2025 Nobel Prize in Economic Sciences (Sveriges Riksbank Prize in Memory of Alfred Nobel)

<u>The Royal Swedish Academy of Sciences</u> has decided to award the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2025 to Joel Mokyr, Philippe Aghion and Peter Howitt

"for having explained innovation-driven economic growth"

with one half to

1. Joel Mokyr

Affiliations:

Northwestern University (USA) and Tel Aviv University (Israel)

Citation:

"For having identified the prerequisites for sustained growth through technological progress."

2. Philippe Aghion

Affiliations: Collège de France and INSEAD (France), London School of Economics (UK)

3.Peter Howitt

Affiliation: Brown University, USA

Joint Citation with Aghion:

"For the theory of sustained growth through creative destruction."

□ Theme of the Prize (2025):

"For having explained innovation-driven economic growth."

□ Background: Why This Matters

- For most of **human history**, economies were **stagnant** living standards barely improved over centuries.
- The Industrial Revolution (18th-19th centuries) changed this pattern ushering in sustained economic growth driven by technological progress.

• The 2025 laureates explain why and how innovation became selfsustaining, enabling long-term prosperity.

□[Key Contributions

1. Joel Mokyr: The Historical Roots of Innovation-Driven Growth

- Focus: Historical and cultural foundations of sustained technological progress.
- **Approach:** Used **historical evidence** and **economic reasoning** to understand how innovation became continuous.

□□ Major Insights:

- Before the Industrial Revolution:
 - Innovation was sporadic occasional inventions didn't lead to continuous progress.
 - Reason: People knew *what* worked but not *why* there was little scientific understanding.

After the Industrial Revolution:

- Scientific thinking and experimentation merged leading to systematic innovation.
- Knowledge became cumulative (each discovery built on previous ones).
- Societies became open to new ideas, tolerating experimentation and risk.
- This cultural openness and curiosity created a self-reinforcing cycle of innovation.

□□ UPSC Angle:

- Link to **GS Paper 1 (World History):** Industrial Revolution.
- Link to **GS Paper 3 (Economy):** Innovation, Research & Development, Economic Growth.
- **Takeaway:** Knowledge, openness, and institutional support are *prerequisites* for sustained economic growth.

2. Philippe Aghion & Peter Howitt: The Theory of Creative Destruction

- Origin: Their landmark paper (1992) formalized the idea of "creative destruction."
- Concept borrowed from: Joseph Schumpeter (1942), who first coined the term.

□□ What IsCreative Destruction?

- When new technology or products replace old ones, driving economic progress.
- Example:
 - Smartphones replaced feature phones.
 - Renewable energy is replacing coal-based power.

□□ Key Elements of Their Model:

- 1. Innovation is both creative and destructive:
 - Creative → New products, methods, and efficiency.
 - Destructive → Old firms and technologies become obsolete.
- 2. Growth is sustained only if innovation continues.
- 3. **Competition and incentives** drive innovation entrepreneurs innovate for profit.
- 4. **Institutions and policies** must manage the social conflicts arising from this process.

□□ Managing the Conflicts:

- Creative destruction creates winners and losers:
 - New firms and innovators gain.
 - Old firms and workers in obsolete industries lose.
- If **incumbents** (big firms, interest groups) block innovation to protect themselves, growth slows.
- Therefore, policy must protect competition and ensure social safety nets

for displaced workers.

□□ UPSC Angle:

• GS Paper 3:

- Inclusive Growth
- Industrial Policy
- Innovation Ecosystem
- Role of Competition in Markets

• Essay Topics:

- "Innovation as the Engine of Growth"
- "Balancing Growth and Equity in the Age of Technology"

☼ Overall Message of the 2025 Nobel

"Economic growth cannot be taken for granted. We must uphold the mechanisms that sustain innovation and creative destruction."

Key Mechanisms to Sustain Growth:

- 1. **Open societies and institutions** that encourage new ideas.
- 2. **Scientific reasoning and education** that deepen understanding.
- 3. **Free competition** to prevent monopolies from blocking innovation.
- 4. **Policy frameworks** that:
 - Encourage R&D and startups.
 - Provide safety nets and skill retraining for displaced workers.
 - Ensure equitable growth while maintaining dynamism.

□ Relevance for UPSC (Prelims + Mains)

Paper Relevance

Paper Relevance
Prelims Current Affairs: Nobel Prize in Economic

Sciences 2025

GS Paper 1 Industrial Revolution, Economic History **GS Paper 3** Economic Growth, Innovation, Technology,

Inclusive Development

Essay Paper Topics on Growth, Innovation, Technology,

Inequality

Interview Application-based questions on innovation

and economic policy

Possible UPSC Mains Questions

- 1. "Discuss the concept of 'creative destruction' and its role in sustaining economic growth."
- 2. "According to Joel Mokyr, cultural openness and scientific thinking were key to sustained growth. Explain."
- 3. "How can India balance innovation-driven growth with social equity?"
- 4. "Explain the role of knowledge and institutions in driving long-term economic growth."

□Contemporary Relevance for India

- **Startup India** and **Digital India** reflect the push toward innovation-driven growth.
- Creative destruction evident in:
 - E-commerce replacing traditional retail.
 - Electric vehicles replacing fossil-fuel-based mobility.
 - Fintech replacing traditional banking models.
- Policy challenge: Managing transition without social disruption.

□ Key Takeaways Summary

Concept Key Idea

Joel Mokyr Historical roots: Knowledge, culture, and openness drive sustained innovation.

Aghion & Howitt Theoretical model: Growth through creative

destruction.

Core Lesson Innovation sustains growth; resistance to

Concept	Key Idea
Policy Implication	change leads to stagnation. Promote competition, R&D, education, and social inclusion.
☐ For Further Reading	
• Schumpeter, "Capitalism, Socialism	and Democracy" (1942)
• Aghion & Howitt, "A Model of Growt	h through Creative Destruction" (1992)
• Joel Mokyr, "The Gifts of Athena" (2	002)
☐ In Essence:	
Innovation is the engine of growth,	but growth is sustainable only when societies , and manage the disruptions it causes.
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