India's growth challenge through the lens of 2025 Nobel Economics Prize

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The world waited with bated breath as the recipients of the Nobel Prize in Economic Sciences for the year 2025 were announced by The Royal Swedish Academy of Sciences in the early afternoon of October 13. Half of the prize was awarded to Joel Mokyr, an economic historian, for demonstrating that long-term economic growth is reliant on a critical factor beyond invention: the scientific explanations underlying innovation. The other half of the prize went jointly to Philippe Aghion and Peter Howitt for their foundational mathematical model of creative destruction, showing how new technologies displace older ones, driving competition and long-term growth.

The Alchemy of Progress

Consider the partnership between Matthew Boulton and James Watt during the Industrial Enlightenment in late 18th-century Britain. The scientifically adept Watt invented a more efficient steam engine by introducing a separate condenser, which drastically reduced fuel use. Boulton recognized the commercial potential of this innovation and provided the capital, business expertise, and industrial infrastructure necessary to scale production. Their partnership perfectly encapsulates Mokyr's ideas on the combination of propositional and prescriptive knowledge as the time-tested recipe to form a self-reinforcing engine of innovation that transforms economies fundamentally.

Survival of the Innovators

Aghion and Howitt's findings support the argument for the continuous reallocation of resources toward more productive uses through innovation-led competition. Case in point, firms like Kodak did not lose their market dominance because fewer photographs are taken today; rather, it is because the way photos are captured has been radically transformed by digital technology. Only those who reinvent creatively survive.

The Development Paradox

The insights of Mokyr, Aghion, and Howitt find a powerful resonance in India's own growth story. Indian entrepreneurial pursuits have surged in recent years, with success stories such as Zoho, a $20 billion valuation homegrown tech company competing on the global stage. Although India fosters world-class entrepreneurial ventures, the even distribution of the promise of innovation remains a distant dream.

According to the Comprehensive Modular Survey on Telecom (CMS-T) conducted by the

National Sample Survey Office (NSSO) in early 2025, about 16.7 per cent of rural households lack internet access to begin with, while nearly half of those without internet connectivity report insufficient knowledge or awareness to use it even if access were available. This raises the underlying question: Can innovation that is not democratized be a true measure of genuine progress?

The Price of Progress

When compared with major global economies, the pace of creative destruction remains modest in India, with slight momentum only seen in the sectors of telecom, aviation, and digital retail. This restrained dynamism is due to cultural and regulatory barriers. Bankruptcy, for instance, carries a social stigma, incumbents often enjoy protective advantages, and risk-taking is not always encouraged. Resultantly, transformative innovation can be slowed, and firms that might otherwise disrupt the market face higher hurdles. This spell of inertia can only be replaced by innovation-driven long-term growth through the fostering of a culture that sees failure as a learning opportunity.

Caveats of the Digital Economy

India's digital transformation has been so striking that German Foreign Minister Annalena Baerbock publicly lauded the country's Unified Payments Interface (UPI) system as a model of financial inclusion and innovation. Digital public infrastructure in India has leapfrogged into its current status of serving millions of citizens, but this rapid expansion of digital ecosystems has been met with some apprehension from the public. A 2024 Statista survey found that one in four Indian smartphone users expresses concerns over the potential misuse of personal data.

A system that relies on massive user-generated data flows, in the absence of digital literacy and consent mechanisms, often without commensurate awareness, opens the door to new vulnerabilities, namely privacy risks, unrecognized digital labour, and potential exploitation of user data. Innovation without transparency and positive signaling breeds stagnation.

Renewable Energy Realities

India has been a global leader in renewable energy adoption, with 127 GW of installed solar photovoltaic capacity, the fourth-largest in the world. Yet, challenges in long-term sustainability remain. Rural solar mini-grids such as the Dharnai microgrid in Bihar often fail after a few years due to maintenance gaps, and according to the Ministry of New and Renewable Energy, around 50-70 per cent of renewable projects receive direct fiscal support through schemes and incentives, raising questions of sustainability and self-reliance in the long term.

In light of these findings, Mokyr's postulations ring truer than ever: technological innovation must be complemented by institutional and human capacity.

Innovation as Shared Prosperity

Innovation, at its core, drives economic growth, but it is also a social process that, by definition, must be open, ethical, and participatory. Kerala's many community-based technology programs, such as the "Digi Kerala" campaign and the Information Kerala Mission, are real-time examples of how innovation can be democratized.

Ultimately, this year's Nobel laureates in the field of Economic Sciences remind us that progress is most powerful when it is as inventive as it is inclusive. For the world's largest democracy, full of hope and promise, this means India's next endeavor should extend beyond producing world-class innovators to the objective of ensuring that every citizen has the tools, access, and confidence to participate in that journey.

We must ask ourselves, if innovation drives growth, who drives innovation and who gets left behind?

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