Research

Institutional Insights

Artificial intelligence: An X-factor in a new investment regime

Analyzing the potential long-term economic boost from AI

Irina Tytell
Team Leader
Asset Allocation Research Team

KEY TAKEAWAYS

- After studying the growth of past transformational technologies, we believe artificial intelligence (AI) could be a multiyear investment theme and may lead to higher productivity over time, making labor and capital more efficient, facilitating more innovation, increasing consumer buying power, and supporting corporate profit margins.
- Adoption rates for AI and possible productivity gains related to it are likely to vary by sector—more heavily impacting service segments, for example—and any broad contributions to overall economic productivity could be years away.
- However, AI could also pose significant economic and societal costs that may constrain the spread of this technology.

Chapter 1

The link between AI, productivity, and profits

Fidelity's Asset Allocation Research team (AART) recently found potential catalysts that could re-ignite productivity after an extended period of weak growth and a decoupling from corporate profits in a paper titled "A Strategic Allocator's Guide to Productivity and Profits." Although our base-case forecasts in that paper do not indicate a productivity boom ahead, we suspect shifting secular trends could potentially boost productivity rates. These include changes in interest rates and labor costs, as well as reshoring, onshoring, and near-shoring initiatives and efforts to address climate change. We believe that, as a result, public investment and capex could rise from depressed levels and catalyze productivity. Alongside these forces, breakthroughs in AI could be another source of future productivity gains.

Productivity is typically measured as output per hour worked. This measure reflects labor productivity and is a function of labor composition (the quality of human capital), capital intensity (how much capital workers use to produce goods and services), and multifactor productivity (the overall efficiency with which labor and capital are used together).

AI holds promise for accelerating overall productivity and multifactor productivity (ultimately the core driver of long-term growth). It may do so directly by making labor and capital more efficient, and indirectly by facilitating further innovation.

Framing the opportunity for AI as an investment theme and the potential productivity upside of the technology is what we set out to accomplish in this paper.

Summary of the Research

The AART team studied the potential for AI to increase economic productivity using three different methods: by studying the historical productivity increases of past technologies; extrapolating adoption patters by sector, and deriving an estimate from capital spending.

Each method presented slightly different estimates. That said, each similarly concluded that the productivity increase derived from AI would likely be fairly slow in the early going, as the adoption rate improved over a period of roughly 15 years. It would, however, increase as AI technologies became widely adopted. Exhibit 1 shows the summary results of the research.

Artificial intelligence terms

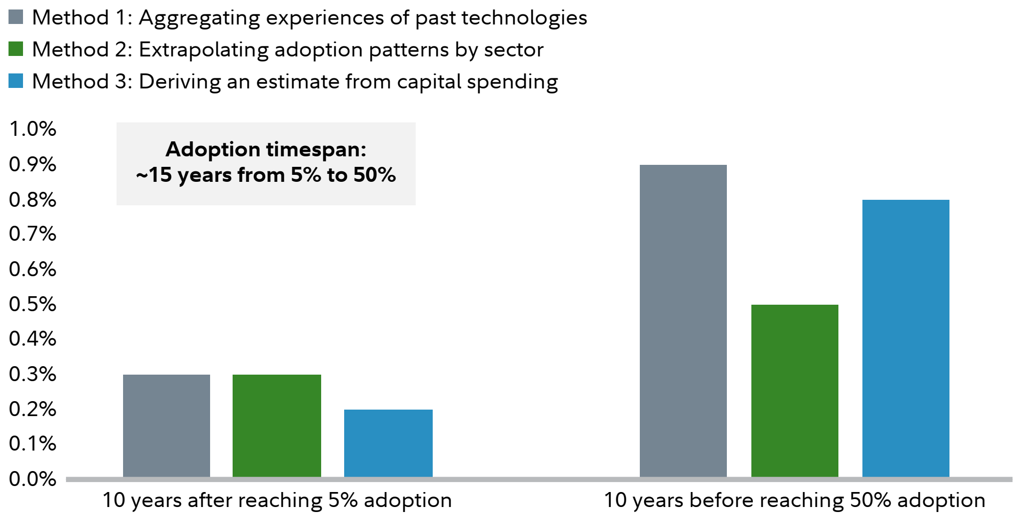
Artificial Intelligence, or AI, describes machines achieving goals that would normally require human reasoning and intervention, such as making decisions, recognizing patterns, and summarizing research. **Machine Learning** is a subfield of AI where machines learn from data without explicit programming. **Generative AI** is the first killer application that finds patterns in data, then uses those patterns to create novel content on demand.

Chapter 2 of this paper provides more details about how the team aggregated the experiences of past technologies to derive an AI estimate for Method 1.

Chapter 3 provides the details behind the estimates using Methods 2 and 3.

Chapter 4 explores what AI could mean for company profits, how it may affect jobs, inequality, and the environment, and provides the AART team's conclusions.

EXHIBIT 1: Estimates of additional productivity from AI



Method 1 sources are listed under Exhibit 4. Method 2 sources are listed under Exhibit 5. Method 3 sources are listed under Exhibit 6. Fidelity Investments (AART), as of 5/31/24.

