Dynamo Problem

Weekender

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The highest that we can attain is not knowledge, but sympathy with intelligence.

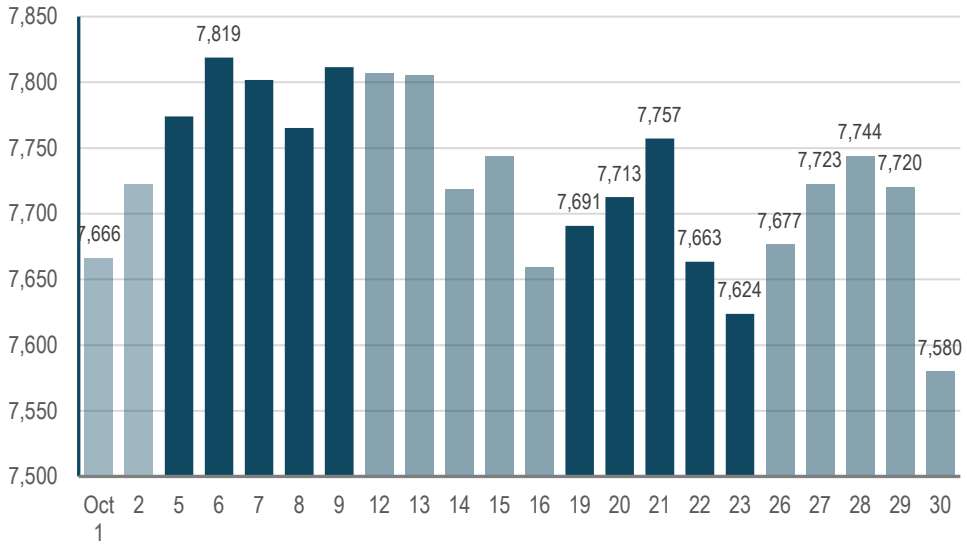
Henry David Thoreau

Good morning and welcome to the *Weekender* for Saturday, October 31, 2026, Halloween. Artificial intelligence and its wild predictions have fueled equity markets for three years. Last week, dreams collided with reality. Few are questioning the largely unlimited possibilities of an AI infused or driven future. But finally, some are asking how much those possibilities will cost, who will pay for them, and whether they will ever generate a return on investment sufficient to justify the risk. Although one week does not create a trend, nor does it suggest an alternate reality is upon us. More important than either of those broader trends, recent market gyrations provide some comfort that perhaps adults are back in the room.

Equity markets, as measured by the Standard and Poor's 500, were down slightly by 0.6%. Since the beginning of June, the index is down 0.3%. But in a testament to the remarkable shifts in the US equity market, an index of the largest 100 US technology firms is down 7.0%; the broader technology index is down 6.1%, while the semiconductor index is in retrenchment territory, down 17.6% over the same period. The equal-weight S&P 500 index is higher by 4.5%. We believe a sturdy rotation is currently underway. Some of the hot air is coming out of the artificial intelligence trade, in favor of a less exciting future for stolid real-economy punters.

S&P 500 Index Levels

(Source: Bloomberg)



The week brought a flood of economic and company data, all of which helped shift the dominant market narrative. Economic growth accelerated to 3.4 percent, consumers kept spending, the Federal Reserve stood pat, and corporate earnings were broadly healthy. Energy prices convinced investors that geopolitical risks remain at a boil. Heavy deployers of scaling capacity were sold hard.

We believe a new market narrative is forming. While we plan to cover this in much more detail in the weeks ahead, the narrative transition has several important factors. Artificial intelligence as an investment theme and market driver is shifting from enthusiasm to accountability, suggesting competitive and financial fundamentals will matter more. An enduring rotation is underway, supporting lagging sectors that are fundamentally cheap relative to artificial names and their historical levels. Economic fundamentals driven largely by artificial intelligence spending will be rerated, resulting in slower growth, softer labor markets, controlled but historically higher inflation, and rates that peak in early 2027 and begin a controlled march lower.

Market narratives never change smoothly or linearly. Expect true believers in the last narrative to keep trying to revive it. But we remain confident that a new narrative is emerging and will likely be in full swing over the next year. Boogeymen worth looking for include a labor market that decays faster than expected; how quickly earnings estimates fall from extreme expectations; and whether peak margins, which are currently in effect, prove unsustainable.

