



progressive policy institute •

U.S. Investment Heroes of 2014:

Investing at Home in a Connected World

BY DIANA CAREW AND DR. MICHAEL MANDEL

SEPTEMBER 2014

In this era of globalization, goods, services, money, people, and data all cross national borders with ease. Indeed, connectedness to the rest of the world is now essential for the data-driven economy we find ourselves in to thrive. It follows that our tax, trade, immigration, and regulatory policies must be oriented to encourage that connectedness.

But perhaps paradoxically, prospering in a connected world requires a dedication to investing at home. It is impossible to participate as a full partner in the global economy unless we are investing in digital communications networks, education, infrastructure, research, energy production, product development, content, and security domestically. Investment generates increased productivity, higher incomes, new jobs, and more opportunities for the economic mobility and growth that we all desire.

Such prosperity-enhancing investment comes in many flavors, both private and public. In this report, we focus on identifying the U.S.-based corporations with the highest levels of domestic capital expenditures, as defined by spending on plants, property, and equipment in the United States. Currently, accounting rules do not require companies to report their U.S. capital spending separately, although some do. We fill in this gap in available knowledge using a methodology outlined at the end of this paper, based on estimates derived from published data from nonfinancial Fortune 150 companies.¹

To understand which companies are betting on America's future, we rank the top 25 companies by their estimated domestic investment. We believe this list can help inform good policy for encouraging continued and renewed investment domestically.

This year, as in the previous two years, the company at the top of our list is AT&T, which invested \$20.9 billion in the United States in 2013. The next on the list is Verizon, with an estimated \$15.4 billion in domestic capital spending, followed by Exxon Mobil, Chevron, and Walmart for the top five. Compared to last year's report, notable changes include the return

About the authors

of Google and General Electric to the list, and Apple's jump from in its rank from 24th to 15th. Similar to last year, telecommunications, cable, Internet, technology, and energy companies reigned supreme. They comprised 19 out of the 25 companies on the list, and accounted for 83 percent of the total investment.

In addition, we present two new features in this report compared to last year. First, we offer up a summary table of the top ten companies with the highest levels of domestic capital spending over the past three years. The list highlights those companies that have sustained their investment in America over time. Topping our three-year investment heroes list is AT&T, which invested \$60.5 billion in the United States from 2011 to 2013.

Second, we use government data to analyze changes in domestic capital spending by industry since the recession started in 2007. The data only goes through 2012, but is adjusted for inflation and covers all types of investment, including structures, equipment, and even intellectual property, such as R&D and content creation. We find this analysis corroborates the findings of our main list, showing that the mining sector and the information sector—including telecom, cable, and Internet companies—had the biggest gains in capital investment over this period.

We conclude our analysis with policy measures that could help boost corporate investment in the United States, as well as a supplementary list of the top 25 non-energy U.S. investment heroes. For example, the large and ongoing investment by telecommunications, cable, and technology companies means it is imperative legislators and policymakers strike the right balance on issues such as broadband regulation, the IP transition, government-owned broadband networks, and data privacy. The large presence of energy companies suggests the ongoing regulatory debate over natural gas exports could have a significant impact on future domestic investment.

U.S. INVESTMENT HEROES: THE LIST

As with previous years, the focus of our analysis is to identify those companies which pour the largest capital expenditures into the domestic economy. We again present two complete rankings of the top 25 U.S.-based companies investing in America: one that includes energy companies, and one that does not. (The non-energy list can be found later in this paper.)

The top Investment Heroes of 2014 look very similar to last year, although in a slightly different order. AT&T, with \$20.9 billion in capital expenditures, once again tops the list, followed by Verizon, Exxon Mobil, and Chevron. Rounding out the top ten are Walmart, Intel, Comcast, ConocoPhillips, Occidental Petroleum, and Exelon (Figure 1). Together, our 25 Investment Heroes invested about \$152 billion in the United States in 2013, with the top ten companies alone investing almost \$100 billion of the total.