Why AI matters to investors

It is still early days for AI, but it could be the next major wave of computing technology. If this proves to be the case, AI may be a multiyear investment theme that could reshape the technology sector.

More broadly, AI may be a driver of future corporate revenue and profit margins if it contributes to upside versus current productivity expectations. If this were to happen, AI could help counteract higher costs that threaten to diminish future market returns.

Will AI be an economic game changer?

AI appears on track to grow into a secular trend. It has the potential to affect many parts of the economy within and beyond the technology ecosystem, depending on the degree to which it drives productivity upside.

Studying the adoption rates and the productivity impact of past technologies can help set baseline expectations for AI-driven productivity growth. Focusing on the technologies we believe are more akin to AI in terms of the likely economic impact can provide more targeted baseline cues.

AI uses: Now and in the future

When investors think of AI, they may specifically think of generative AI that powers chatbots and voice-activated personal assistants, website recommendations, and text that mimics human writing.

Generative AI also can write computer code, summarize findings, and generate ideas that can spark further study or take a project in a new direction.

Looking ahead, AI could drastically improve the speed of code development, resulting in productivity software that is customized for each business. Expect the use of AI to become more widespread in health care, as it can help improve the speed and accuracy of medical diagnoses. It may also find patterns that can be leveraged to create personalized medications. AI could also help personal finance companies better detect and address fraudulent activity. Lastly, it may speed up scientific research.

What about regulation?

Legal guardrails about the use of AI technologies mainly have come from existing rules related to copyright, fairness in hiring, nondiscrimination, data privacy, and cybersecurity. More specific efforts to limit or direct the uses of AI are likely to take multiple forms and could come from state and local policymakers, federal agencies, and organizations that set international standards. Already in 2024, states have proposed more than 500 bills related to AI.[1]

Many questions about how to prevent the misuse of AI remain unanswered, and it will likely take considerable time and human/AI interaction before comprehensive regulations and guidelines are established.

Recent AI regulatory initiatives (since October 2023)

The Biden administration proposed an "AI Bill of Rights" that partly hopes to protect against algorithmic discrimination and protect data privacy, and issued an executive order requiring developers to share safety test results and other information with the U.S. government.[2]

Half of all U.S. states are considering AI laws, most of which include a provision that seeks to regulate the use of AI for digital profiling.[3]

The U.S. Office of Management and Budget enacted new AI regulations that govern how federal agencies can use the technology.[4]

The European Parliament adopted the Artificial Intelligence Act to ban certain AI applications, including the scraping of images to create facial recognition databases.[5]

Chapter 2

Learning about AI from the past

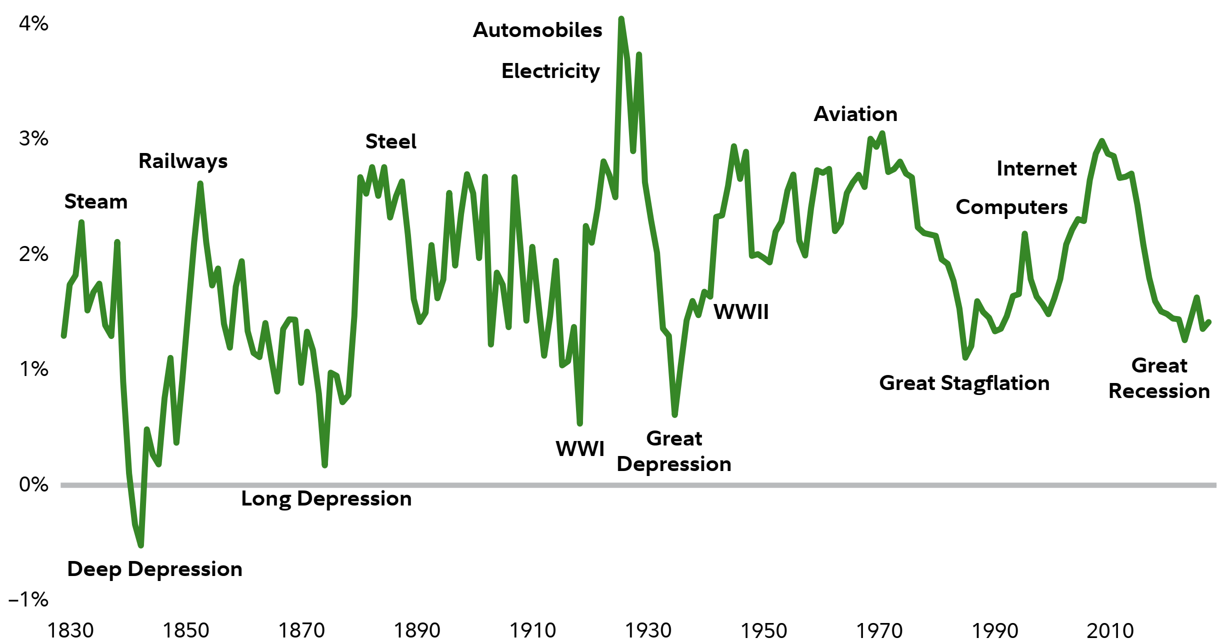
To form a view about the potential of AI technologies to increase the rate of economy-wide productivity growth, it is helpful to think of them in relation to the so-called General-Purpose Technologies (GPT, not to be confused with Generative Pre-trained Transformer in ChatGPT). In contrast to smaller-scale innovations, GPTs cause profound structural changes that bring wide-ranging impacts on the economy and society. In doing so, they produce meaningful accelerations in productivity growth.

