

Technological Innovation

What is technological innovation?

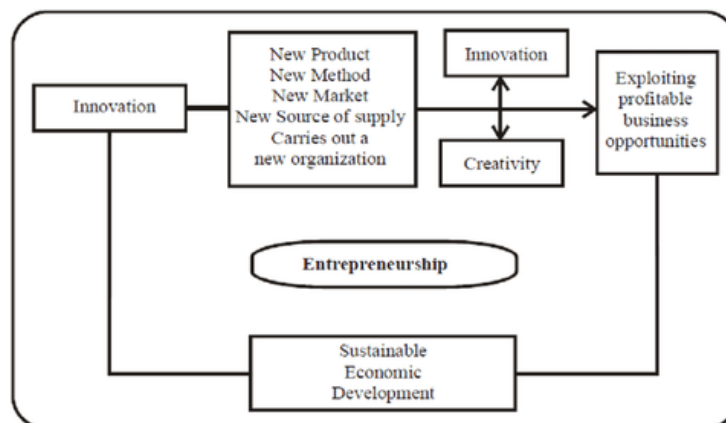
- Introduction of new things, ideas or ways of doing something (i.e. an age of technological innovation) [Oxford dictionary]
- A new idea, way of doing something, that has been introduced or discovered (i.e. technological innovations designed to save energy) [Oxford dictionary]



Technological innovations result when new rules and ideas find practical use through being applied and/or commercialized by entrepreneurs.

The innovation process

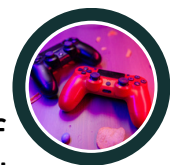
Joseph Schumpeter (Austrian economist) defined technological innovation as a process of "creative destruction",



because technologies evolve in cycles of gradual change that are eventually punctuated by radically better technological changes that quickly displace old, inferior technologies.



Novelty and New Gadgets



Technological innovation contributes to higher levels of economic output and can deliver new goods and services that change human lives and capabilities.

We live in a technological age and a global economy where knowledge and technological innovation are a key competitive advantage.

The relationship between technology and entrepreneurship is becoming increasingly important and is driving the growth and development of the global economy.

Frontier technologies



AI



IoT



Big Data



Blokchain



3D printing



Robotics



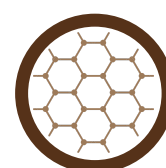
Drones



Gene editing



5G



Nanotechnology



Solar PV

Technology and inequality

Human development has been accelerated by **technological change**, but **inequality** has also evolved since the Industrial Revolution. Today, technological change is happening very quickly due to digitalization and new technologies. These changes can have a very **negative impact** on the functioning of society if they evolve faster than the ability to adapt to them.

Technological impacts

Technological change impacts inequalities through its effect on **jobs, wages and profits**.

To benefit from frontier technologies, countries need to promote their **use, adoption and adaptation**, while addressing their potential adverse effects.

Challenges for developing countries



Demographic changes



Existing technological gaps



Low economic diversification



Weak financing mechanism



Stringent intellectual property rights

We must take care of the risks associated with



Automation taking jobs



Job polarisation



The gig economy and the reduction of labour rights



The inequalities created by market and profit concentration



Increase of inequality driven by AI



Widening technological gaps

Innovation with Equity

Technological progress is essential for sustainable development but can also perpetuate inequalities or create new ones.

The task for governments is to maximize the potential, benefits, while mitigating harmful outcomes.

They must effectively manage technological change, work together to strengthen the global framework for the development of science, technology, and innovation, and promote sustainable development.

International cooperation must

Build stronger national capacities in science, technology and innovation

Smooth technology transfer

Increase women's participation

Improve foresight and technological assessment

Promote inclusion