Artificial Intelligence Part II

The Economy: The Lag Is the Story

Goldman Sachs expects labor productivity in developed economies to rise by about 15% once AI is widely adopted and integrated. Oxford Economics, in its baseline, pencils in a more modest three-and-a-half percent lift to U.S. productivity over the coming decade. McKinsey puts the global value of automating or supporting existing work at roughly $2.5 trillion a year. An analysis of actual usage data from Anthropic, the company behind the Claude models, estimates that AI is already saving time worth about $2.7 trillion annually across 86 countries, roughly 3.4 percent of their combined GDP, though with the gains heavily concentrated in rich countries and well-paid occupations. A fourfold range between credible estimates doesn't mean nobody knows anything. It signals that the answer depends on the rewiring, not the motor.

What we can actually measure so far is modest but real. The Atlanta Fed surveyed roughly 750 senior corporate executives this spring and asked them directly what AI had done to their revenue, headcount, and output. AI-attributed labor productivity growth was already positive in 2025, around six-tenths of a percent, and executives expected it to triple in 2026, with the largest gains in high-skill services and finance. A European Investment Bank study of more than 12,000 firms found adoption associated with about four percent higher labor productivity, concentrated among larger businesses that also invested in workforce development. A sustained extra point of productivity growth, compounded, is the difference between a decade that feels like the 1990s and one that feels like the 2010s.

But the Atlanta Fed found something David would have recognized immediately. Executives consistently reported bigger productivity gains than their own revenue and employment numbers implied. The authors call this a productivity paradox. I call it the dynamo problem. Firms can feel the motor humming, but the building hasn't been rearranged, so the output hasn't shown up on the invoice yet. Erik Brynjolfsson at Stanford argued this year that the fog is finally lifting, pointing to an economy that grew briskly while adding very few workers. Skeptics such as Torsten Slok at Apollo counter that outside the seven largest technology companies, profit margins and earnings forecasts show no trace of AI at all. Both can be right. That is what the middle of a J-curve looks like.

We believe, and the data seem to support, that before AI makes anything cheaper, it is making a lot of things more expensive. The capital spending on chips, data centers, and the electricity to run them is the largest private investment wave since the railroads, and it competes for the same construction labor, transformers, and power the rest of the economy needs. The Richmond Fed's president warned this quarter that red-hot AI demand could push inflation higher in the near term. Building the AI economy is inflationary, and using it is disinflationary. The gap between those two phases is where monetary policy and markets will spend the next several years. We are paying for the dynamo before it has paid us.

Businesses: Rewiring Versus Bolting On

Here the dynamo story is almost a how-to manual. The firms reporting real gains are not the ones that bought a subscription and handed it to employees. The Atlanta Fed found that the gains came not primarily from capital deepening, but from revenue-based total factor productivity tied to innovation and new demand. Research synthesizing firm-level data tells the same story from a different angle. A one-standard-deviation increase in AI investment is associ-

ated with roughly two percent faster annual sales growth, more employment, and more product innovation, measured in trademarks and patents. So far, adoption has meant expansion, not amputation. Translated out of The Economist, the winners changed what they sell and how the work flows, not just who holds the tools. Bolting AI onto the old process gets you a faster memo. Rewiring the process gets you a different business.

Two details in that research deserve a closer look. First, the effects show up with a lag of two to three years and are strongest among large firms; small firms, so far, see little benefit. That is the dynamo lag again, and it also creates a recipe for rising industry concentration, since companies with proprietary data, compute, distribution, and the balance sheet to wait out the lag pull away from those without. Second, firms that adopt AI change shape. They tilt toward more educated and technical workers, flatten their hierarchies, and employ fewer middle managers relative to independent contributors. The rewired firm's org chart is wider and shorter than the one it replaced.

A hopeful counterweight to the concentration story exists. The same technology that rewards scale at the infrastructure layer lowers the cost of capabilities that once required scale at the operating layer. A talented entrepreneur with a good idea can now buy research, design, software, and analysis that once took millions of dollars and a floor of employees. Whether that creates a new generation of strong small firms or feeds more customers to the hyperscalers is one of the decade's open questions, and the answer will differ by industry.

