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Investment Heroes 2023

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INTRODUCTION

The theme of this year's Investment Heroes report is the recovery of U.S. capital investment from the shock of the pandemic and the benefits for workers. Every year, the Progressive Policy Institute (PPI) analyzes the financial reports of large U.S. companies and ranks them by their capital investment in the United States. Eight of the top 10 companies on this year's Investment Heroes list are in tech, broadband, or e-commerce industries. Amazon is at the top of the list, investing $46.5 billion in the United States in 2022, according to estimates by PPI. Next comes Meta, Alphabet, AT&T and Verizon, followed by Microsoft, Intel, Walmart, Comcast, and Duke Energy.

All told, the 25 companies in the Investment Heroes list invested $324 billion in the U.S. in 2022 (Table 1).

But it is not simply that the companies on the list invest the most in the U.S. — they also show faster recovery from the pandemic. Since 2019, domestic capital expenditures by the 25 companies on this year's list has risen 38%, without adjusting for inflation. By comparison, overall nonresidential investment as measured by the Bureau of Economic Analysis rose by only 15% over the same period, also without adjusting for inflation.

And while this report focuses only on U.S.-based companies, the difference was not being made up by money from abroad. New direct investment by foreign companies in the U.S. actually fell by 20% from 2019 to 2022.

The domestic capital investment by the companies on the list is the lifeblood of the economy, producing job and income gains, and setting the country on a path to a greener future. It ranges from e-commerce fulfillment centers employing thousands of workers at good wages, to data centers supporting small businesses across the country, to 5G and broadband networks linking rural areas, to factories building batteries for the next generation of electric vehicles, to new fabs, to new fuel-efficient planes.

TABLE 1: U.S. INVESTMENT HEROES: TOP 25 NONFINANCIAL COMPANIES BY ESTIMATED U.S. CAPITAL EXPENDITURE

	COMPANY	ESTIMATED DOMESTIC CAPITAL EXPENDITURES, 2022 (MILLIONS OF DOLLARS)
1	Amazon	46,488
2	Meta Platforms	28,738
3	Alphabet	24,223
4	AT&T	23,539
5	Verizon Communications	23,087
6	Microsoft	18,400
7	Intel	15,467
8	Walmart	14,232
9	Comcast	12,221
10	Duke Energy	11,367
11	PG&E	9,584
12	ExxonMobil	9,547
13	Charter Communications	9,376
14	Chevron	8,856
15	Apple	8,435
16	Dominion Energy	7,758
17	Exelon	7,147
18	Conocophillips	6,721
19	FedEx	6,448
20	Delta Air Lines	6,366
21	General Motors	6,196
22	Target	5,528
23	Tesla	4,869
24	United Airlines	4,819
25	Ford Motor	4,774
TOTAL		324,186

Data: Company financial reports, PPI estimates

It should be noted that the financial data we use for our list focuses mainly on spending on structures and equipment — what's known as tangible investment. But the government's definition of investment includes key intangibles such as software and research and development. Very few companies report software spending, and not all companies break out their R&D expenditures. But the ones that do tend to show big gains. For example, Alphabet boosted its spending on R&D by more than 50% from 2019 to 2022, compared to a 32% gain in overall private R&D spending. Apple showed a 62% increase in R&D spending from FY 2019 to FY 2022. General Motors increased its R&D spending by 44%. Such increases fuel new product development and innovation, which shows up as faster growth going forward.