The impact of past tech advances on productivity

Examples of GPTs over time include the advent of steam power, modern railways, industrial steelmaking, the widespread use of electrical grids, automobiles, air travel, personal computers, and the internet. In their own ways, each contributed to multiyear increases in productivity, thus boosting living standards (Exhibit 2).

EXHIBIT 2: Past technology advances and productivity gains

Productivity: U.S. nonfarm output per hour (10-year annualized growth rate)



Sources: Maddison Project Database: Jutta Bolt and Jan Luiten van Zanden (2020), "Maddison style estimates of the evolution of the world economy. A new 2020 update." Bureau of Labor Statistics, Haver Analytics, Fidelity Investments (AART).

The economic impact of GPTs has varied partly due to the speed of adoption. Exhibit 3 (page 6) shows that consumer communications technologies, such as radio, television, and mobile phones, spread relatively quickly. In comparison, capital-intensive industrial buildouts, such as railway lines, electricity grids, and, more recently, industrial robots, took relatively longer to reach widespread use.

The timing and the magnitude of productivity booms vary considerably across the different technologies. For example, after the invention of the microprocessor in the early 1970s, it took more than a decade for them to make their way into a range of commercial and consumer products—most notably, the personal computer—before they added to economic efficiencies and global productivity growth.

Similarly, the U.S. Department of Defense invented the underpinnings of the modern internet in 1983. Over time, the internet helped to reduce transportation costs for companies, lower consumer costs, and increase the number of product choices. It also helped increase the speed and lower the cost of communication for both companies and consumers. Yet many economists conclude that the internet did not contribute meaningfully to economic productivity until the mid-1990s.

The contributions of other meaningful recent technologies to economic productivity are less clear. For example, mobile broadband has improved the speed of communication, leading to efficiencies in many market segments, such as consumer banking (especially in developing countries). Yet the overall impact on worker output has been difficult to quantify.

Furthermore, other innovations, policy actions, and societal changes took place alongside technological advancements and likely contributed to the productivity dynamics. For example, the spread of industrial automation coincided with globalization of supply chains, making the exact sources of the pickup in manufacturing productivity difficult to disentangle.

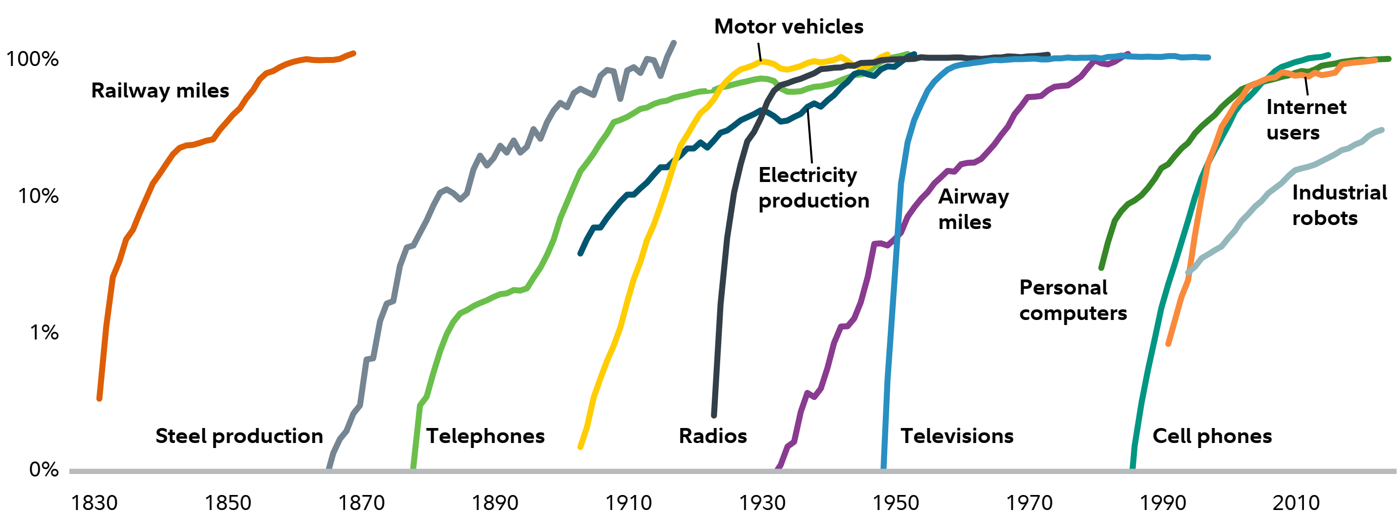
How AI compares with prior technologies

While adoption of AI tools is at an early stage, the often-cited use cases cluster around services applications, such as software development, professional writing, or customer support.