The continued strength of domestic investment by telecommunications and cable companies is apparent. For example, Comcast moved up from being in the 10th spot last year to ranking 7th this year, on the strength of its investment in its X1 cable platform equipment, wireless gateways, and network capacity. AT&T invested significantly in expanding its U-verse fiber optic network, and Verizon focused its investment on building out its 4G LTE wireless network.

One important pattern to point out on this year's list is the strong gains by several Internet 'edge' companies, or companies that provide Internetbased content and services. Google re-entered the list in 12th position, after just missing a spot in the top 25 last year. According to public filings, the company invested heavily in production equipment, data centers, and real estate purchases in order to "manage increases in Internet traffic, advertising transactions and new products and services." Apple significantly raised its domestic investment in 2013, jumping from 24th to 15th on the list, focusing on product tooling and manufacturing process equipment, retail stores, and corporate facilities. Amazon also maintained its strong investment from 2012 to 2013, investing in more fulfillment centers and technology infrastructure for its Internet-based services.

The emergence of high-speed broadband has also fueled the large investment by the technology companies on our list. For example, in 2013 Intel completed construction of a new large-scale wafer fabrication facility in Arizona, reserved for future computing processor technologies, and began building a development fabrication facility in Oregon. And according to its public filing, in 2013 Microsoft focused on its cloud and devices

FIGURE 1: U.S. INVESTMENT HEROES: TOP 25 NONFINANCIAL COMPANIES BY ESTIMATED U.S. CAPITAL EXPENDITURE! (IN \$ MNS)

Rank	Company	Estimated 2013 U.S. Capital Expenditure ² (in \$ mns)	Rank	Company	Estimated 2013 U.S. Capital Expenditure ² (in \$ mns)
1	AT&T ³	20,944.0	14	Hess Corporation	3,851.0
2	Verizon Communications ⁴	15,443.5	15	Apple	3,807.1
3	Exxon Mobil	11,072.0	16	Energy Transfer Equity ³	3,505.0
4	Chevron	10,562.0	1 <i>7</i>	Union Pacific³	3,496.0
5	Walmart	8,652.0	18	Enterprise Products Partners ³	3,408.2
6	Intel	8,441.6	19	Ford Motor ⁵	3,391.8
7	Comcast ³	6,596.0	20	General Electric	3,266.2
8	ConocoPhillips	6,350.0	21	Time Warner Cable ³	3,198.0
9	Occidental Petroleum	5,500.0	22	FedEx	3,167.1
10	Exelon ³	5,395.0	23	Microsoft ⁶	3,062.9
11	Duke Energy	4,762.7	24	FreeportMcMoRan ⁷	2,666.0
12	Google	4,697.1	25	Amazon ⁷	2,648.1
13	General Motors	4,591.4	Total		152,474.8

PPI estimates based on 2013 and 2014 company financial reports & filings. Totals include capital expenditures in plants, property, and equipment.

strategy, spending capital on data centers, facilities, and computer systems.

This year's list also included 10 energy companies, either involved in the exploration and production of oil and gas, or involved in energy distribution and power. All told, these ten companies invested a total of \$57 billion in 2013, or 37 percent of the top 25 investment.

Much of the investment by the oil and gas companies on the list was concentrated on deepwater oil reserves off the Gulf of Mexico. In addition, these companies reported sizeable oil and gas exploration and production investment on reserves in Texas, Louisiana, Alaska, California, Wyoming, Ohio, and North Dakota.

Several other companies on the list made notable investments in 2013. Ford reported increasing production capacity in its U.S. plants by 200,000 units, in addition to significant U.S. hiring. Union Pacific invested heavily in its rail infrastructure, as well as line expansion, new freight cars, train control,

^{1.} Universe includes nonfinancial Fortune 150 companies from 2014.

^{2.} For all but four companies, fiscal year 2013 was calendar year 2013. For Walmart, Apple, FedEx, and Microsoft, we used the most recent fiscal year statement as of August 2014.

^{3.} Predominately U.S. operations.

^{4.} Reduced total capital expenditures by the share of international employment, to adjust for global investment activities.

^{5.} Adjusted for net investment in operating leases by removing it from long-lived assets in proportion to the country share.