Employment: The Missing Rung

The exposure numbers sound alarming until you read the fine print. The IMF estimates that roughly sixty percent of jobs in advanced economies are exposed to AI. Most other estimates put fifteen to thirty percent of jobs in categories where a substantial share of tasks could be affected. Exposure is not elimination. The International Labor Organization concludes that transformation, not replacement, is the likely outcome for most exposed occupations. Goldman's baseline projects temporary displacement of about nine percent of U.S. workers, roughly fifteen million people, over about a decade, with the disruption gradual in a healthy economy and sharper in a downturn. The World Economic Forum still projects net global job creation by 2030. A large Danish study linking worker surveys to administrative data finds little average effect on earnings or hours so far. However, heavy chatbot users switch occupations more often, usually into better-paying ones.

The composition of the labor market, however, is shifting fast, and in a direction that should worry anyone with a child in college. A Stanford study of 1.25 billion job postings across 41 countries found that when firms adopt AI, senior employment grows and moves toward AI-exposed roles. In contrast, junior employment moves away from them. Routine clerical work is declining, and demand for skilled technical roles is rising. Put plainly, the experienced analyst becomes more productive, and the firm hires fewer twenty-four-year-olds to do the work she used to delegate. That delegated work was never just labor. It was how the twenty-four-year-old learned the trade. McKinsey calls the broader version of this problem occupational mobility. Millions of workers may need to change fields, and only a minority have an obvious path to a comparable or better role. The risk is not mass unemployment. It is a career ladder with the bottom rung sawed off, and a mismatch between the skills people have and the skills the economy now pays for.

Wealth: Who Owns the Dynamo

Labor's share of national income has been declining for decades, and AI adds to the pressure in two ways. It is capital-intensive in a peculiar fashion. A data center employs very few people per dollar invested. And it substitutes for cognitive tasks that used to be labor's best-defended territory. Analyses of AI patenting intensity already find an association with lower labor shares, particularly in industrial regions. The returns flow first to whoever owns the compute, the data, the models, and the distribution, and that is a short list. So far, the technology complements senior, capital-rich workers more than junior ones. And where productivity gains exist, they have shown up in profit margins before they have shown up in paychecks; one widely shared headline this year put it bluntly. Your boss loves AI, and you hate it because corporate profits are capturing your extra productivity.

The forces pushing the other way are real. Task-level studies consistently find that AI gives the largest boost to less experienced and lower-skilled workers within a given job, compressing the gap between the best performer and the average one. When the price of cognitive work falls, the benefit goes to everyone who buys it, which is all of us. AI can put a tutor, a lawyer's first draft, or a bookkeeper within reach of people who never had one. And as other goods become cheap, the relational work in which a human presence is the point, in care, teaching, and personal service, may grow in value rather than shrink.

Two Kinds of Gain

There are two kinds of AI improvement. Competence gains are the familiar kind. The model gets better at a discrete task, a memo, a line of code, a diagnosis. Those gains work through the economy the way every prior technology has, gradually shifting prices, wages, and the human-machine mix while leaving industry structures recognizable. Coordination gains are different. They arrive when AI agents can work together at scale, handing tasks to one another and completing multi-step jobs without a person in the loop. Coordination gains do not arrive gradually. They cross thresholds, and when they do, concentration and employment can jump rather than drift.

The evidence to date is almost entirely about competence gains, which is why it looks gradual and skill-biased rather than catastrophic. The honest caveat is that the data cannot tell you when, or whether, the coordination threshold gets crossed. A sensible plan assumes the gradual path and keeps a reserve for the other one.

What To Do About It

Own the dynamo but don't overpay for the belt. The infrastructure layer, meaning chips, power, data-center real estate, and the handful of model builders, has the pricing power. Still, it also has the valuations to match, and a capex boom is exactly the kind of thing that overshoots. The less crowded trade is the second-order one. The operating businesses in boring industries that are rewiring early. Firm-level research says to look for companies large enough to absorb the two-to-three-year lag, with proprietary data and distribution, where management talks about process redesign and revenue per employee rather than a chatbot. Remember David's lesson. Productivity shows up late, so the discipline is patience with position sizing, not a bet on timing. Next week's installment of the series takes up the harder question, whether the price being asked for a share of this revolution is justified by the value it creates, so that I will leave valuation there.

