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AI's disruptive economic impact

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Why in News: Little did we know that beyond the automated factory machines, self-driving cars, and robocops, Artificial Intelligence (AI) would one day crash into our lives, authoring poems, tipping us with pickup lines, and passing the toughest examinations. The recent rise of Large Language Models and Generative AI has sparked more interest in the progress of AI across the globe.

Positive effects of AI adoption

There is broad consensus on increasing productivity by adopting AI in producing goods and services. In a study called "Generative AI at Work" (involving over 5,000 customer support agents in the Philippines), Massachusetts Institute of Technology (MIT) economists showed that AI tools boosted worker productivity by 14% and improved consumer satisfaction, leading to better treatment of customer service agents and increased employee retention.

Experts suggest that generative AI may not replace employees, but employees using generative AI will replace those who do not upskill.

A recent survey among employees of LinkedIn's top 50 companies in the United States shows that almost 70% of them found AI helping them to be faster, smarter, and more productive.

Another 32% were of the opinion that while AI's current impact may be modest, they anticipate larger gains over the next five years. Professor Erik Brynjolfsson of the MIT suggests that restructuring business processes and increased investments are essential to fully leverage AI's productivity potential.

Research from across the world is also largely optimistic about AI's impacts on growth. A study by PricewaterhouseCoopers (PwC) predicted an increase in global GDP by 14% or \$15.7 trillion by 2030 due to ongoing technological advancements in AI.

Further, a report from Goldman Sachs Research in April 2023 said that generative AI alone could raise global GDP by 7% or almost \$7 trillion over a 10-year period.

The report highlights generative AI's potential to create human-like output and that its ability to break down communication barriers between humans and machines could have large positive macroeconomic effects.

There are also views of U.S. and European economic experts on the impact of AI on the per capita income of the U.S. and western Europe.

On the question whether AI will result in a substantial increase in the growth rates of real capita income in the U.S. and western Europe over the next two decades, 44% of the U.S. experts agreed to an expected substantial increase, whereas 46% said the effects were uncertain.

Among the European experts, 34% expected a substantial increase in GDP per capita, while 42% were uncertain about the effects of AI.

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Only 2% of experts believed that AI would not significantly impact per capita GDP; this included Professor Nicholas Bloom of Stanford, who pointed out historical data on slowed GDP growth despite technological advancements.

On another question of whether a ban on generative AI chatbots could negatively impact national innovation, 62% of the European experts agreed that a ban could hinder innovation, 14% were uncertain, and only 2% disagreed.

Negative impact of AI Technology

Experts also point to multiple negative impacts of AI technologies. The first is labour replacement that AI technologies bring to the table.

AI can automate repetitive tasks and with generative AI, even creative tasks can be done efficiently and fast.

A research paper titled “Robots and Jobs: Evidence from US Labor Markets” by Daron Acemoglu of MIT and Pascual Restrepo of Boston University found that robot adoption has a negative effect on workers, on average — it reduces the labour share, employment and wages.

These adverse effects primarily affect blue-collar workers and individuals with lower levels of education.

In “Tasks, Automation, and the Rise in U.S. Wage Inequality”, the two authors document that between 50% and 70% of changes in the U.S. wage structure over the last four decades can be attributed to relative wage declines of worker groups specialised in routine tasks in industries experiencing rapid automation.

Acemoglu argues that automation reduces labour share and wages, especially when productivity gains from automation are small.

His other studies also highlight distributional concerns over automation, causing inequality among workers and possible serious negative impacts on social welfare.

A European Parliamentary Research Service report cites McKinsey Global Institute’s research that suggests that AI may intensify competition and deepen the technological divide among firms. Early adopters of AI may gain significant advantages, leading to a winner-takes-all scenario.

The Guardian puts forward the idea that AI could be highly disruptive as it is more likely to displace middle-class, white-collared jobs; in comparison, earlier technological advancements displaced people from lower-paid farm jobs to higher-paid factory floor jobs.

Analysis by Goldman Sachs has suggested that 15%-35% of work in the U.S. economy is exposed to automation. Still, the finance giant also puts out numbers to show how this may not adversely affect the labour market — “60% of workers today are employed in occupations that didn’t exist in 1940, implying that over 85% of employment growth over the last 80 years is explained by the technology-driven creation of new positions” — hinting at the possibility of AI creating more jobs than on how much it displaces. But surely, no inferences can be yet derived on how each upgrade impacts the labour market.

Opportunities for India

India, being the most populous country, should be on the lookout as any net negative effect on employment can adversely impact the economy.

Increased efficiency by the adoption of AI in call centres and software industries does not bode well for millions of Indians who work in the field.

Regulation on the use of AI is not a bright solution as this would just drive investments and new opportunities away.

The PwC report suggests that the greatest economic gains from AI will come from China, with a projected 26% boost to GDP by 2030.

Thus, it would be prudent for India to focus more on education and training in AI; this could be a lot easier now with online education having larger acceptance after the COVID-19 pandemic to take advantage of the demographic dividend and new opportunities that emanate from AI.

AI has seeped into every aspect of the global economy, and its effect on productivity and growth is being seen in an optimistic way. Views on the effect of AI on the labour market and its impact on society are gloomy, with 70% of American experts in an IGM survey agreeing that AI could create deep challenges for society, including in the labour market, politics, data privacy, crime and warfare; these challenges are difficult to anticipate and plan for.

Governments would have to step up their cyber regulations with respect to the new challenges posed by AI and may also need tax capital, as suggested by many experts, to balance the returns from capital and labour to reduce the displacement and distributional effects.

Conclusion

Either way, ever-growing advancements in AI are now a reality and equipping ourselves with the latest tools will help us forge ahead along with everyone else. And no, an apocalypse where robots take over the human world is nowhere soon.