

Briefing

- Technological revolution begins in business and then spreads to households. Henry Ford coined the term “automation” in 1947 to describe the use of machines to control other machines. The automation revolution quickly spread from businesses to households in the form of modern appliances. The digital revolution began with businesses using mainframe computers for data processing and then spread to the invention of personal computers that, in some form, occupy nearly 100% of U.S. households today. The information revolution began as a tool for government and university mainframes to communicate and then became available to households as the internet. While artificial intelligence (AI) has only recently become common in households, businesses have been using AI since the mid-2010s. With each revolution, experts predicted massive job losses, yet jobs continued to grow (Figure 1).
- In terms of household use, AI in 2026 is like computers in 1997 (Figure 2). Consider what didn't exist in 1997: online shopping, streaming media, social media, ride-sharing, virtual meetings, the gig economy and more. Similarly, over the next decades, AI will make businesses possible that we can't yet imagine.
- AI currently contributes about 1% to U.S. gross domestic product (GDP) (Figure 3). If the AI revolution plays out as did the digital and information revolutions, AI could grow to 10 times its current size.

Chart of the Week

Experts' Views on Technological Change and Labor

- “Workers become commodities, and AI becomes the instrument for displacing them.”
 - “The Condition of the Working Class,” Engels, F.
- “AI is reaching into so many fields so fast that it has become our second-most important problem.”
 - Time
- “One of the greatest problems with AI is not the worker who is fired but the worker who isn't hired.”
 - E.J. Holland, Pennsylvania House of Representatives
- “Early predictions about AI are overblown.”
 - Newsweek
- “Worldwide unemployment will increase as AI eliminates tens of millions of jobs.”
 - J. Rifkin, Economist and Author
- “The growth of AI will slow drastically...it will become clear that the impact on the economy has been no greater than the fax machine's.”
 - Paul Krugman, Nobel Laureate
- “AI is going to wipe out large numbers of middle-class jobs...”
 - Autor, D.H., Journal of Economic Perspectives

Commentary

What's interesting about the quotes above (Chart of the Week) is that, while they are legitimate quotes, none of them are actually about AI. We've replaced the words “automation,” “machines” and “computers” with “AI.” The first quote, from 1845, is talking about the industrial revolution. The last quote, from 2015, is talking about the digital revolution. The others, ranging from 1961 to 1998, express concern about computers and the digital revolution.

In each revolution, experts said: “This time, it's different.” Yet, what's always been the same is how easy it is to point to existing jobs that a new technology will displace but how hard it is to imagine non-existing jobs that the technology will create. And sometimes, a new technology surprises us by doing both at once.

In the 1970s, ATMs started to become popular. They did much of the work that human bank tellers performed, and so experts felt confident in predicting the destruction of bank teller jobs. The experts were partially correct. The number of urban bank teller jobs declined 40% over the course of a decade. But what the experts failed to anticipate was that, with 40% fewer human tellers, it was now profitable for banks to open more rural branches. While the average number of tellers per branch declined 40%, the increase in the number of branches more than compensated. The result was an overall increase in the number of teller jobs.

Snapshots

Figure 1. US Jobs (Millions)

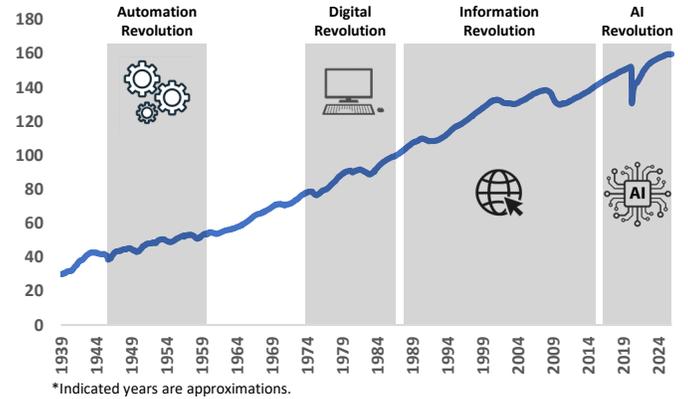


Figure 2. Technology Use Among Americans

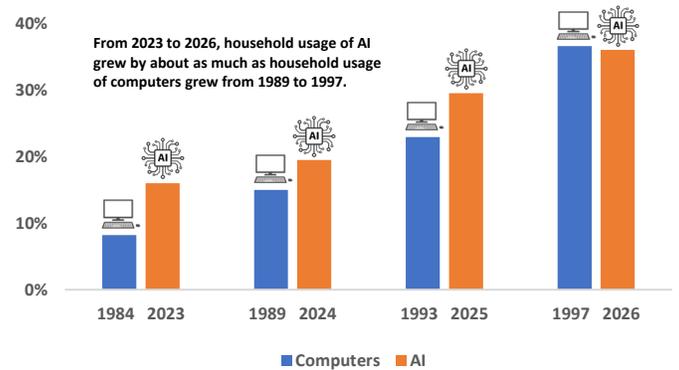
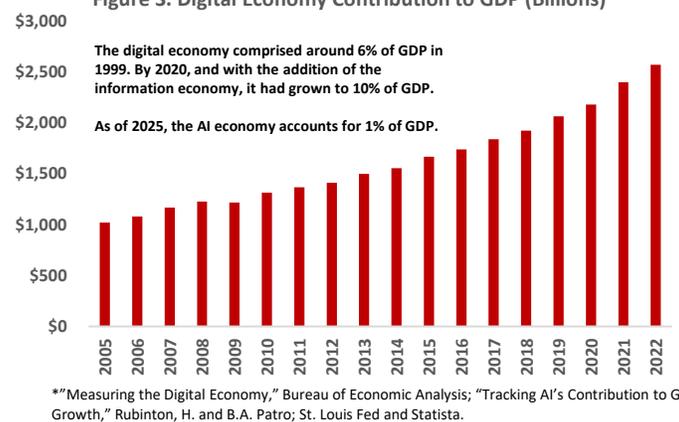


Figure 3. Digital Economy Contribution to GDP (Billions)



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