In this sense, AI may be more akin to sector-specific innovations, such as industrial robots, than to the broad-based general-purpose technologies, such as electrification. Another similarity with industrial robots is that many AI systems are aimed specifically at the automation of tasks.

EXHIBIT 3: The adoption rate of past technologies

U.S. major technology adoption patterns (log scale)



Railway miles per 1,000 people, steel short tons per employee, telephone lines per household, electricity 10 megawatts per household, automobiles per household, radios per household, airway miles per 1,000 people, televisions per household, households with computers, cell phones per person, internet users per household, robots per 1,000 manufacturing employees. Sources: "Historical Statistics of the United States, Earliest Times to the Present: Millennial Edition," edited by Susan B. Carter et al., New York: Cambridge University Press, 2006. Diego Comin and Bart Hobijn, "An Exploration of Technology Diffusion," The American Economic Review, Vol. 100, No. 5 (December 2010), pp. 2031–2059. World Bank, U.S. Census Bureau, Bureau of Labor Statistics, Haver Analytics, Macrobond, Fidelity Investments (AART).

AI technology also differs from innovations aimed at connectivity by way of either transportation or communication. Instead, AI tools appear to have more in common with the computer, the typewriter, and the calculator (task automation), than with railways, automobiles, or telephones that connect individuals within an interrelated network.

While AI use cases are still evolving, this technology appears more widely applicable in the workplace than at home. AI is less of a household technology than radios, televisions, or cell phones. Even though AI tools may not be household staples, they are digital technologies, such as the computer and the internet, which build on existing digital infrastructure.

These comparisons suggest that AI's impact on productivity may be gleaned from the experience of prior technologies, especially those with the more similar qualities. The implications for the speed of adoption may be examined likewise. Although such assessments are vastly uncertain, they provide a reference framework for an initial evaluation of the economic prospects of AI.

What prior technologies suggest for AI (Method 1)

Looking at the largest productivity booms of the last 200 years, productivity growth rates reached about 3%, on average, in the peak decades. That is an acceleration of roughly 1% relative to the long-term rate of just under 2%. These booms took place against vastly different historical backgrounds and were likely influenced by multiple coincident developments. Yet, technological breakthroughs were at the heart of many of these episodes.

Exhibit 4 summarizes the experience of prior technologies in terms of their adoption and the associated productivity impact. To draw parallels with AI, we assign "AI similarity" scores to these innovations that reflect our qualitative views. We examine the rise in adoption rates from 5%—close to where AI technologies stand today (more on that below)—to 50%. We then proceed to evaluate the impacts on productivity in two decades: first, after the adoption rate passed 5% and, second, before it reached 50%.

EXHIBIT 4: Implications of adoption rates and productivity gains of past technologies

Technology	AI subjective similarity score	5% to 50% adoption period (years)	Additional productivity: 10 years after reaching 5% adoption	Additional productivity: 10 years before reaching 50% adoption
Railways	5%	18	-1.4%	1.0%
Telephones	5%	18	-0.5%	-2.0%
Automobiles	5%	10	0.6%	0.6%
Radio*	5%	6	-2.8%	-3.0%
Aviation	5%	21	0.0%	0.6%
Television*	5%	4	0.4%	0.9%
Steel	10%	23	1.4%	1.9%
Cell phones	10%	10	0.9%	0.9%
Internet*	10%	7	1.3%	1.9%
Electricity	15%	21	-0.7%	2.0%
Computers	25%	18	1.1%	1.1%
Robots	30%	–	–	–
AI**	**100%**	**15.5**	**0.3%**	**0.9%**

* Additional productivity boosts are calculated over 5- rather than 10-year periods to reflect the speedy adoption of these technologies.
** For AI, estimates of the adoption period and additional productivities combine experiences of prior technologies with AI similarity scores (excluding robots due to incomplete data). For the other technologies, estimates are based on the data shown in Exhibits 1 and 2. For all technologies, additional productivities are calculated relative to productivities in the 10 years before reaching 5% adoption rates.

It's important to note that while these assessments offer a useful historical context for AI, they are uncertain.

History suggests that technology adoption tends to take a long time. In the past, moving from an adoption rate of 5% to 50% took multiple years and, in some cases, more than two decades. Household items, such as radios, televisions, and cell phones, as well as network services, such as the internet, were adopted quickly. Technologies that required extensive infrastructure buildouts, such as railways and electrical grids, or major changes in worker skills and business practices, such as computers, were adopted slowly. Weighing historical experiences by their similarity with AI leads to roughly 15 years as a plausible runway to widespread use.

Productivity gains tended to be modest in the initial stages of adoption. Relative to the preceding decade, the productivity boost after the 5% adoption mark was often small and, in some cases, negative. The AI similarity-weighted estimate is 0.3% over the 1.4% productivity rate of the last decade. Over the coming decade, therefore, a major AI-driven acceleration in productivity is unlikely.