^{6.} Pro-rated assets by geographic location for the final two months of FY2014 to account for Microsoft's acquisition of Nokia, based in Finland, on April 25, 2014.

^{7.} May include some Canadian investment, but our assessment finds this amount was minimal.



Data: PPI

and other technology. FedEx reported increased spending in both its Ground and Express facilities.

Overall, the top 25 list contains four telecom and cable companies, with a total of \$46 billion in domestic capital spending (Figure 2). The next highest category in terms of investment is energy production and refining, with six companies accounting for a total of \$40 billion in domestic capital spending. The third largest category is Internet and technology companies, containing five companies totaling \$22.7 billion, led by Intel, Google, and Apple.

Finally, here we must note an important caveat. We acknowledge some of the companies on our list have been criticized for a variety of issues, including pricing, environmental impacts, privacy concerns, and low tax payments. Without minimizing these potential problems, we want to recognize the positive

impact these companies are having in terms of creating U.S. jobs and generating economic growth through their U.S. investments.

THREE-YEAR HEROES

This is the third year that PPI has put together an Investment Heroes list, using essentially the same methodology. That allows us to assess investment patterns, to see which companies have sustained their high levels of domestic spending, making long-term bets on America.

In addition to our annual list, we put together a list of the top nonfinancial companies who are investing in the United States, based on cumulative capital expenditures from 2011 to 2013 as reported in our annual lists.² The results are shown in Figure 3.

What stands out is just how large the numbers are. The top company is AT&T, which by our estimates totaled \$60.5 billion in capital expenditures from

2011 to 2013. Second was Verizon, with \$46.6 billion in domestic capital spending. Together, these two telecom giants have spent roughly \$107 billion on their domestic wireline and wireless networks from 2011 to 2013. By comparison, all government investment in airports, urban mass transit, and other non-highway transportation projects over the same period came to only \$81 billion.³

Out of the top 10 Investment Hero companies for the three-year period, three are telecom and cable, and five are energy-related. Just two other companies, Walmart and Intel, made the list. Together, the top 10 companies invested \$293 billion in the United States from 2011 to 2013.

RECESSION AND RECOVERY

So far we have concentrated on corporate data from financial reports for the past three years. Here we take a broader perspective. Looking at the latest aggregate GDP data from the Bureau of Economic Analysis, we notice good news and bad news.

The good news is that businesses and nonprofits are investing more in America. Adjusted for inflation, investment in structures, equipment, and intellectual property is up 4.7 percent from the second quarter of 2013 to the second quarter of 2014. That far exceeds the overall increase of 2.4 percent in gross domestic product over the same period.

The bad news is that the United States is still suffering from an investment drought. Almost seven years after the Great Recession started, overall nonresidential investment is only 4 percent above its pre-recession peak. By comparison, the recovery in personal consumption is twice as big, 8 percent, compared to its pre-recession peak in the fourth quarter of 2007. Adding to the imbalance, nonresidential investment growth slowed in 2013, to just 3 percent, compared to 7.2 percent and 7.7 percent in 2012 and 2011, respectively.

Still, some industries were able to power through the recession and significantly boosted their investment in the United States. To identify these "Investment Hero Industries," we looked at official government data on private sector investment in equipment, structures, and intellectual property by broad industry sector, adjusted for inflation. Using this data, Figure 4 shows the increase in investment from

FIGURE 3: THREE YEAR TOTALS: WHICH COMPANIES ARE THE LEADERS?

		Total Estimated U.S. 2011-2013 (\$mns)
1	AT&T	60,509
2	Verizon Communications	46,643
3	Exxon Mobil	34,929
4	Chevron	31,377
5	Walmart	25,144
6	Intel	24,612
7	Occidental Petroleum	19,326
8	ConocoPhillips	18,052
9	Comcast	17,610
10	Exelon	15,226
	TOTAL	293,428

Data: PPI

2007, the peak year before the recession, to 2012, the last data available.