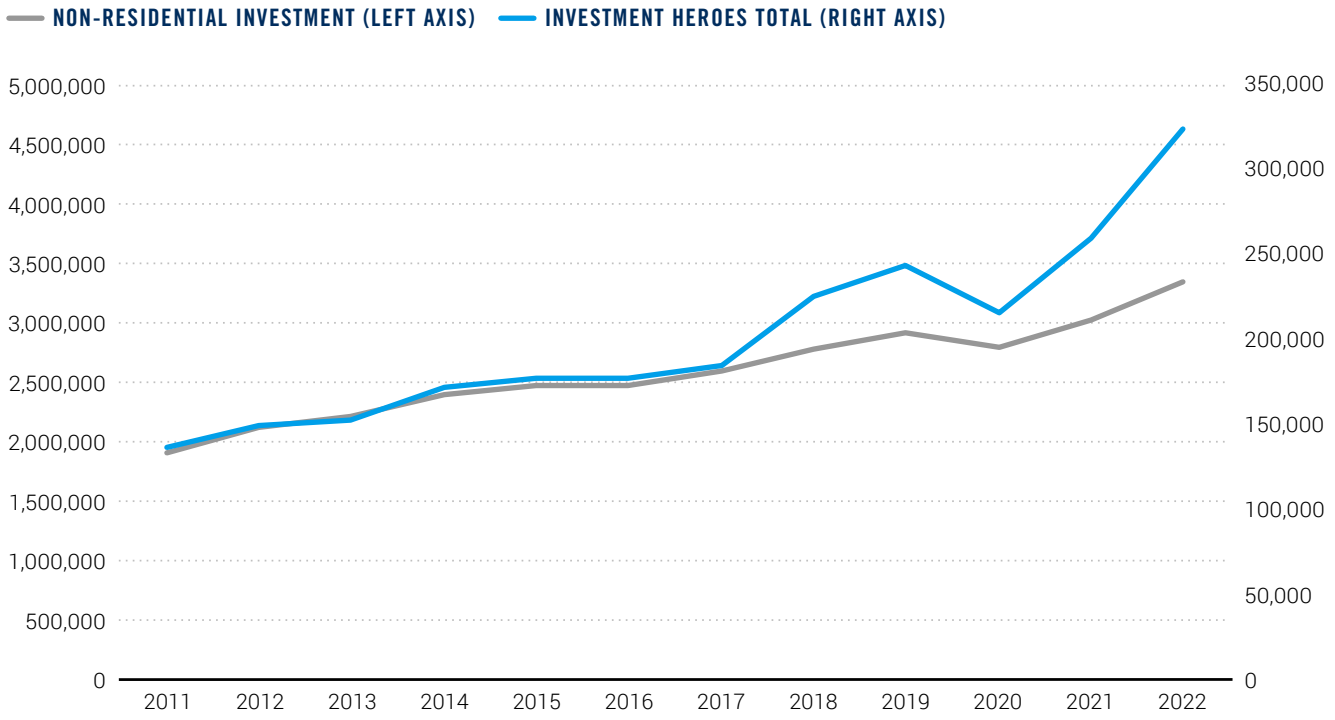
From the perspective of policy, it's worth comparing the U.S. capital investment performance during the pandemic years with Europe's. Europe has consistently adopted a more aggressive regulatory stance. Has it paid off in the form of higher investment?

The short answer is no. When the European Investment Bank (EIB) did its comparison of U.S. and European investment spending in a February 2023 report, it focused on a measure called "non-construction investment" — basically machinery, equipment and intellectual property assets such as software and R&D. Using the EIB's methodology, we calculated that nonconstruction investment in the United States rose by 20% from 2019 to 2022, compared to only 12% in the European Union.[1] Overall, the EIB study finds a widening gap between the US and Europe in terms of productive investment.

Before we dive into the details of this year's study, it's worth taking a long-run perspective. Our first Investment Heroes report, released in 2012, tracked 2011 domestic capital spending. Five out of the top ten companies that year were energy companies. The only tech company in the top ten was Intel. Google and Apple were 24 and 25 on the list, respectively, and Amazon was nowhere to be found. Neither was Microsoft or Meta. It was a completely different list.

Figure 1 shows the full history of aggregate capital spending of the Investment Heroes list on a year-by-year basis (right axis), plotted against annual U.S. nonresidential investment (left axis). From 2011 to 2017 the two figures rose by the same amount, 36% without adjusting for inflation.