The more substantial pickup in productivity tended to happen closer to the 50% adoption mark. Electrification was associated with a 2% productivity boost (on top of 1.7% baseline rate at the turn of the 19th century). More recently, computers and the internet also saw sizable productivity gains as their adoption became widespread. The AI similarity-weighted estimate in the lead-up decade is 0.9% over the 1.4% baseline.

The range of outcomes is wide, however, from productivity decelerating to impressive accelerations. The uncertainty is a reminder that these technologies differ from one another and that many other developments take place alongside their adoption.

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Chapter 3

Gauging AI benefits over time

As described in "A Strategic Allocator's Guide to Productivity and Profits," recent productivity trends and our baseline expectations are both muted. Yet, productivity is increasingly important in driving economic growth in the era of slowing demographic growth and aging populations. In this environment, even a modest boost from AI would be meaningful and could support stronger economic growth. We also think that the benefits are likely to increase corporate profits.

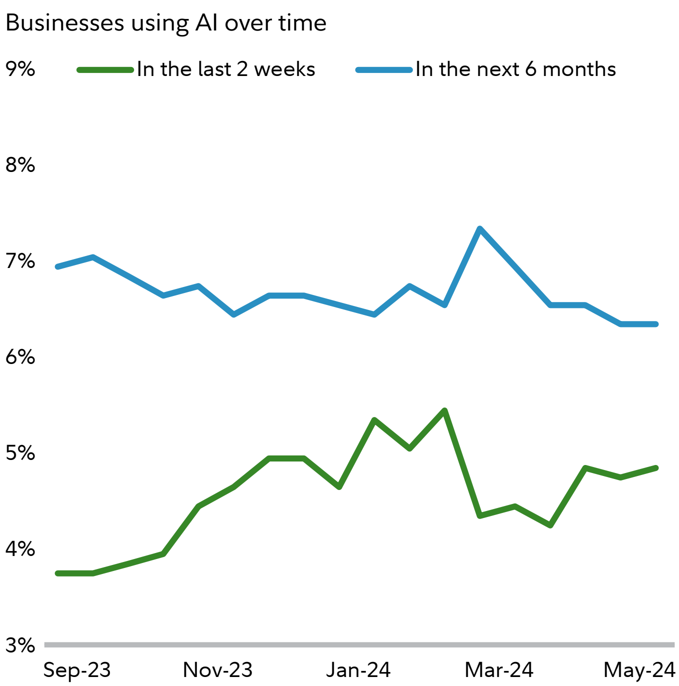
The current state of AI adoption

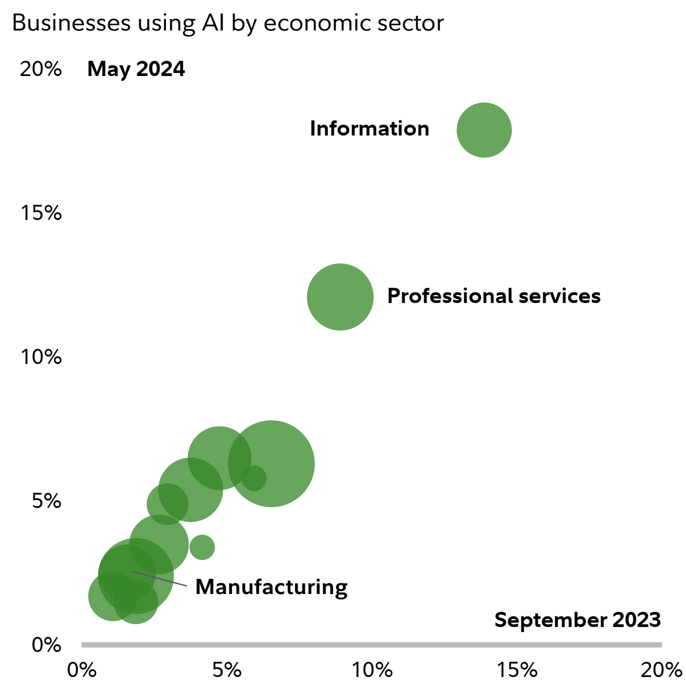
According to the U.S. Census Bureau, AI adoption rates are still low. AI tools are currently (as of May 2024) used by 4.8% of businesses, with 6.9% intending to use them in the coming months (Exhibit 5). These estimates come from the Business Trends and Outlook Survey and represent about 1.2 million businesses. Since September 2023, the survey includes a question that asks firms about their usage of AI, including machine learning, natural language processing, virtual agents, voice recognition, and more. Back then, 3.7% of businesses reported using AI, with 6.3% planning adoption.

Why AI could more heavily impact service industries

Far more businesses report using AI in information and professional services than elsewhere in the economy (Exhibit 5). As of May 2024, about 18% of firms in the information sector and 12% of firms in the professional services sector reported using AI, compared with under 3% in manufacturing.