We see that the top industry in terms of investment growth was mining, including oil and gas, which boosted investment by \$31 billion (in 2012 dollars) between 2007 and 2012. That makes sense given the energy boom, particularly in natural gas, which has swept the country.

The second biggest contributor to investment growth was the information sector, which includes telecom, cable, and Internet 'edge' companies, as well as content producers such as publishers and movie makers. Investment in this sector rose by \$21 billion (in 2012 dollars) between 2007 and 2012. Broadly speaking, the combination of telecom, tech, and content—which in another context PPI has called the tech/info sector—has been a potent force for growth.

FIGURE 4: WHICH INDUSTRIES ARE LEADING THE INVESTMENT RECOVERY: 2007-2012

Company	Increase in Investment, 2007-2012 (in 2012 \$bns)
Mining (including oil and gas)	31.3
Information (including telecom, cable, and Internet companies)	21.1
Management of companies and enterprises	13.6
Agriculture, forestry, fishing, and hunting	10.1
Transportation and warehousing	7.5
Administrative and waste management services	5.4
Professional, scientific, and technical services	0.7
Health care and social assistance	-0.1
Educational services	-0.1
Utilities	-3.8
Manufacturing	-4.2
Arts, entertainment, and recreation	-10.0
Other services, except government	-10. <i>7</i>
Wholesale and retail trade	-11.2
Construction	-16.4
Accommodation and food services	-20.5
Finance and insurance	-43.3
Real estate and rental and leasing	-254.2

Data: BEA, PPI

At the other end of the spectrum, major sectors such as health care, education, manufacturing, accommodation and food services, and utilities contributed nothing to investment growth over this period.

HOW POLICY CAN BOOST INVESTMENT

This report identifies America's "Investment Heroes"—the corporations who are leaders in domestic capital spending. But what does that mean for legislators and regulators?

First, these companies should be commended for their willingness to invest in this country. More importantly, facilitating business investment needs to be high on the list of concerns for regulators—an explicit goal instead of a fortuitous outcome. Of course, regulation has a wide variety of important goals, including consumer protection, worker protection, and environmental protection. But the key lies in striking the right balance between providing consumer protections and enabling innovation and growth.

We believe a pro-investment agenda starts with a regulatory and tax policy environment that encourages more companies to be domestic investment heroes. Policies that provide a good macroeconomic environment for investment will pay off big in jobs, productivity, and wages.

That means policymakers must be aware that all regulations have impacts on business environment and investment appetite, whether directly or indirectly. Moreover, the unintentional accumulation of regulations over time can impede the flow of investment and innovation. That is why we proposed a Regulatory Improvement Commission (RIC), an independent body tasked by Congress to review existing regulations deemed duplicative or outdated.⁴

The large, robust investment by telecom and cable, and Internet and tech companies, suggests we are entering a period of unprecedented interconnectedness. Indeed, a recent PPI report on the so-called "Internet of Everything" (IoE)—the natural extension of Internet-type connectivity to physical objects—argues that we are only beginning to enter the next phase of smart design and delivery of everyday goods and services. This reality makes it essential to have policies in place that encourage continued data-driven investment and growth.

Many of the policy decisions with the greatest impact for these companies are coming out of the Federal Communications Commission (FCC). Currently the FCC is reviewing several telecommunications, cable, and Internet (broadband) issues that could have dramatic implications for the pace of future domestic investment.

First is the need to successfully execute the planned spectrum auction as scheduled for mid-2015.6 All wireless broadband providers must have adequate access to spectrum as a way to encourage continued investment. Spectrum is necessary for wireless network expansion and to meet consumer demand for increased data flows, but it is a finite resource where many frequencies are tied up by the government or reserved for public use. As such, there are few opportunities for providers to obtain new spectrum. However, in May 2014, by recommendation of the Department of Justice, the FCC approved rules that would limit participation by large wireless carriers already holding low-frequency spectrum.⁷ Such limitations could sacrifice continued investment in the high-bandwidth, national networks our data-driven economy relies on. Further, as highlighted in a previous PPI report, a compelling case has yet to be made that smaller wireless carriers would be impaired by larger providers fully participating in the auction.8

Second, the FCC must follow through on efforts by industry to transition to an all-IP world. The recent approval by the FCC of AT&T's petition to begin IP-transition trials in Florida and Alabama should be the first part of a gradual, complete transition. Forcing companies to invest in outdated, underused technology will not spur the innovation and growth we need to fully participate in the globally-connected economy.

