS or Time Use Survey to capture the diverse nature of platform-based work.

3. Data–Policy Synergy

- Use e-Shram data + PLFS upgrades to map gig economy size, vulnerability, and trends in real-time.

4. Inter-Ministerial Coordination

- Labour Ministry, MoSPI, NITI Aayog, and State Labour Boards must coordinate on a unified data framework.

UPSC Mains Practice Question

Ques: Recognition without representation undermines the purpose of social protection.” Examine this statement in the context of gig and platform workers in India. **(250 words)**



Rephrasing global development finance

India's development cooperation with the Global South has been showing a rising trend for the last several years. India has made consistent efforts to expand the facets of these engagements and has also almost doubled the flow of quantum – from around \$3 billion in 2010-11 to around \$7 billion in 2023-24. While capacity building programmes and the initiatives for technology transfer and duty-free access to India markets have been important modalities of this engagement, the main instrument has been the extension of lines of credit (LoC) under the Indian Development and Economic Assistance Scheme (IDEAS).

If budgetary provisions for 2025-26 are any indication, the red flag from the Ministry of Finance on credit lines, as a modality of engagement, is absolutely clear. At the G-20, India expressed serious concerns over rising sovereign debt levels across the Global South. During the third Voice of Global South Summit (VoGS) in 2024, Prime Minister Narendra Modi articulated the concept of a Global Development Compact (GDC), thereby implying a harmonious balance between all the modalities of engagement with the Global South. It is worth noting that there are five modalities of engagement, viz., capacity building, technology transfer, market access, grants and concessional finance. This balanced approach on modalities may be supplemented by India by having wider and deeper partnerships with countries that can work across third countries.

In this backdrop, under the modalities of engagement, India has to refocus on LoCs as an instrument of engagement. India was largely borrowing from global capital markets and providing the resources to the partner countries at a concessional rate of interest. The difference in the rates of interest was being absorbed by the Government of India. With a rising global liquidity crisis, such schemes have lost their relevance as capital market predictability and the repaying capabilities of partner countries have become severely constrained. India should take full advantage of this new reality.

Shrinking ODA and debt crisis

The traditional official development assistance (ODA) providers are going through their own budgetary crisis while the partners of the Global South have challenges in coping with the debt



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With geopolitical complexities affecting global development finance, a solution lies in evolving a mechanism of pooling resources with like-minded countries

crisis. With rising geopolitical complexities, the flow of global development finance in any case is witnessing a profound decline. The collapse of USAID and the decline of the Foreign, Commonwealth and Development Office (FCDO) have highlighted the emerging crisis in development finance. The availability and leveraging of resources have been hampered further by the declining trend in ODA, which is likely to be close to \$97 billion. This proposed slashing of foreign aid is a near 45% reduction from the levels of ODA in 2023, which stood at around \$214 billion. At the Organisation for Economic Co-operation and Development (OECD), its Development Assistance Committee (DAC) has been an elite club for ODA providers, dictating the terms and conditions for the economic and political programmes for the South.

Shrinkage in the resource flow is likely to affect several development programmes, across least developed economies, particularly at a time when several of them are passing through an unprecedented debt crisis. Over the last 20 years, a series of overlapping crises and major geopolitical and economic transformations have reshaped the global financial environment, leaving many developing countries struggling to access funding. This has posed a risk to development progress at risk and jeopardised achievements.

The investment needed to achieve the Sustainable Development Goals (SDG) by 2030 has also surged from \$2.5 trillion in 2015 to over \$4 trillion in 2024. Without a major increase in financing, progress toward the SDGs (already derailed by the COVID-19 pandemic and other global shocks) will remain elusive. Simultaneously, borrowing has become costlier and less predictable.

Rationale for triangular cooperation

A ray of hope lies in the possibility of evolving a new mechanism of pooling resources with like-minded countries. The flows from the 19 non-DAC countries that report to the OECD rose from \$1.1 billion in 2000 to \$17.7 billion in 2022. Some of these countries such as Indonesia and Brazil have evolved a rich global experience with Japan and Germany of working in third countries. Japan and Indonesia have worked together in several Association of Southeast Asian Nations

(ASEAN) economies to implement development projects. Similarly, Germany and Brazil have worked together in Mozambique in multiple development areas. Triangular Cooperation (TrC) has emerged as a powerful mechanism to bridge the divide between the Global North and the Global South.

The beauty of the TrC is that it brings together a traditional donor from the Global North, a pivotal country from the Global South, and a partner country (often from the Global South), creating inclusive platforms for shared learning, mutual respect and the co-creation of solutions tailored to local needs. Comprehensive TrC data is still being compiled at the global stage. However, the efficacy and the success of the model has been well established. Some preliminary data collection suggests TrC to be between \$670 million to \$1.1 billion.

