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Editorial of the Day – 31.12.2025

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1. Too Good to Last- On November's Industrial Data, The Indian Economy

General Studies 3- Economy

Topic- Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.

Overview- November 2025 Industrial Performance

Deceptive Strength- While the industrial growth figures for November appear strong, they represent a **temporary spike** rather than a sustainable recovery.

Narrow Base- The growth was predominantly fueled by the manufacturing sector, lacking the broad-based momentum required for long-term stability.

Contextual Comparison- This surge follows a dip in October 2025, where growth had slipped to a 14-month low, making the November rebound partly a statistical correction.

Key Data Highlights (Statistical Spike)

Index of Industrial Production (IIP)- Registered a growth of 6.7%, marking the fastest pace in 25 months.

Manufacturing Output- Rose by 8%, mirroring the 25-month high trend.

Sectoral Rebound

1. Consumer Durables- Witnessed a robust 10.3% growth (12-month high).
2. Consumer Non-Durables- Recorded a 7.3% growth (25-month high), suggesting a temporary boost in mass consumption items.

Underlying Drivers of the Surge (Temporary Factors)

The impressive numbers are attributed to specific, short-term catalysts rather than organic demand growth

Inventory Restocking- Sellers engaged in aggressive restocking following inventory depletion during the festive season.

Policy & Fiscal Triggers- GST rate cuts, strategically timed around the festivals, provided an artificial, short-term boost to consumption.

Mining Sector Recovery- After two months of contraction caused by an extended monsoon, the mining sector rebounded with 5.4% growth in November. This indicates weather-dependent volatility rather than structural improvement.

Sustainability Concerns

Several indicators suggest that the November performance is "too good to last"-

Seasonality- The festive demand is cyclical and will not reoccur until late 2026.

Fading Policy Impact- Industry feedback indicates that the demand boost from GST cuts is already dissipating.

Volatility- Key sectors like electricity and mining remain heavily dependent on weather conditions.

Weak Core Demand- Overall consumer sentiment remains tepid outside of the festive window.

Longer-Term Trends- A Reality Check

Sluggish Average Growth- The average IIP growth for the April–November 2025 period stood at just 3.3%.

Significance- This is the lowest average growth for this period in any post-COVID year.

Persistent Stress- Despite the November spike, the cumulative data for consumer non-durables shows a contraction of 1%, highlighting deep-rooted stress in rural and mass consumption.

RBI Growth Outlook & Economic Headwinds

The Reserve Bank of India's projections and external factors paint a cautious picture for the near future-

Decelerating Growth Projections

1. **Q3 Growth-** Projected at 7%, a decline from the 8% average seen in Q1 and Q2.
2. **Q4 Growth-** Expected to slow further to 6.5%.

External & Structural Challenges

Trade Barriers- High **U.S. tariffs (50%)** continue to dampen export prospects.

Investment Gap- Private investment remains sluggish, failing to pick up the slack.

Capital Flight- Continuous foreign capital outflows are exerting pressure on the financial markets.

Currency Pressure- A weakening Rupee is increasing import costs, fueling inflation in an import-dependent economy.

Wage Stagnation- Insufficient growth in real wages is capping consumer purchasing power.

Conclusion

The industrial upswing in November 2025 should be viewed as a statistical anomaly driven by festive seasonality and restocking, rather than a sign of a structural turnaround. With the economy facing a "pincer movement" of weak domestic demand (low private investment, stagnant wages) and external pressures (tariffs, capital outflows), the outlook remains challenging. Sustainable recovery will require a revival in broad-based consumption and private investment, not just short-term output spikes.

Source- https-//www.thehindu.com/opinion/editorial/too-good-to-last-on-novembers-industrial-data-the-indian-economy/article70453570.ece

2. Quantum physics

General Studies 3- Science & Technology

Topic- Developments and their applications and effects in everyday life; Indigenization of technology and developing new technology.