EXHIBIT 5: AI adoption rates over time and across economic sectors





Shares of business survey respondents reporting using AI. Sizes of bubbles correspond to sector shares in GDP ex. government. Sources: Census Bureau's biweekly Business Trends and Outlook Survey, Bureau of Economic Analysis, Haver Analytics, Fidelity Investments (AART).

Relative to manufacturing, services are generally lower-productivity activities, but at more than 70% of GDP, they constitute a far larger share of the economy. The net effect on productivity will, therefore, reflect the likely more modest boost from the directly affected sectors that is, however, spread more widely across the economy, as compared to industrial automation. There is some early evidence of sizable productivity improvements within the directly affected sectors.[6]

Why the capital spending rate matters

Over time, AI is likely to provide workers with productivity-enhancing digital tools, especially in service sectors where these tools might be most applicable. However, to reap the productivity gains, workers will need to learn new skills and companies will need to adapt their business processes, as well as purchase new capital goods and services.[7]

Investment activity—such as expenditures on research and development, public infrastructure, and corporate capital outlays—correlates closely with productivity trends. In fact, investment tends to lead productivity by approximately five years with a correlation coefficient of 0.6 (Exhibit 6).

In the coming years, capital spending needs to rise substantially from the recently depressed levels to enable productivity gains from AI to materialize. This means reversing the multi-decade downtrend that brought public investment to 3.5% of GDP and private capital spending to 35% of EBITDA, both near postwar lows.

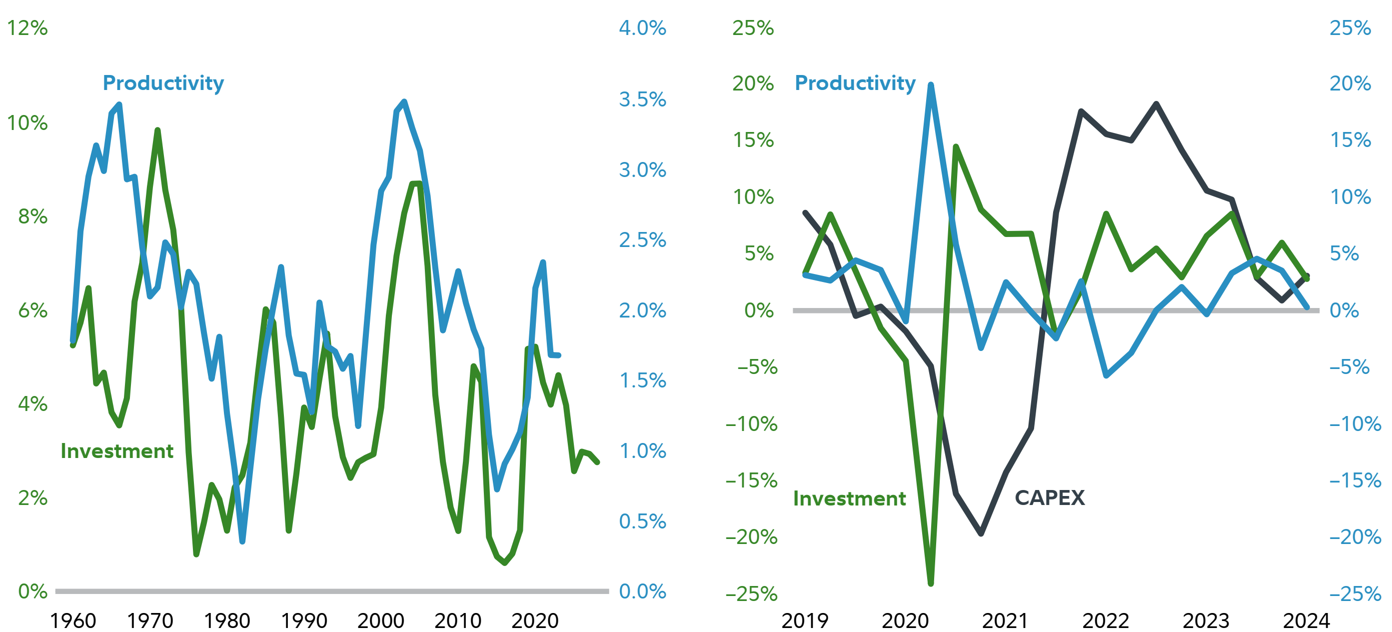
Arriving at productivity estimates (Methods 2 and 3)

To size the admittedly uncertain impact of AI on future productivity, we use two different approaches in addition to Method 1. Both aim to offer a plausible range of estimates for both the next decade and the longer-term gain when adoption becomes widespread.

EXHIBIT 6: The relationship between investment spending and productivity

Real investment and productivity growth (5-year annualized)

Real investment and productivity growth (quarterly annualized)



The left chart shows annual data in 5-year annualized constant dollars. Productivity is measured by nonfarm business real output per hour, shown with a 5-year lag. Investment is measured by gross fixed real capital formation (private nonresidential, federal nondefense, plus state and local government), shown with a 5-year lead. The right chart includes CAPEX (capital expenditures) aggregated across top 3,000 publicly traded companies (ex. financials and real estate) and shows real quarterly annualized growth rates. Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Haver Analytics, Fidelity Investments (AART).

