P.L.RAJ IAS & IPS ACADEMY

Building Bureaucrats Since 2006

Editorial of the Day – 03.10.2025

Index

1. Technological Unemployment - Historical Patterns and the AI Challenge

GS Paper 3 - Indian Economy / Science and Technology **Topics -** Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment; Awareness in the fields of IT, Computers, robotics; Science and Technology- developments and their applications and effects in everyday life.

1. Introduction - A Recurring Historical Challenge

Technological unemployment, a term coined by economist John Maynard Keynes in 1930, refers to job loss caused by technological advancements. Keynes postulated that this occurs when our "discovery of means to economise labour" outpaces our ability to find "new uses for labour." This is not a new phenomenon but a recurring pattern throughout history, with the current wave of Artificial Intelligence (AI) bringing the issue back into sharp focus.

2. Historical Precedents of Technological Disruption

The article highlights several historical examples to show that resistance to job-displacing technology is a consistent theme, and often, the underlying technological cause is overlooked in favour of more visible political or social factors.

The Luddites (1811-1817) - The original protest against technological unemployment, where English textile workers destroyed automated looms that threatened their livelihoods. This has become a symbolic reference for anti-technology movements.

Indian Indigo Farmers (Pre-Independence) - While Mahatma Gandhi's Champaran Satyagraha is often framed as a fight against exploitative British planters, the article argues the root cause of low indigo prices was technological. German companies like Bayer and BASF had developed synthetic indigo from coal tar, making natural indigo cultivation economically unviable.

Bank Computerization in India (1978) - Over half a million bank employees went on strike to protest the introduction of computers, fearing mass job losses. Despite this resistance, the government pushed forward. The eventual outcome was not mass unemployment but a massive expansion of the banking sector, with population coverage increasing from under 10% to over 90% and the rise of digital banking.

Mumbai Textile Mill Strike (1982) - The widespread closure of Mumbai's cotton mills is often attributed to the bitter conflict between mill owners and the union leader Datta Samant. However, the article posits the fundamental reason was the market disruption caused by the arrival of cheaper and more durable synthetic cloths like nylon and polyester, which made cotton mills obsolete.

3. The Current Wave - Artificial Intelligence (AI) and Neo-Luddism

The contemporary wave of anxiety is centered around AI, with early signs of protest and concern emerging globally.

Modern Protests - Small-scale protests are already occurring, such as demonstrations outside the UK's Department of Science and OpenAI's office in San Francisco, with protesters demanding regulation and raising concerns about existential risks.

Concerns from Tech Pioneers - Even the creator of the World Wide Web, Tim Berners-Lee, has started a campaign for a more human-centric web, warning against threats from misinformation and the domination of big tech platforms.

4. The Core Challenge - The Regulatory Dilemma

The central question facing governments today, including in India, is how to regulate AI and other frontier technologies. The challenge lies in striking a delicate balance.

Risk of Over-regulation - Too much regulation could stifle innovation, slow down economic progress, and prevent society from reaping the immense potential benefits of AI in fields like healthcare, education, and logistics.

Risk of Under-regulation - Too little regulation could allow the technology to cause severe social disruption, exacerbate inequality, and "savagely act as a sword against humanity" through job losses and misuse.

5. Conclusion - Navigating the Future

History teaches us that technological disruption is inevitable and often brings long-term benefits despite short-term pain and resistance. However, the unprecedented speed, scale, and scope of the AI revolution present a unique challenge. A proactive, balanced, and well-thought-out regulatory framework is not just necessary but essential for governments to navigate this transition, ensuring that the benefits of AI are distributed widely while mitigating the risks of social and economic upheaval.

2. Crafting India's Energy Policy - From Slogans to Strategy

GS Paper 3 - Infrastructure - Energy; Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.

Topics - Energy Security, Government Policies and Interventions, Geopolitics of Energy, Critical Minerals, Renewable Energy.