Partnerships with results

The TrC has shown that addressing physical infrastructure can advance social progress. For instance, improving regional energy grids expands digital connectivity and provides access to opportunities in education and health. In this context, in 2022, Germany and India signed a Joint Declaration of Intent on the implementation of TrC projects in third countries (during the sixth India-Germany Inter-Governmental Consultations), with a focus on Africa, Asia, and Latin America. Since then, TrC projects are being implemented in several countries which include Cameroon, Ghana and Malawi in Africa, and in Peru in Latin America.

These offer clear examples as to how to rephrase global development finance in a manner that ensures assured and efficacious outcomes in a cost-effective manner. Engagement in TrC was further emphasised during India's G-20 presidency, with expanded collaborations involving countries such as Germany, the United States, the United Kingdom, the European Union, and France. These partnerships span a variety of sectors and modalities, from grant-based projects to investment-driven initiatives such as the Global Innovation Partnership (GIP) with the U.K. These efforts illustrate how leveraging technical, financial, and human resources can deliver results in third countries.

The views expressed are personal

Paper 02 International Relations

UPSC Mains Practice Question: India's development partnership model is emerging as an alternative to traditional North-dominated development assistance." Discuss in light of India's engagement with the Global South and the concept of Triangular Cooperation. (250 words)

Context :

In the backdrop of shifting global geopolitics and economic instability, India's evolving development cooperation with the Global South signifies a strategic recalibration in international development finance. As traditional sources of Official Development Assistance (ODA) contract, India's role as a responsible development partner is expanding through alternative mechanisms like concessional finance, capacity building, and triangular cooperation (TrC). Prime Minister Modi's articulation of a Global Development Compact at the Voice of Global South Summit (2024) marks a vision for inclusive, collaborative, and balanced development partnerships.

India's Development Cooperation: Expanding Modalities

- India's development finance to the Global South has grown significantly—from \$3 billion in 2010–11 to nearly \$7 billion in 2023–24.
- Key instruments include:
 - Lines of Credit (LoCs) under the IDEAS scheme.
 - Capacity-building programmes through the Indian Technical and Economic Cooperation (ITEC).
 - Technology transfer and duty-free market access for least-developed countries (LDCs).

However, the Ministry of Finance's caution against over-reliance on LoCs due to rising global debt distress indicates the need to diversify engagement mechanisms.

Global Context: Declining ODA and Rising Debt Crisis

- Global ODA has seen a sharp decline, with proposed reductions of nearly 45%, from \$214 billion in 2023 to \$97 billion.
- Traditional aid agencies like USAID and FCDO are facing institutional weakening.
- Simultaneously, developing countries are caught in a debt trap, with borrowing becoming costlier and financial predictability declining due to global crises, including COVID-19.

These developments are severely impacting the ability of least developed countries to achieve Sustainable Development Goals (SDGs)—where the investment gap has risen from \$2.5 trillion (2015) to over \$4 trillion (2024).

Triangular Cooperation: The New Paradigm

- **Triangular Cooperation (TrC) combines:**
 - A donor from the Global North (e.g., Japan, Germany),

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- A pivotal country from the Global South (e.g., India, Brazil),
- A partner country (e.g., Ghana, Mozambique, Peru).
- TrC promotes:
 - Shared learning,
 - Tailored local solutions,
 - Cost-effective delivery,
 - Mutual respect between North and South.

Examples:

- India-Germany Joint Declaration (2022) for TrC projects in Africa and Latin America.
- Projects in Cameroon, Ghana, Malawi, and Peru.
- Partnerships like the Global Innovation Partnership (GIP) with the U.K. support scalable innovations.

Strategic Significance for India

- Leadership role in the Global South through platforms like Voice of Global South Summit, BRICS, and G-20.
- A balanced approach to development financing, moving beyond credit lines to:
 - Grants, technical aid, and market access.
 - Collaborative development with third-party nations.
- Potential to counterbalance China's Belt and Road Initiative (BRI) through transparent and demand-driven models of development.

Conclusion

Rephrasing global development finance requires moving away from debt-heavy, donor-recipient relationships to more equitable and multilateral cooperation. India, by embracing triangular cooperation and a broader development compact, is reshaping South-South collaboration in a more resilient, inclusive, and sustainable manner. In an era of diminishing ODA and rising debt vulnerability, India's model offers a blueprint for developmental diplomacy that is both pragmatic and principled.