Third, the FCC is currently considering an order that could encourage more local governments to deploy their own broadband networks. ¹⁰ As recent PPI research shows, such investment could crowdout private investment in broadband, which is quite strong and robust. Instead, in an era of constrained fiscal resources, public investments in transportation infrastructure may have a greater economic return. ¹¹

Fourth, the FCC must adopt an approach to the net neutrality debate that does not choke off investment. Currently, net neutrality advocates are pushing the FCC to regulate the Internet as a public utility, 12 which runs counter to the light-touch regulation that has enabled the data-driven economy to

prosper. Instead, a new PPI report by Bob Litan and Hal Singer proposes that the FCC should pick the policy that maximizes total investment across the entire Internet ecosystem. ¹³ They suggest case-by-case adjudication of Internet anti-competitive discrimination is the best path forward for ensuring an open Internet.

Data privacy is another issue that could have a big effect on future investment. As the FCC, the Federal Trade Commission (FTC) and the National Telecommunications and Information Administration (NTIA) decide how to approach the balance between consumer protection and data-driven innovation in a connected world, we must be mindful not to impose rules that are impractical to implement, restrict cross-border data flows, or hinder free speech. And in the wake of the Snowden revelations, government should be transparent about their own collection and use of data to assuage public concerns over privacy violations.

The need for patent reform, which recently failed in the U.S. Senate, ¹⁵ also continues to be important for many Internet and technology companies. Patent Assertion Entities (PAEs) that purchase patents with the only intention of suing any company infringing upon it are a threat to companies' willingness to invest. As a PPI report has previously noted, there must be balanced reform that curbs predatory litigation while protecting legitimate patent infringement claims. ¹⁶

On the energy front, efficiency-enhancing advancements in drilling and extraction techniques have substantially changed the economics of natural gas and oil.¹⁷ While regulators wrestle with important environmental considerations, they must also consider the potential for natural gas and oil production and exports to boost growth and job creation through investment.

Another way to encourage domestic investment is with good tax policy. Tax policy can encourage investment at home by enabling U.S.-based companies to be competitive abroad. As an upcoming PPI paper will show, many developed countries have moved toward a territorial taxation system, making U.S. corporate tax policy a relic of the past. In particular, the fundamental problems in the corporate tax system offer incentives for

corporate inversion, requiring comprehensive tax reform and lowering the corporate tax rate, instead of punitive fix-it measures from the Treasury Department.¹⁸

Finally, access to qualified workers factors into corporate investment decisions. That means we must have policies that invest in a prepared workforce, by encouraging more STEM education to train workers for a connected future. In July 2014, the White House released a report on "Job-Driven Training and American Opportunity," where several initiatives focused on equipping more Americans with tech skills.¹⁹ And President Obama's ConnectEd Initiative, a five-year plan to get high-speed broadband in the classroom,²⁰ along with July 2014 reforms to the government "e-rate" school broadband funding program,²¹ will certainly boost the ability for students to get connected. But these efforts must only be the beginning, and they must be in partnership with the private sector.

Ensuring a globally-competitive workforce also requires policies that facilitate more viable alternative pathways into the workforce after high school. This includes reforms to the Higher Education Act (HEA) to expand more rigorous alternatives to the four-year college degree such as competency-based education. It also includes reauthorizing the Career and Technical Training Act (CTE) already supported by over 200 companies, many of which are telecommunications and tech companies. Some companies are even working to create their own workforce pathways outside of traditional postsecondary education. For example, new "nanodegrees," through online educator Udacity, are being sponsored by AT&T.