Adoption patterns by sector (Method 2)

Extrapolating AI adoption rates across economic sectors led us to an estimate of a productivity boost of 0.3% over the next decade and 0.5% in the decade leading up to widespread adoption. To arrive at these estimates, we assumed that the vanguard information sector will see 55% adoption in 10 years and 100% adoption in 15 years. We then used the Business Trends and Outlook Survey (Exhibit 5) to pro-rate the other sectors based on their adoption rates to date. Finally, we weighted the sectors by their relative sizes and arrived at 16% of the private economy with a direct boost 10 years from now and 29% 15 years from now.

To size the magnitude of this boost mostly impacting services, we used the experience of industrial automation as a sector-specific parallel in manufacturing. We chose to use the relative boost in manufacturing productivity over the boom decade of 1995–2005 of 1.8%.

An estimate from capital spending (Method 3)

An alternative approach to sizing the productivity upside comes from the capital spending lens. It complements the sector approach in that it captures broad productivity gains potentially extending beyond the directly affected sectors. The investment-productivity relationship (Exhibit 6) leads us to an estimate of a productivity boost of 0.2% over the next decade and 0.8% in the decade leading up to widespread adoption. To arrive at this estimate, we used the model that links productivity growth to capital spending with a five-year lag. We chose a scenario where capital spending—both public and private—reaches the peak of the dot-com era 10 years from now.

Both approaches produced broadly similar estimates for the AI-driven productivity acceleration. The estimates were also fairly close to the estimates we derived using the long history of past technologies (Exhibit 4). Although our assessments are inherently uncertain, we think that a productivity boost of 0.2%–0.3% is plausible over the next decade, with gains of 0.5%–0.9% attainable in the lead-up to 50% adoption.

While adoption lags mean that these benefits will not be immediate, once they materialize, they could support stronger economic growth.

Chapter 4

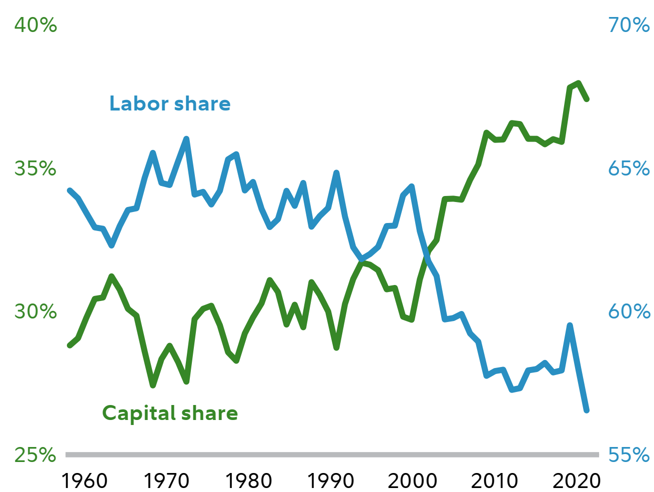
What AI could mean for company profits

AI promises potentially significant productivity benefits that could raise the rate of economic growth and increase GDP. The gains from the larger economic "pie" would be divided between labor compensation and company profits, with a portion going to the government in tax revenues. Because AI may shift some of the tasks previously performed by labor to AI capital, the "capital share" of the economy—in essence, the aggregate profit margin—is likely to rise relative to the "labor share" as a result.

The "capital share" of the economy is already near historic highs, reflecting structural changes, such as industrial automation and globalization, which tended to benefit multinational corporations, as well as other factors, including a supportive tax and regulatory environment for businesses (Exhibit 7).

EXHIBIT 7: The economy-wide profit margins and labor compensation

Private nonfarm business capital and labor shares



Private nonfarm business capital income and labor compensation, respectively, as a share of output in current dollars. Sources: Bureau of Labor Statistics, Haver Analytics, Fidelity Investments (AART).

The "labor share" tends to be compressed when alternatives to domestic workforce, such as labor-saving technologies, become available. AI represents one such alternative, although the net effect will depend on the composition of the affected tasks, developments in globalization, policy efforts to support domestic workers, and the role of aging demographics in tightening the labor market. In addition to potentially compressing the labor share overall, AI is likely to benefit some occupations while challenging others. In contrast with other automation technologies, AI can introduce automation into less-routine, higher-wage occupations, than prior technologies that were confined to more-routine, lower-wage occupations.

A variety of mostly service occupations are exposed to AI, with those with complementary skills likely to benefit and those with substitutable skills likely to be challenged. AI is likely to play a complementary role in cognition-intensive occupations, such as software development, legal and financial services.[8] AI's penetration will likely be more limited in occupations where the human component is central, such as personal services or creative occupations.

At the same time, like prior technological advancements, AI may displace some jobs—although it will almost certainly create new jobs either in occupations specifically related to AI or in other areas that benefit from the economy-wide productivity gains. More than 60% of employment today is found in occupations that did not exist in 1940, reflecting the importance of job creation in the labor market.[9]

The potential economy-wide productivity boost from AI is unlikely to be equally distributed. That said, higher incomes of AI beneficiaries could raise aggregate demand, while lower prices on affected goods and services could switch demand to other goods and services, spreading the benefits more widely. The overall impact on corporate profitability will depend on the productivity effect and the relationship between labor and capital costs in affected industries.