FIGURE 1. INVESTMENT HEROES TOTAL VERSUS NONRESIDENTIAL INVESTMENT (MILLIONS OF DOLLARS)



But after 2017, the situation changed. The companies on the Investment Heroes list began driving national capital expenditures. From 2017 to 2022, domestic capital expenditures by PPI's Investment Heroes rose by 75%, compared to 29% for the BEA's nonresidential investment figures.

The key leader was Amazon. In the five years ending with 2022, the company invested the staggering sum of $162 billion in the United States, creating hundreds of thousands of jobs in the process and creating massive gains in consumer welfare.

But it wasn't simply Amazon. Table 2 sums our 2022 Investment Hero estimates into seven economic sectors: tech/ internet; broadband/ wireless; ecommerce/retail; energy distribution; energy exploration; transportation; and automotive. We call these the "high-investment" sectors. We then compare capital spending in those sectors with our estimates of domestic capital spending for those same companies in 2019.

For six out of seven economic sectors, we find significant growth in domestic capital spending from 2019 to 2022. In other words, the companies on our Investment Heroes List typically have high and growing levels of domestic capital investment compared to before the pandemic.

In addition, our analysis shows that capital investment creates jobs and raises wages. Between 2019 and 2022, the high-investment sectors on our list added more net new jobs than the entire rest of the private sector put together. We calculate this number by looking at the employment in domestic industries corresponding to the seven sectors in Table

2, as reported by the BLS. (We use industry data because domestic employment data is not available for all companies. The industry-level data also accounts for broader impacts of investment).

By our estimate, the high-investment sectors added 1.3 million net new jobs between 2019 and 2022, accounting for 55% of private sector job creation. Employment in the high-investment sectors grew by almost 5%, compared to a 1% gain in the rest of the private sector.

The leader was the ecommerce/retail sector, which added more than 800,000 jobs between 2019 and 2022, as job gains in ecommerce fulfillment and delivery more than made up for any losses in brick-and-mortar retail. Next was the combined tech/internet/broadband/wireless sector, which added almost 500,000 jobs.

What about pay? Real wages per worker in the ecommerce/retail sector rose by 7% from 2019 to 2022 (using QCEW data from the BLS and the PCE deflator). Overall, real wages per worker in the high-investment sectors rose by about 6%, a slightly larger gain than the rest of the private sector.

We also note the importance of investment in human capital — the training and education of workers. Companies are not required to report spending on training and education, but it's more essential today than ever before.

TABLE 2: ESTIMATED INVESTMENT HERO DOMESTIC INVESTMENT BY ECONOMIC SECTOR (MILLIONS OF DOLLARS)*

	2022*	2019*	% CHANGE 2019-2022
Tech/internet (5 companies)	95,263	64,755	**47%**
Broadband/wireless (4 companies)	68,223	52,240	**31%**
Ecommerce/retail (3 companies)	66,248	30,237	**119%**
Energy distribution (4 companies)	35,856	30,004	**20%**
Energy exploration (3 companies)	25,124	31,549	**-20%**
Transportation (3 companies)	17,633	14,111	**25%**
Automotive (3 companies)	15,839	12,475	**27%**
TOTAL	**324,186**	**235,371**	

**Based on 2022 list*
Data; Corporate financial reports, PPI analysis.

COMPANIES

The top spending category in the 2023 investment Heroes list are the tech/internet firms, including Meta (#2), Alphabet (#3), Microsoft (#6), Intel (#7), and Apple (#15), with more than $95 billion in domestic capital spending in 2022, according to PPI's estimates. Meta is investing in servers, data centers, and network infrastructure. Alphabet's investments help expand its offices and data centers, and support its user-facing product like search and Google Maps, and its work on artificial intelligence. Microsoft anticipates its future capital spending to increase to support its cloud offerings and AI infrastructure. Intel is building new chip fabs in Arizona and Ohio, while Apple is investing in 5G component production in the U.S.[2]