Introduction

The year 2025 has been declared by the United Nations as the International Year of Quantum Science and Technology, marking a century since Werner Heisenberg's foundational work. The editorial highlights how quantum physics, once considered abstract and counterintuitive, has evolved into the bedrock of modern civilization. From the microchips in smartphones to life-saving medical diagnostics, quantum mechanics has fundamentally altered humanity's technological trajectory and philosophical worldview, proving that investment in basic science yields exponential long-term dividends.

Historical Evolution- From Theory to Foundation

The journey of quantum mechanics represents a collaborative triumph of human intellect over the last century

The Dawn of Quanta (1900)- Max Planck revolutionized physics by introducing the concept of "energy quanta" to explain the anomalies of thermal radiation, moving away from classical continuous energy theories.

The Photoelectric Effect (1905)- Albert Einstein applied these quantum concepts to light, explaining the photoelectric effect—a discovery that later laid the groundwork for solar cells and sensors.

Decoding the Atom (1913)- Niels Bohr utilized quantum principles to model the structure of the hydrogen atom, explaining atomic stability and spectral lines.

Formalization (1925–26)- Werner Heisenberg, alongside Max Born and Pascual Jordan, developed matrix mechanics, formally establishing the mathematical framework of quantum mechanics.

Global Contributions

Louis de Broglie- Proposed wave-particle duality, suggesting matter behaves like both a wave and a particle.

Erwin Schrödinger- Developed the wave equation, a fundamental tool for describing quantum systems.

Indian Pioneers

Satyendra Nath Bose- His work on photon statistics led to the discovery of the Bose-Einstein Condensate, a new state of matter.

C.V. Raman- Discovered the Raman Effect, demonstrating quantum interactions between light and matter.

Technological and Societal Impact

Quantum principles have transitioned from blackboards to ubiquity, driving the "First Quantum Revolution"

Electronics & Computing- The understanding of electron behavior in materials led to the invention of the **semiconductor** in the 1950s, which is the basis of all modern electronics (transistors, chips).

Lasers & Communication- Developed in the 1960s, lasers (based on quantum stimulated emission) now power the internet (fiber optics), manufacturing, and surgery.

Data Storage- Innovations in the 1990s utilized quantum magnetoresistance to enable high-density hard drives, revolutionizing data storage.

Medical Diagnostics- Modern imaging techniques, including MRI (Magnetic Resonance Imaging), rely heavily on quantum mechanical principles of nuclear spin.

Emerging Technologies- The "Second Quantum Revolution" is now underway, focusing on Quantum Computing (unprecedented processing power) and Quantum Sensing (ultra-precise measurements).

Philosophical and Global Significance

Altering Reality- Quantum mechanics challenged the deterministic worldview of classical physics, introducing probability and uncertainty as fundamental traits of nature.

Cultural Resonance- The non-intuitive concepts of quantum physics (interconnectedness, observer effect) have influenced global philosophy and found resonance in Eastern metaphysical traditions like **Vedanta and Buddhism**.

Economic Driver- It serves as a prime example of how abstract scientific inquiry, initially devoid of practical application, can become a primary engine for global economic development.

Way Forward

Sustained Investment- Continued funding for fundamental (basic) science is non-negotiable for maintaining technological leadership and securing future innovations.

Interdisciplinary Approach- Policies must break silos, promoting research that integrates physics, computer science, and engineering.

Public Awareness- enhancing literacy regarding quantum science's societal applications is crucial to inspire the next generation, strengthen the education system, and boost national competitiveness.

Conclusion

The trajectory of quantum physics over the past century serves as a powerful testament to human curiosity. While conceptually challenging, it has revolutionized every facet of modern life—from energy and medicine to information technology. As we observe the International Year of Quantum Science and Technology in 2025, the key takeaway is clear- curiosity-driven basic research is not a luxury but a necessity for transformative progress and the future well-being of humanity.

Source- https-//indianexpress.com/article/upsc-current-affairs/upsc-key-bangladesh-khaleda-zia-lateral-entry-quantum-physics-10448514/