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THE BROADBAND ASSOCIATION

Broadband Investment Ticked Down in 2015

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Research Brief
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USTelecom's annual analysis of broadband industry capital expenditures reveals that the industry invested approximately $1.5 trillion in network infrastructure over 20 years from 1996-2015. The wireline industry invested nearly $750 billion during this period. In 2015, the industry invested $76 billion, $1billion lower than the previous year. The U.S. digital economy requires constant broadband investment in ever greater capacity, speed, and reliability. To optimize the benefits for all American consumers and businesses, policymakers must seek to create an environment that encourages growth in broadband investment.

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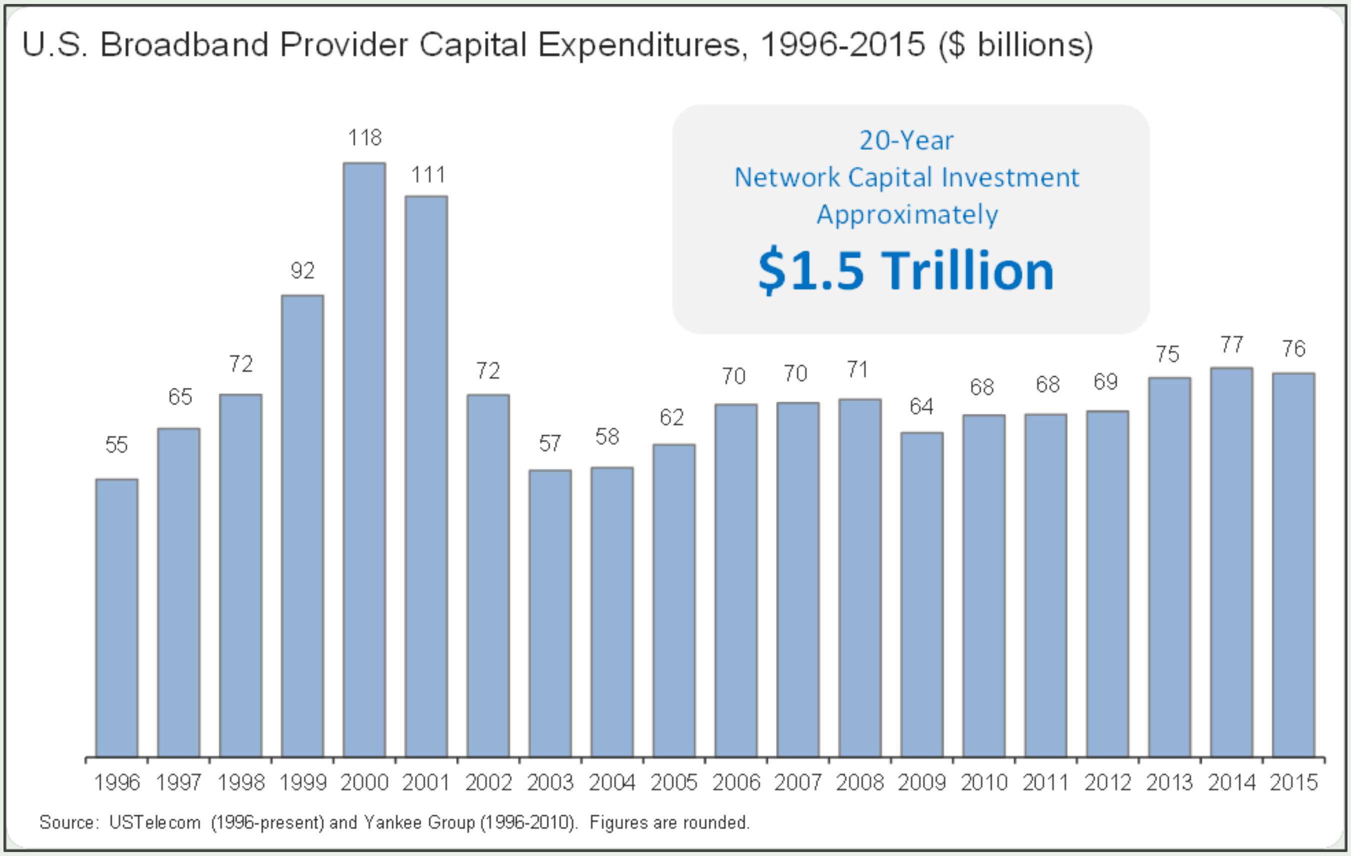
U.S. broadband providers invested approximately $76 billion in network infrastructure in 2015 down from approximately $77 billion in 2014 according to a new USTelecom analysis of company capital expenditures data (see Chart 1). USTelecom has published this data series annually for the last six years and the data now cover 20 years of broadband provider capital investment. From 1996 through 2015, the broadband industry has made capital investments totaling $1.5 trillion.