CONCLUSION

In order to truly achieve a pro-growth, proinnovation agenda, we must emphasize economic growth based on production and investment over debt-driven consumption. In crafting regulatory policy, that means making investment a bigger priority and embracing a globally connected, datadriven future.²⁴

We hope legislators and regulators can use the lists presented in this report to assist in thinking about how to encourage innovation-creating investment: why some companies are not investing, and why some on the list are not investing even more. Only when we have policies that make companies want to bet on America's future can we succeed in a connected world.

NON-ENERGY U.S. INVESTMENT HEROES

Here we present our list of the top 25 U.S.-based non-energy Investment Heroes (figure 5). Similar to the main list, no financial companies were included. We present this list to give an indication of which U.S. companies are investing in America outside of the sector that powers them.

Similar to the main list, the non-energy Investment Heroes of 2014 are remarkably similar to last year's list, also with slightly different rankings. Delta and United Continental continued to spend on new aircraft and existing aircraft modifications. Kroger, CVS, and Target invested significantly in new stores, store remodels, and information technology. Boeing invested in its manufacture of commercial and defense aircraft. Finally, Walt Disney continued its domestic theme park investment in 2013, but at a decreased level, just making it onto the list at number 25.

METHODOLOGY

Our U.S. Investment Heroes ranking for 2014 also follows a similar methodology to last year. We started with the 2014 Fortune 150 list as our universe of companies. We removed all financial and insurance companies, since their reporting of capital expenditures is not consistent with our interpretation of plants, property, and equipment. We then estimated the amount of gross capital expenditures in the United States for 2013, and ranked the companies in order of their total estimated U.S. capital expenditures.

For these rankings, we used each company's most recent fiscal year statements. In most cases, the fiscal year is the calendar, but for a handful of companies, we used the most recent fiscal year statement which captures a large portion of calendar year 2013.

The companies in these rankings are all based in the United States. Non-U.S. based companies were not included in this list, because of data comparability issues, although there are non-U.S. companies that invest in America. Moreover, a company's absence

FIGURE 5: NON-ENERGY U.S. INVESTMENT HEROES: TOP 25 NONFINANCIAL COMPANIES BY ESTIMATED U.S. CAPITAL EXPENDITURE¹

Rank	Company	Estimated 2013 U.S. Capital Expenditure ² (in \$ mns)	Rank	Company	Estimated 2013 U.S. Capital Expenditure ² (in \$ mns)
1	AT&T ³	20,944.0	14	Microsoft ⁶	3,062.9
2	Verizon Communications ⁴	15,443.5	15	Amazon ⁷	2,648.1
3	Walmart	8,652.0	16	Delta Air Lines ³	2,568.0
4	Intel	8,441.6	1 <i>7</i>	Kroger ³	2,330.0
5	Comcast ³	6,596.0	18	United Continental ³	2,164.0
6	Google	4,697.1	19	Boeing ³	2,098.0
7	General Motors	4,591.4	20	DIRECTV	2,050.0
8	Apple	3,807.1	21	CVS Caremark ³	1,984.0
9	Union Pacific³	3,496.0	22	IBM	1,957.0
10	Ford Motor ⁵	3,391.8	23	Target	1,886.0
11	General Electric	3,266.2	24	Johnson & Johnson	1,868.9
12	Time Warner Cable ³	3,198.0	25	The Walt Disney Company	1,826.0
13	FedEx	3,167.1	Total		116,134.7

PPI estimates based on 2013 and 2014 company financial reports & filings. Totals include capital expenditures in plants, property, and equipment.

- 1. Universe includes nonfinancial Fortune 150 companies from 2014.
- 2. For all but seven companies, fiscal year 2013 was calendar year 2013. For Walmart, Apple, FedEx, Microsoft, Kroger, Target, and Walt Disney, we used the most recent fiscal year statement as of August 2014.
- 3. Predominately U.S. operations.
- 4. Reduced total capital expenditures by the share of international employment, to adjust for global investment activities.
- 5. Adjusted for net investment in operating leases by removing it from long-lived assets in proportion to the country share.
- 6. Pro-rated assets by geographic location for the final two months of FY2014 to account for Microsoft's acquisition of Nokia, based in Finland, on April 25, 2014.
- 7. May include some Canadian investment, but our assessment finds this amount was minimal. Excludes capital leases.

from the list does not mean they did not invest domestically in 2013. We cut the list at the top 25 companies for both our energy and non-energy rankings. Large U.S. companies not on the list may be investing in America, just not as much as the other companies on the list. Finally, we note that if our universe was expanded to include companies in the top Fortune 200, additional energy and power companies would have made the list.