AI outside the U.S.

While the U.S. is in the leadership position in the AI space, the technology is increasingly developed and adopted in other countries. While the process of international technology diffusion is uncertain and uneven, it seems likely that developed markets may see impacts sooner and on a bigger scale than emerging markets.

Developed markets tend to have larger services sectors with more cognition-intensive occupations where AI tools are most applicable. They also tend to have workers with better digital skills and infrastructure that makes AI adoption easier. In addition, AI represents a potential alternative to outsourcing tasks, such as customer support services, which have helped some emerging markets in the past.[10]

Constraints on AI

AI promises meaningful productivity benefits, even though their magnitude and timing are uncertain. These benefits depend partly on the extent and speed of adoption of AI tools across the economy. However, AI may also pose significant economic and societal costs that, if they lead to a backlash and increased regulation, may constrain the spread of this technology.

We can loosely group these concerns into four areas: information, jobs and inequality, computing costs, and the environment.

Information

Perhaps the most frequently voiced concerns relate to the reliability of generative AI and the content it generates. In recent years, creators have used generative AI to make compelling deepfake videos of politicians and celebrities saying or doing things they never did or said. Arguably more troubling are examples of generative AI "hallucinating," or making up plausible historical facts and, in some instances, even false accusations. These issues raise concerns about the potential for information abuse serving vested interests.

A related yet different point of contention is privacy and ownership of information used for model training; one can argue that entities whose data end up used for that purpose ought to be compensated. A longer-term concern is the potential impact of generative AI on human learning, from misuse in educational settings to the more general "groupthink" driven by the increasing dominance of generated content.

Jobs and inequality

AI technologies are likely to have profound impacts on the labor market, and the necessary adjustment may increase inequality, already a widespread concern. Since AI tools do not require explicitly coded instructions but instead embed learning, they may be capable of performing more cognition-intensive tasks. As such, these technologies may complement some occupations while substituting and displacing others. For example, lawyers may be a complementary occupation where AI tools could augment labor productivity, while telemarketers may be a substitutable occupation where AI tools could instead augment capital productivity.[8]

Even though AI has the potential to increase the overall economic "pie," the unequal distribution of the "slices" between wages and profits and among workers in different occupations is a widespread concern in the society.

Computing costs

Perhaps less frequently voiced concerns relate to the computing costs of generative AI, which are much higher than those of non-generative machine learning and other digital technologies. OpenAI's GPT-3 is estimated to use 175 million parameters and cost over $4.6 million to train. GPT-4 is larger, with as many as 1.8 trillion parameters, resulting in an estimated $78 million in training costs.[11]

Generative AI algorithms will continue to evolve and may become more efficient with time. In addition, alongside large language models, smaller models that are fine-tuned to address specific use cases are emerging. However, for now, generative AI's computing costs appear an underappreciated risk to corporate profitability, the demand for and the price of energy, and the associated carbon footprint.

The environment

It is estimated that training OpenAI's GPT-3 took 1,287 MWh, or about as much electricity as 120 U.S. households consume in a year, and generated 552 metric tons of carbon emissions, or roughly three times the emissions of a direct round trip of a passenger jet between San Francisco and New York.[12] In addition, using the model consumes power.

In the future, generative AI algorithms could turn to low-carbon energy sources. They may also have direct environmental benefits in terms of better weather forecasts and faster clean energy innovation. However, the current state of the technology poses environmental concerns.

Conclusions

- AI will likely remain a prominent investment theme in the coming decade and beyond. Based on our analysis, it could add significantly to overall economic productivity, but not right way.
- Services segments are likely to experience the broadest adoption of AI technologies in the coming years, with information technology and professional services in the lead.
- For AI adoption to ramp up, companies may need to increase capital spending, upskill their workforces, and adapt their business practices.
- AI could result in both higher productivity and higher profits, benefiting the corporate sector and supporting profit margins. It has the potential to raise incomes overall but help complementary occupations relative to substitutable occupations.
- AI may affect developed markets sooner and on a bigger scale than emerging markets.
- Computing costs and potentially negative societal consequences of AI may constrain adoption. These include concerns about reliability and information abuse, inequality, and the environment.
- AI still appears likely to result in benefits for the broader economy and for capital markets. At a time of deteriorating demographics and subdued productivity, even a modest productivity boost would be meaningful and could support stronger economic growth.

Endnotes

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Author

Irina Tytell

Team Leader, Asset Allocation Research Team

Irina leads a team of research analysts for the Asset Allocation Research Team, which conducts economic, fundamental, and quantitative research to develop asset allocation recommendations for Fidelity's portfolio managers and investment teams. AART is responsible for analyzing and synthesizing investment perspectives across Fidelity's asset management unit to generate insights on macroeconomic and financial market trends and their implications for asset allocation.

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