Chart 1



The wireline industry continued to make large capital investments to expand and upgrade broadband infrastructure for American consumers and businesses. In 2015, the wireline industry invested $27 billion, down from $28 billion the previous year (see Chart 2). In 2015, wireline contributed 35 percent of broadband providers' capital investments while wireless contributed 43 percent and cable 22 percent (see Chart 3). From 1996 through 2015 wireline providers invested almost $750 billion, about half of the $1.5 trillion in total broadband industry capital investment. During this same period, the wireless industry contributed 33 percent and cable providers contributed 17 percent of total capital investment (see Chart 3).

Chart 2

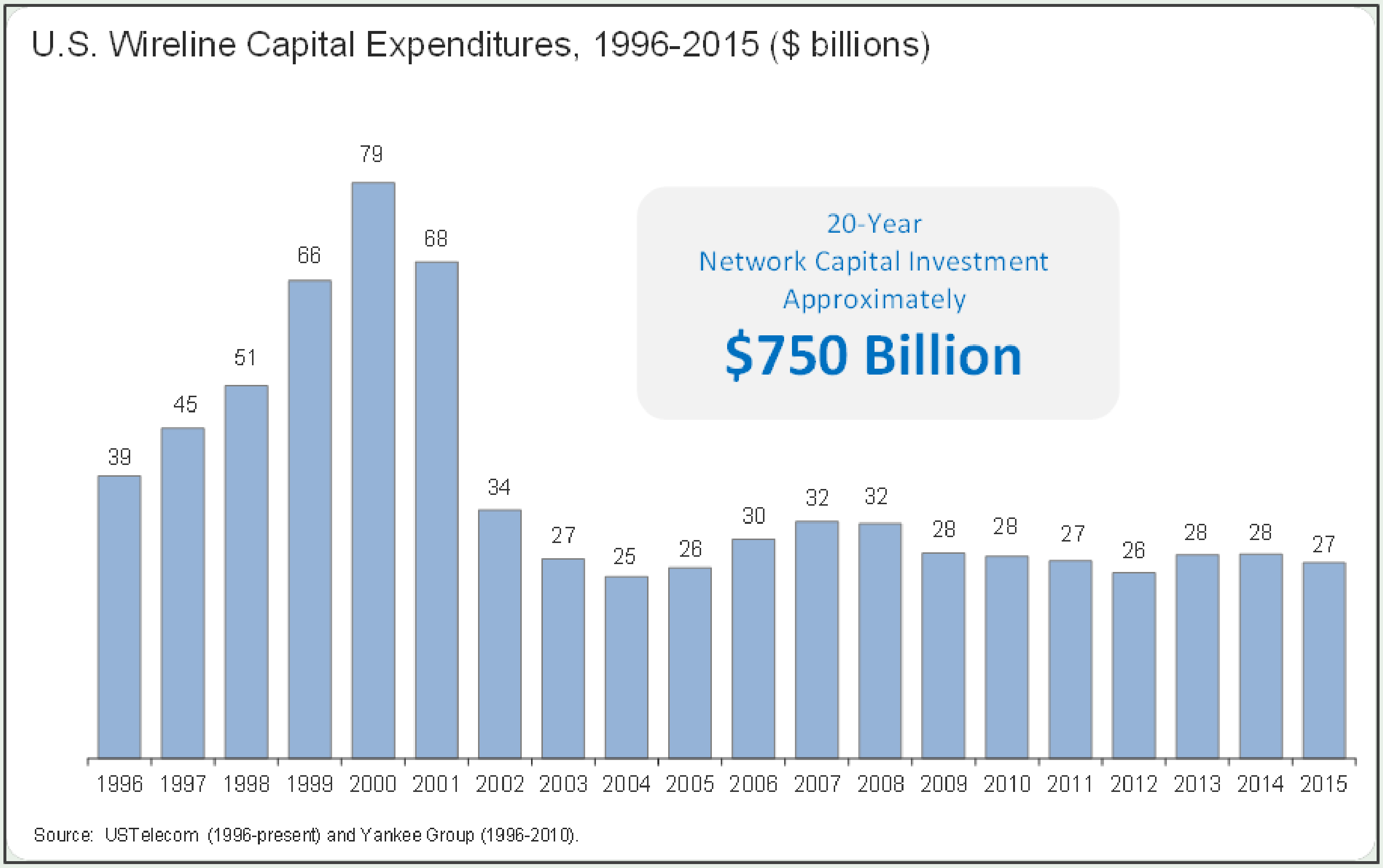
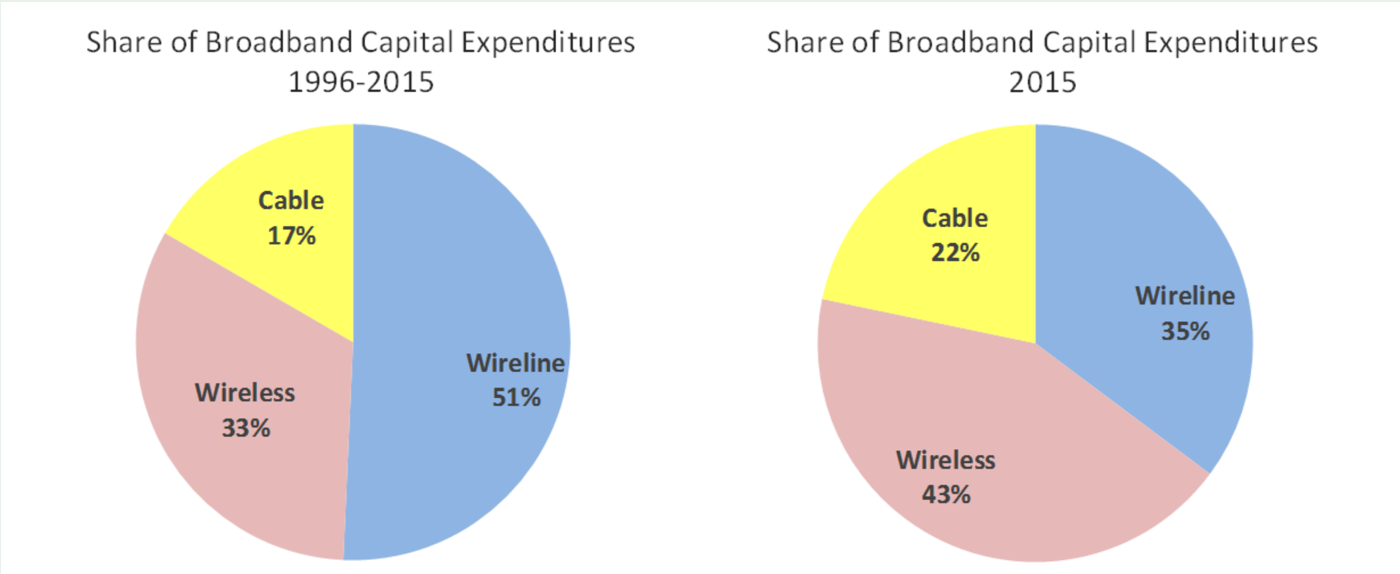