Most multinational 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 the information provided in the annual 10-K statement. This methodology should in most cases provide a reasonable approximation to actual spending.

We start with the 2014 list of Fortune 150 companies, ranked by revenue. We omitted financial companies, which use a different accounting standard for the reporting of capital spending. For each company, we then looked at their most recent publicly available financial data, including annual 10-K filings with the SEC.

- If a company has small or no foreign operations, we allocated all capital spending to the United States.
- 2. If a company reported U.S. capital spending separately, we used that figure.
- 3. If a company did not report U.S. capital spending separately, but did report changes in U.S. long-lived assets or plant and equipment, we were able to use that information plus depreciation rates to estimate capital spending.

In a small number of cases, including major acquisitions, we look for proxies that enable us to allocate capital spending.

We paid special attention to AT&T and Verizon, the top two companies on our list. In its statement, AT&T reported its assets were "predominately in the United States." For Verizon, no international distribution of assets were reported, even though there are some international operations. We adjusted our estimate for their international operations using the share of international employees as a proxy. Based on our analysis, both companies would retain their top spots under any reasonable set of assumptions.

The authors would like to thank Brad Janicki for his valuable research assistance.

ENDNOTES

- 1. These calculations do not rely on any private communications with the companies.
- 2. The cumulative data relies on our published lists, rather than recalculating for restatements. The one exception is Chevron, for which we use a revised number for 2011.
- 3. Census Bureau, "Annual Value of Construction Put in Place," 2008-2013: http://www.census.gov/construction/c30/xls/public.xls.
- 4. Michael Mandel and Diana Carew, "Regulatory Improvement Commission: A Politically Viable Approach to U.S. Regulatory Reform," Progressive Policy Institute, May 2013: http://www.progressivepolicy.org/wp-content/uploads/2013/05/05.2013-Mandel-Carew_Regulatory-Improvement-Commission_A-Politically-Viable-Approach-to-US-Regulatory-Reform.pdf.
- Michael Mandel, "Can the Internet of Everything Bring Back the High Growth Economy?," Progressive Policy Institute, September 2013: http://www.progressivepolicy.org/wp-content/uploads/2013/09/09.2013-Mandel_Can-the-Internet-of-Everything-Bring-Back-the-High-Growth-Economy-1.pdf.
- Bloomberg BNA, "FCC: Spectrum Auction Rules Fulfill Congressional Mandate, Despite NAB Claims," August 20, 2014: http://www.bna.com/fcc-spectrum-auction-n17179894003/.
- 7. Tom Risen, "FCC Limits Spectrum-Buying Power of Verizon, AT&T," U.S. News & World Report, May 15, 2014: http://www.usnews.com/news/articles/2014/05/15/fcc-limits-spectrum-buying-power-of-verizon-at-t.
- 8. Hal Singer and David Balto, "The FCC's Incentive Auction: Getting Spectrum Policy Right," Progressive Policy Institute, September 2013: http://www.progressivepolicy.org/wp-content/uploads/2013/09/09.2013-Balto-and-Singer-Getting-Spectrum-Policy-Right.pdf.
- 9. AT&T Public Policy Blog, "Going All-IP in Alabama, Florida," February 28, 2014: http://www.attpublicpolicy.com/wireless/going-all-ip-in-alabama-florida/.