1. Introduction - Defining the Goals

To effectively navigate the future, India's energy policy must be guided by a clear and pragmatic interpretation of the national slogans 'Viksit Bharat' and 'Atmanirbhar Bharat'. The article argues for a nuanced understanding of these terms to create a robust policy roadmap that addresses economic, social, and environmental imperatives.

2. Decoding 'Viksit' and 'Atmanirbhar' in the Energy Context

'Viksit Bharat' (Developed India) - In the energy sector, this must be interpreted more broadly than just economic metrics like GDP. It should encompass social inclusiveness (energy access for all) and environmental protection (a clean energy transition). India does not have the luxury to "develop first and clean up later."

'Atmanirbhar Bharat' (Self-Reliant India) - A crucial distinction must be made between 'self-sufficiency' and 'self-reliance'.

Self-Sufficiency (Producing what we consume) - This is an unrealistic and undesirable goal.

1. **Petroleum -** It's unrealistic. India's import dependency has increased from ~30% in the 1970s to ~85% today, despite efforts to boost domestic production.
2. **Coal -** While attainable (India has the 5th largest deposits), over-dependence on this highly polluting fuel would compromise the environmental goals of a 'Viksit Bharat'.

Self-Reliance (Ensuring access to energy) - This is a more pragmatic and achievable goal. It means creating a robust network of national and international relationships and assets to guarantee access to affordable, timely, and clean energy. A key new imperative of this approach is securing access to critical minerals essential for the green transition, such as nickel, cobalt, lithium, copper, and rare earths.

3. The Global Energy Backdrop - Key Realities for India

India's energy policy must be framed against a challenging global backdrop.

Ecological Crisis - Global efforts to limit climate change have largely failed, with the 1.5°C temperature increase target already breached in 2024. As a country highly vulnerable to global warming, India has no choice but to support and participate in international collaborative efforts for environmental protection.

Weaponization of Energy and Geopolitical Hypocrisy - Globalization is in a 'comatose' state, leading to the weaponization of energy trade. The article highlights hypocrisy where the US sanctions India for buying Russian oil while purchasing from Venezuela, and EU nations buy Russian LNG while calling for sanctions. The key lesson is that opportunism is the bedrock of contemporary energy policy.

China's Emergence as an Energy Leviathan - China dominates the green energy supply chain. While critical minerals are mined in Africa, Latin America, and Australia, they are overwhelmingly processed and smelted in China. This makes the global green transition, and by extension India's, heavily dependent on China.

4. A Five-Point Strategy for 'Energy Atmanirbharta'

Based on this analysis, the article proposes five high-level strategic initiatives for the Indian government.

1. **Enact Legislation -** Pass an "Energy Atmanirbharta Act" to create a solid legal and institutional framework for the country's energy security goals.
2. **Create Strategic Stockpiles -** Establish a strategic stockpile of critical minerals and metals, analogous to the existing Strategic Petroleum Reserves, to buffer against supply chain disruptions.
3. **Aggressively Acquire Overseas Assets -** Disproportionately invest public funds in acquiring, controlling, or managing international energy assets, including mines for critical minerals. The full weight of the Indian state (diplomatic and financial) should back these efforts.
4. **Boost R&D and Innovation -** Massively increase public investment in energy research and technology. Replicate and institutionalize the global model of successful Public-Private Partnerships (PPPs) involving government departments, academia, research labs, and private businesses.
5. **Strengthen the Domestic Ecosystem -** Undertake domestic reforms to simplify the regulatory environment, ensure easy access to factors of production (land, capital), guarantee contract sanctity, and contemporize the workforce (e.g., training more solar maintenance engineers).

5. Conclusion

For India to achieve genuine energy security, it must shift its policy focus from the unrealistic goal of 'self-sufficiency' to the pragmatic pursuit of 'self-reliance'. This requires a clear-eyed understanding of the volatile global landscape and the implementation of a comprehensive strategy that combines aggressive overseas asset acquisition, robust domestic reforms, and a major push for technological innovation.