

Innovation won't overcome stagnation

Policymakers think technology will save them. It's an illusion

SATYAJIT DAS

Innovation, everybody hopes, will rescue the world from economic stagnation. I'm not so sure.

The extent to which an innovation is significant depends on the degree to which it alters existing activity or the performance of a function. It must create related and ancillary activities that in turn lead to employment, wealth and other discoveries in a virtuous cycle. It must have longevity, being capable of exploitation over long periods. These characteristics are why the Second Industrial Revolution (electricity, internal-combustion engines, modern communications, entertainment, hydro-carbons and so on) succeeded in lifting productivity and living standards.

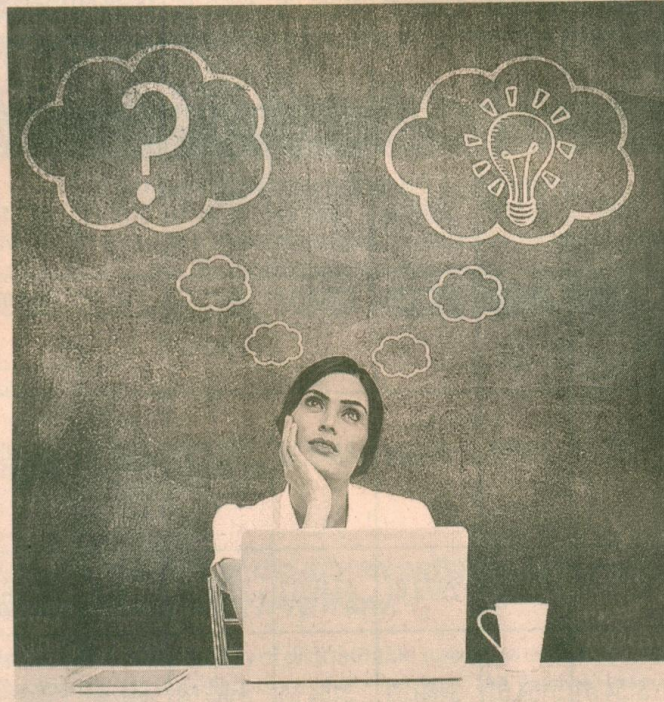
Today's innovations are unlikely to be nearly as powerful.

Most new technologies have significant benefits but don't radically reshape the modes of doing things. A driverless or electric automobile is just a new type of car. It isn't the quantum leap that motorised transport was over its animal-powered predecessors. Email improves the speed of communication but it isn't as radical as the advent of telephony. Platforms such as EBay Inc, Uber Technologies Inc and Airbnb Inc are merely new marketplaces matching buyers and sellers. Big data is just a more

sophisticated way to handle information and statistical analysis.

Moreover, many of today's tech companies focus on consumption, improving the marketing and distribution of existing goods and services. Many centre on entertainment and communication, with tangential impact on productivity. Most emphasise enhancing speed, capability, power and efficiency, rather than changing the work itself. Word processing software didn't eliminate the need to type out documents but eliminated secretaries and typing pools, leaving individuals to do the task themselves.

New technologies also tend to cannibalise existing industries, limiting their effect on growth and



Most new technologies have significant benefits but don't radically reshape the modes of doing things

PHOTO: ISTOCK

productivity. Smartphones and tablets cannibalised computers, mobile phones, portable music players such as the Walkman and digital assistants like the once-ubiquitous Palm Pilot. They replaced low-end cameras and watches. They incorporated GPS and other standalone technologies. Alphabet Inc and Facebook Inc divert advertising revenue from newspapers and magazines. Amazon.com Inc and other online sellers have taken market share from existing retailers. Netflix Inc has cannibalised television, video stores and cinemas.

Few of these businesses create completely new streams of income. The revenue gain for

smartphones is offset by reduced revenue from all the products it replaces. New products redirect investment capital, and are not necessarily incremental, at least not significantly.

It's true that many recent innovations have reduced costs. But they've often done so by using lower-quality products or untrained workers, or by extracting revenue from personal assets. Airbnb allows people to rent out their own lodging for accommodation. Uber allows people to use their own cars to offer rides for others (or entails arbitraging regulations). Many online media or entertainment services rely on contributors, who offer their services for free.

© Bloomberg