- 10. Federal Communications Commission, "Public Notice for Comment," July 28, 2014: http://apps.fcc.gov/ecfs/document/view;jsessionid=QHjMT2hfCLghl1z21LFC119j71HNTnB1MZyC0T12HY1ty419g5Cm!44062279!-58662085?id=7521737783.
- 11. Diana Carew and Michael Mandel, "Infrastructure Investment and Economic Growth: Surveying New Post-Crisis Evidence," Progressive Policy Institute, March 2014: http://www.progressivepolicy.org/wp-content/uploads/2014/03/2014.03-Carew_Mandel_Infrastructure-Investment-and-Economic-Growth_Surveying-New-Post-Crisis-Evidence.pdf.
- 12. Brian Fung, "Sunlight: 99 percent of net neutrality comments wanted stronger FCC rules," Washington Post, September 2, 2014: http://www.washingtonpost.com/blogs/the-switch/wp/2014/09/02/sunlight-99-percent-of-net-neutrality-comments-wanted-stronger-fcc-rules/.
- 13. Hal Singer and Robert Litan, "The Best Path Forward on Net Neutrality," Progressive Policy Institute, September 2014.
- 14. Paul Hofheinz and Michael Mandel, "Bridging the Data Gap: How Digital Innovation Can Drive Growth and Create Jobs," The Lisbon Council and Progressive Policy Institute, July 2014: http://www.progressivepolicy.org/wp-content/uploads/2014/04/LISBON_COUNCIL_PPI_Bridging_the_Data_Gap2.pdf.
- 15. Erin Mershon and Tony Romm, "Patent Reform Hits Dead End in Senate," *PoliticoPro*, May 21, 2014: http://www.politico.com/story/2014/05/patent-reform-senate-106968.html.
- 16. Phil Goldberg, "Stumping Patent Trolls on the Bridge to Innovation," Progressive Policy Institute, October 2013: http://www.progressivepolicy.org/wp-content/uploads/2013/09/10.2013-Goldberg_Stumping-Patent-Trolls-On-The-Bridge-To-Innovation.pdf.
- 17. Timothy Cama and Benjamin Goad, "Natural Gas Execs Fear They're Next for Regs," *The Hill*, August 17, 2014: http://thehill.com/policy/energy-environment/215298-natural-gas-execs-fear-theyre-next-for-obama-regulations.
- 18. Kasia Klimasinka and Richard Rubin, "Lew Says Business Tax Revamp Best Best for Limiting Inversions," *Bloomberg*, August 21, 2014: http://www.bloomberg.com/news/2014-08-21/lew-says-business-tax-reform-best-for-addressing-inversions.html.
- 19. The White House, "Ready to Work: Job-Driven Training and American Opportunity," July 2014: http://www.whitehouse.gov/sites/default/files/docs/skills_report.pdf.
- 20. The White House, "ConnectEd Initiative," June 2013: http://www.whitehouse.gov/issues/education/k-12/connected.
- $21. \ Sean \ Cavanagh, "Schools \ Set \ to \ Adjust \ Revamped \ E-Rate \ Policies," \ \textit{Education Week}, \ August \ 1, 2014: \ \underline{http://www.edweek.org/ew/articles/2014/08/01/37erate.h33.html.}$
- 22. TechNet, "TechNet, Coalition Urge Congress to Reauthorize Perkins Act," May 21, 2014: http://www.technet.org/technet-coalition-urge-congress-to-reauthorize-perkins-act/.
- 23. Udacity, "Announcing Nanodegrees: a New Type of Credential for a Modern Workforce," June 2014: http://blog.udacity.com/2014/06/announcing-nanodegrees-new-type-of.html.
- 24. Michael Mandel, "The Case for Pro-Growth Progressivism," Policy Network, June 18, 2014: http://www.policy-network.net/pno-detail.aspx?ID=4693&title=The-case-for-pro-growth-progressivism.

About the Progressive Policy Institute



The Progressive Policy Institute (PPI) is an independent research institution that seeks to define and promote a new progressive politics in the 21st century. Through research, policy analysis and dialogue, PPI challenges the status quo and advocates for radical policy solutions.

© 2014 Progressive Policy Institute All rights reserved.

Progressive Policy Institute 1101 14th St. NW Suite 1250 Washington, DC 20005

Tel 202.525.3926 Fax 202.525.3941 Email info@ppionline.org www.progressivepolicy.org