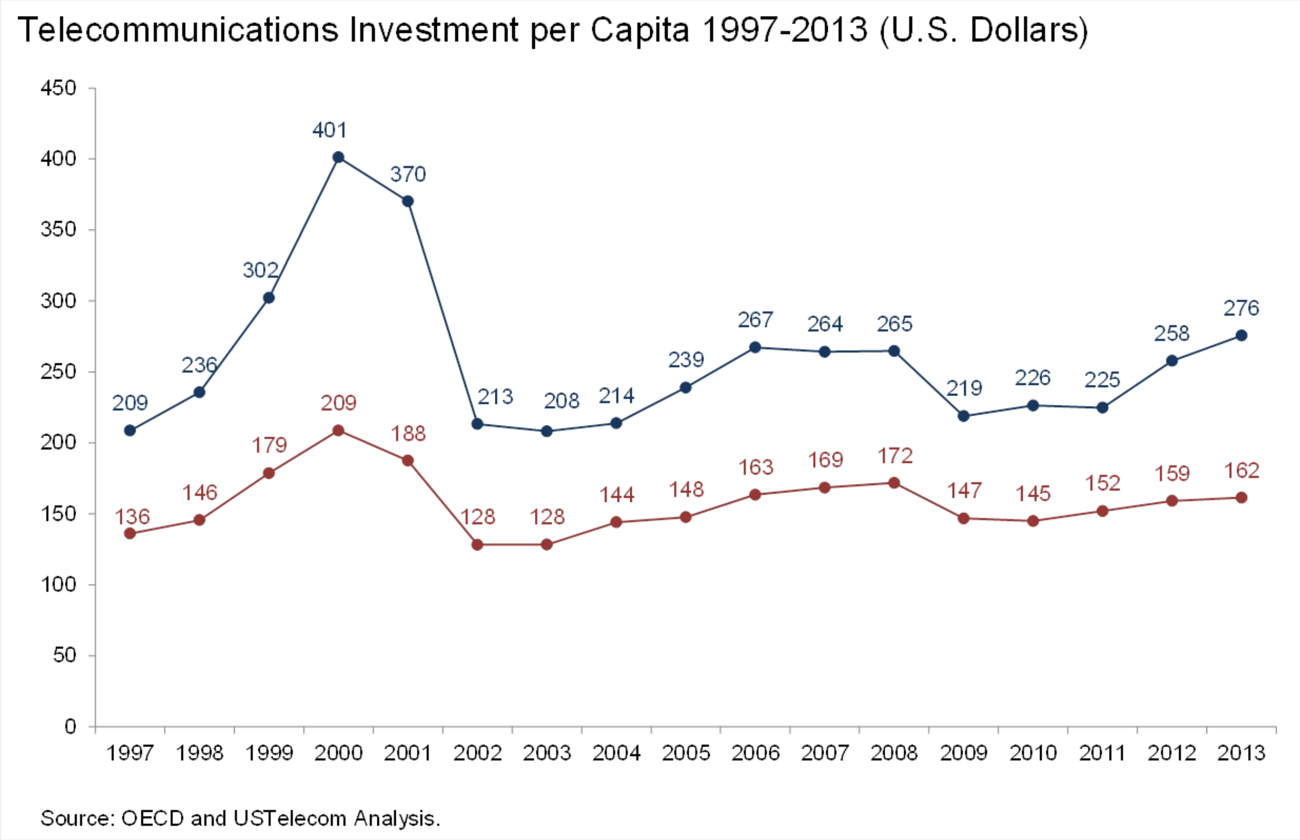
Chart 3



Source: USTelecom (1996 - present) ad Yankee Group (1006-2010)

Over the last decade and a half since U.S. telecommunications markets were opened to competition and broadband was unleashed, U.S. providers have invested significantly more in broadband per capita than the average of the industrialized nations comprising the Organization for Economic Cooperation and Development (OECD) (see Chart 4).

Chart 4



Many factors affect capital spending, such as competition, financial markets, project timelines, and regulation. USTelecom has argued that the regulatory reclassification of broadband providers as common carriers under Title II of the Communications Act in early 2015 would exert downward pressure on investment, holding other factors constant.

Broadband investment, including wireline investment, remains critical to modernizing our nation's network infrastructure and maintaining our international leadership. According to the Cisco Visual Networking Index, U.S. Internet traffic, after growing three and a half times over the last five years, is expected to grow nearly two-and-a-half times again over the next five years. Traffic growth will be driven by consumer and business use of streaming media, faster 5G mobile networks, the growing Internet of Things, and cloud-based applications. These applications, the Internet connections they rely upon, and the mobile and data center infrastructures that deliver them will require constant broadband investment in ever greater capacity, speed, and reliability. To optimize the benefits for all American consumers and businesses, policymakers must seek to create an environment that encourages a return to growth in broadband investment.

Methodology

USTelecom analyzed capital expenditure data for wireline telecommunications, wireless telecommunications, and cable broadband providers in order to approximate industry aggregates. Other providers, such as satellite providers, telecommunications resellers, and electric utilities are excluded. Figures are rounded. Previous years may include minor revisions.

The majority of telecommunications data were taken from company financial statements. USTelecom's analysis attempts to consistently measure infrastructure spending from year to year, taking into account many factors that affect company capital investment reporting, such as business segment reporting, accounting changes, mergers, and spin-offs. The analysis is subject to the reporting practices of individual companies. Capital expenditures may include investment in property, plant, and equipment; capitalized software; capitalized interest during construction; corporate, directory, and other capital expenditures; and intra-company eliminations. USTelecom made reasonable efforts to eliminate double-counting, non-U.S. investment, and non-capital spending. We made estimates for non-reporting companies.