The broadband/wireless sector includes companies such as AT&T (#4), Verizon (#5), Comcast (#9), and Charter (#13). This sector is showing a 31% increase in capital spending from 2019 to 2022, as the broadband/wireless sector is conducting two major infrastructure projects at once — the extension of broadband to everyone, and the buildout of 5G wireless service across the United States. Partly we measure the success of these projects by coverage and speed. For example, the average download speed for U.S. broadband in June 2023 was 205 Mbps, faster than Taiwan, Japan, and South Korea and any European country, German broadband recorded a stunningly low 84 Mbps.[3]

Price and total spending are important markers of success as well. Wireless prices are only up by 2% since July 2019, according to BLS data. And according to PPI calculation, only 2% of personal consumer expenditures are going to phone, Internet, cable and streaming services, as of 2022. That's the lowest level since 2006. Quite literally, the wireless/broadband investment surge is holding down prices and spending.

The biggest growth in capital spending is in the ecommerce/retail sector, including Amazon (#1), Walmart (#8), and Target (#22). In that category, our estimate is that domestic investment spending rose by 119%, or more than doubled, from 2019 to 2022. Amazon has expanded its network of ecommerce fulfillment centers and invested in AWS. Walmart increased its spending on supply chains, "omni-channel initiatives," technology and store remodels. Target increased investments in both stores and its supply chain.

It should be noted that nationally capital investment in "multimerchandise shopping" structures, or shopping malls peaked in 2017, and since then has fallen by roughly $12 billion. Meanwhile investment in warehouses, which includes fulfillment centers, has risen by $30 billion, to $59 billion in 2022.

The energy distribution sector increased capital spending by 20%, including Duke Energy (#10), PG&E (#11), Dominion Energy (#16), and Exelon (#17). In October 2022, Duke announced a 10-year plan to spend $145 billion moving to net zero carbon emissions by 2050.[4] In the latest year, PG&E invested in hardening its system against natural disasters. Dominion Energy expects to make significant investments in utility-scale solar and offshore wind projects. Exelon's capital spending was down slightly in 2022 compared to 2019, but only because of the separation of its generation into a separate company, Constellation, in 2022. If that spinoff company was included, Exelon would have shown a much bigger increase.

The energy exploration and production sector, including ExxonMobil (#12), Chevron (#14), and Conocophillips (#18), was the only sector with lower domestic capital investment in 2022 than 2019. ExxonMobil's domestic capital investment was down 42% compared to 2019, including exploration, with non-US spending showing a much smaller decline. By contrast, Conocophillips had a 37% increase in domestic capital expenditures.

Capital investment in the transportation sector, including FedEx (#19), Delta Airlines (#20), and United Airlines (#24), was up 25% compared to pre-pandemic levels. FedEx increased its spending on package handling and ground support equipment. Delta's capital expenditures, which plummeted during the pandemic, are now 29% over 2019 levels due to the purchases of aircraft, airport construction projects, fleet modifications, and technology enhancements. United Airlines capital expenditures totaled $4.8 billion in 2022, more than double 2021 levels and above 2019 levels. The company invested in the purchase of aircraft, including advance deposits for future aircraft purchases, as well as facility and technology-related projects.

Finally, the automotive sector, including General Motors (#21), Tesla (#23), and Ford (#25), checked in with an estimated $15.8 billion in domestic capital spending in 2022, up 27% since 2019. The big theme was the shift to electric vehicles. In January 2022, General Motors announced plans to invest $7 billion in its home state of Michigan to increase electric pickup-truck production and build a new EV battery cell plant. In 2022, Tesla expanded its Gigafactory Texas. Ford is investing $3.5 billion to build an LFP battery plant in Marshall, Michigan.[5]

METHODOLOGY

The U.S. Investment Heroes Ranking for 2023 follows the same methodology as our most recent report from 2022.

We began by selecting the top 200 companies from the Fortune 500 list. From that list, we removed all financial and insurance companies except health insurance companies. The companies in these rankings are all based in the United States. Internationally-based companies were not included due to data comparability issues. But it should be noted that many non-U.S. companies make investments in America.

