Vanguard

Megatrends and AI:
What it means for our jobs and the future of work

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Vanguard's megatrends research examines how fundamental shifts in technology, demographics, fiscal deficits and debt, globalization, and more may shape the economic landscape, future markets, and broader society. We use the Vanguard Megatrends Model™ to assess over 130 years of history to isolate the drivers and impact behind each megatrend and assign probabilities to future financial and economic scenarios.

One such outcome suggests a future that too few are talking about, one in which technology as a megatrend, specifically artificial intelligence (AI), transforms the way we work, driving increases in productivity and economic growth.

In this series, Vanguard Global Chief Economist Joe Davis, Ph.D., answers questions to help investors understand the implications of his research and how investors should respond.

There are some who believe that AI will be massively disruptive to the job market. Are you able to talk me off the edge?

Davis: Well, first let's acknowledge that AI is likely to be the most disruptive technology to alter the nature of our work since the personal computer. Those of a certain age might recall how the broad availability of PCs remade many jobs—it didn't eliminate jobs as much as it allowed people to focus on higher-value activities. Our research suggests that, for the majority of occupations, AI will not be inconsequential, but it also won't eliminate those jobs either. We could see job loss in upwards of 20% of occupations as a result of AI-driven automation. But for the majority of jobs—likely 4 out of 5—AI's impact will result in a mixture of innovation and automation, resulting in about 43% in time savings. But it won't systematically eliminate these jobs, and workers' time will increasingly shift to higher-value-added and uniquely human tasks. We're saying that we see AI as disruptive, not dystopian.

Can you talk more about how AI may impact jobs and responsibilities?

Davis: If AI advances in the way our research suggests, it's likely that among 800 occupations reviewed, 25% of current working hours are spent performing tasks that will be automated. This introduces augmentation—which refers to how AI *may* serve as a "copilot" to various roles, introducing efficiency to repetitive tasks, assisting with responsibilities, etc. That includes nurses, family physicians, high school teachers, pharmacists, HR managers, and insurance sales agents. For example, I have a

colleague who was a fund accountant in the 1980s, when the work was highly manual and paper-based. We had essentially one accountant for every mutual fund. Fast-forward a few decades and consider the impact of the PC. We still have fund accountants, but they're much more efficient, and their day-to-day tasks are spent on much higher value activities than manually calculating a mutual fund's share price. Our research suggests a similar influence in the years ahead from AI. Not dystopian for the majority of the workforce, but something that unleashes potential boosts to future U.S. productivity, living standards, and growth.

Can you drill deeper into how AI can influence productivity?

Davis: As AI integrates into the workforce by 2035, we estimate that the average automation rate across all U.S. jobs will exceed 20%, equivalent to freeing up one day of work per week. This will not give everyone an extra day off. Rather, it means turning out more with less. Spread out over 10 years, that 20% productivity lift per year would put GDP growth near 3% during the 2030s. Broadly speaking, that would be the fastest growth in the U.S. trend since the late 1990s.

That's a significant increase in productivity.

Davis: Absolutely. The irony is that our research suggests that a reason for relatively low productivity growth in recent years may be a lack of automation. If AI's impact is what our models suggest and drives significant increases in productivity, it would be the equivalent to the baby boom generation not retiring at all.

Takeaways:

- **Widespread impact on jobs:** AI is expected to positively impact about 80% of all jobs in the next decade, enhancing job functions rather than replacing jobs entirely.
- **AI as a copilot:** AI is expected to act as a supportive tool across various professions, improving efficiency and allowing workers to concentrate on more strategic tasks. This applies to a majority of occupations.
- **Boost in productivity:** Recent years have seen low productivity growth, partly due to a lack of automation. By 2035, AI integration could increase productivity by 20%, potentially raising annual GDP growth to 3% in the 2030s.
- **Fastest economic growth since the late 1990s:** The productivity gains from AI could produce the fastest productivity and economic growth in a generation, significantly enhancing U.S. productivity and economic standards.