Watch two numbers. Revenue per employee across the S&P 500 outside the big seven tells you whether the J-curve is turning. Labor's share of national income tells you who is capturing it. If the first rises and the second falls, equities do well, and the political weather gets worse. Plan for both.

If you run a business, stop running pilots and pick one process to rewire end to end. The evidence says the gains come from redesigning the flow of work, not from distributing tools, and that they take two or three years to show up, so start the clock now. Choose a workflow with a clear cost or cycle time, rebuild it with AI doing the routine layers, and measure it. Then decide deliberately which side of the ten-analysts fork you are on. The firms expanding into new revenue are the ones that treated the savings as capacity rather than a reason to cut, and the data say that path has been more common and more profitable.

Expect the org chart to change shape, and get ahead of it. The rewired firm has fewer management layers and more independent contributors, which means the managers you keep need to be coaches and standard-setters, not traffic cops. And protect your bottom rung on purpose. If AI absorbs the work your junior people used to learn on, you will have no senior people in ten years. Build apprenticeship into the new process. Ensure juniors review and correct AI output, own small projects end to end, and sit with clients earlier than they used to. The firm that solves the training problem will have the only talent pipeline in its industry. If you are small, the scale disadvantage is real but not permanent. The large firms are winning the first lap because they can afford the lag and the complementary investment. Your advantage is that you can rewire the whole building in a season, while they are still holding committee meetings about the shafts.

If you are a worker, or raising one, the safest ground is judgment plus a trade. The jobs that look most durable combine something AI does poorly, which is being accountable to a human for an outcome, with domain knowledge that the tools amplify. The nurse who manages the AI triage, the estimator who checks the AI bid, the advisor who sits across from the family. The lead piece lists what becomes scarce when intelligence is abundant. The ability to tell truth from error, sound judgment, originality, and the willingness to take responsibility for a result. Those are not soft skills. They are the hard skills now. Become the person who supervises the machine in your field, and be the one in the room who knows where it is wrong.

For the young, the practical advice is uncomfortable. The entry-level job that teaches you the business is getting scarce, so find the learning deliberately. Take the role at the smaller firm that still needs you to do everything. Learn a physical craft alongside the digital one; the electricians are the ones with the backlog. The Danish evidence has a quiet encouragement in it. People who used the tools most were the ones most likely to move into better work. Use them, and read widely, because the scarce skill in an age of cheap answers is knowing which questions are worth asking.

If you are managing a household balance sheet, own some of the dynamo, broadly and cheaply. The simplest hedge against a world where returns flow to capital is to own

capital, which for most families means a diversified index position held through the volatility, not a concentrated bet on the current darling. Keep a larger cash cushion than feels necessary, because transitions are lumpy, the displacement estimates assume a healthy economy, and the person whose role gets reorganized is rarely warned. And treat your own skills as an asset with a depreciation schedule. The question to ask every year is not whether you have a job but whether you are the kind of worker the machine makes more valuable or less.

If you vote, or sit on a board, the distribution of gains is a choice, not a forecast. The levers are known and unglamorous. Competition policy that keeps the application layer open, a tax code that stops favoring the purchase of a machine over the training of a person, public investment in the power and skills the dynamo needs, and incentives for tools that expand what people can do rather than replace them. Without those choices, the default path amplifies trends already decades old. With them, the abundance has a chance of being widely shared. This part of the transition will not take care of itself.

The Long View

David's factory owners eventually got it right, and the result was the most prosperous half-century in human history. But the decades in between were not gentle. Old skills lost their value, some towns never recovered, and the ownership of the new machinery became the central political question of the age. We expect the same arc here, but on a much more compressed timeline. The technology will deliver. The building will be rewired. The hard questions, about who learns the trade and who owns the dynamo, will not answer themselves, and they are the ones worth our attention while everyone else is staring at the motor.

Conclusion

Whew. Economics concluded. Next week will focus on the investment thesis of artificial intelligence. Thats all for this *Weekender.* Have a wonderful week.

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