Most multinational U.S. companies do not provide a breakdown of capital expenditures by country in their financial reports. However, PPI has developed a methodology for estimating U.S. capital expenditures based on public data provided in their annual 10-K statements and other financial documents.

For each company, we collected the global capital expenditure number from their most recent 10-K annual financial report as of April 30, 2023. In this report, we refer to all estimates as "2022" even if their fiscal year ended in 2023. Some companies, like Apple, Microsoft, and FedEx, publish their annual reports after our cut-off. For those companies, we use the previous year's report.

Global capital expenditure is the starting point for the analysis and generally covers plant, equipment, and capitalized software costs. For energy production companies, it can also include exploration. It does not include research and development and most spending on software.

For transportation companies, our report estimates the booked location of spending on capital expenditures for the company's most

recent fiscal year, rather than how much of those acquired assets are actually being used within the U.S.

After calculating our internal estimate of U.S. capital expenditures, we contact the investor relations offices of the top 25 companies on the list and ask them to point us to any additional public information that might be relevant. Ultimately, we acknowledge that the figures in this report are estimates based on limited information.

Our estimation process goes as follows:

- If a company has no or very small foreign operations, we allocated all capital spending to the United States.
- If a company reported U.S. capital spending separately, we used that figure.
- If a company did not report U.S. capital spending separately, but did report changes in global and U.S. long-lived assets or plant and equipment, we used that information plus depreciation to estimate domestic capital spending.
- If none of the previous approaches gave reasonable results, we allocated capital spending proportionally to domestic versus foreign assets, revenues, or employees.

Some adjustments of note:

- We have been paying close attention to Amazon's extensive use of finance leases. As in 2022, we chose to specify global capital expenditures as purchases of property and equipment (net of proceeds from sales and incentives) plus principal repayments of finance leases. We then used reported changes in U.S. and non-U.S. property and equipment, net, and operating leases to allocate global capital expenditures, taking into account depreciation and removing the effect of operating leases.
- For consistency, we omitted capital spending by the finance arm of companies such as General Motors and Ford, which reflects the financing of leased equipment rather than actual direct investment.
- For AT&T we include payments for vendor financing equipment as part of capital investment.

We then used our estimates to construct two lists, the main list (Table 1) and an additional list (Table 3) which omits non-energy companies. The second list is relevant because capital spending by energy exploration and extraction companies tend to fluctuate sharply with the price of energy.

ABOUT THE AUTHORS

Michael Mandel is Vice President and Chief Economist of the Progressive Policy Institute.
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TABLE 3: U.S. INVESTMENT HEROES: TOP 25 NONFINANCIAL NONENERGY COMPANIES BY ESTIMATED U.S. CAPITAL EXPENDITURE

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9	Comcast	12,221
10	Charter Communications	9,376
11	Apple	8,435
12	FedEx	6,448
13	Delta Air Lines	6,366
14	General Motors	6,196
15	Target	5,528
16	Tesla	4,869
17	United Airlines	4,819
18	Ford Motor	4,774
19	HCA Healthcare	4,395
20	Union Pacific	3,620
21	PepsiCo	3,213
22	Oracle	3,121
23	Kroger	3,078
24	Lumen Technologies	3,016
25	UnitedHealth Group	2,802

Data: Company financial reports, PPI estimates

References

1 The EIB's methodology excluded Ireland from its calculations for technical reasons, so we did the same thing. Including Ireland would have lowered the EU's growth.

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Founded in 1989, PPI started as the intellectual home of the New Democrats and earned a reputation as President Bill Clinton's "idea mill." Many of its mold-breaking ideas have been translated into public policy and law and have influenced international efforts to modernize progressive politics.

Today, PPI is developing fresh proposals for stimulating U.S. economic innovation and growth; equipping all Americans with the skills and assets that social mobility in the knowledge economy requires; modernizing an overly bureaucratic and centralized public sector; and defending liberal democracy in a dangerous world.

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