Additional market research and government sources were consulted for comparison, including the United States Census Annual Capital Expenditures Survey, the Yankee Group Global Capex Forecast 2010, the Skyline Marketing Capex Report 2010, data from the Cellular Telecommunications & Internet Association (CTIA), New Paradigm Resources Group, and the Association for Local Telecommunications Services (ALTS). Cable data are from the National Cable & Telecommunications Association (NCTA), at www.ncta.com, citing SNL Kagan.

Technical Notes

It was necessary to make several adjustments to the reported capital expenditures for 2014 and 2015 data to ensure that the series remained consistent over time and reflected actual change in the capital stock of the U.S. economy.

AT&T Acquisitions and Reporting Changes in 2015

For full year 2015, AT&T revised its financial reporting to reflect acquisitions of DirecTV and Mexican wireless operations. To develop a consistent time series with appropriate comparisons to prior years, USTelecom's 2015 capital expenditures estimate for AT&T excludes estimated capital expenditures for these newly acquired businesses. The estimated amounts are based on public company statements and are prorated to account for the timing of the acquisitions. In particular, AT&T reported approximately $20 billion in capital expenditures, including capitalized interest, for 2015. The 2015 estimate backs out approximately $500 million for Mexican wireless operations and $1.5 billion for DirecTV, which both reflect approximately a half year of operations. In addition the remaining $18 billion in capital spending is allocated half to wireless and half to wireline.

Capitalized Handsets in 2015 and 2014

USTelecom adjusted total reported capital spending to account for the reporting impacts of a change in the accounting treatment of wireless phones adopted by some companies. This accounting change was accompanied by an extraordinary ramp up in wireless handset leasing. It was necessary to make the adjustment because otherwise total company-reported capital expenditures would not provide an apples-to-apples comparison over the course of our time series, and especially from 2014 to 2015. The 2015 ramp up of handset leasing programs – especially Sprint's – inflate the reported *growth* in capital expenditures. The adjustment involved backing out approximately $143 million in 2014 and $2.163 billion in 2015 in reported capital expenditures for wireless handsets that Sprint purchased to lease, instead of sell, to its customers. As a result, our previously reported figure of $78 billion ($77.521) in capital investment for 2014 was adjusted downward to $77 billion ($77.378 billion) and our capital investment figure for 2015 was $76 billion ($76.331 billion) (see Chart 5).

Chart 5

Impact of the Rapid Expansion of Sprints Leased Device Program on Reported Capex Growth

	2013	2014	2015
Sprint Spending on Capitalized Devices	$ -	$ 143	$ 2,163
Total Capex	$ 75,389	$ 77,521	$ 78,494
Total Capex Excluding Sprint Capitaleized Devices	$ 75,389	$ 77,378	$ 76,331
Total Capex Change Year over Year	n/a	$ 2,132	$ 973
Total Capex Change Year Over Year Excluding Sprint Capitalized Devices	n/a	$ 1,989	$ (1,047)
Wireless Capex	$ 33,699	$ 33,315	$ 35,036
Wireless Capex Excluding Sprint Capitaleized Devices	$ 33,699	$ 33,172	$ 32,873
Wireless Capex Change	n/a	$ (384)	$ 1,720
Wireless Capex Change Excluding Sprint Capitalized Devices	n/a	$ (527)	$ (300)

Source: Company Financial Reports and USTelecom Analysis

As discussed in the Methodology above, USTelecom's reported investment figures are rounded due to the inevitable estimation involved in producing them. In recent years, USTelecom has reported investment data rounded to the nearest billionth dollar. However, in the foregoing discussion it was appropriate to report additional digits to show the impact of proportionately small changes on the rounded totals.

Below is a simplified explanation of how handset leasing affected financial reporting and inflated reported capital expenditures in 2014 and 2015.

The traditional practice among wireless companies has been the subsidized handset sale model, in which the provider purchases handsets and then turns around and sells them to its customers along with a service contract. Typically, the provider sells the device at a steep discount, say $200 for a $600 device, or a $400 subsidy. The provider and the customer enter into a contract for about two years, in which the customer agrees to pay a certain monthly subscription rate. That rate includes an amount sufficient to cover the cost of service and to pay off the subsidized cost of the device over the term of the contract.

From an accounting perspective, under the subsidized handset model, the devices purchased by providers go into inventory and are recorded as a cost of equipment sold once the customer takes ownership of the device. Under a handset leasing model, the devices purchased become an asset owned by the wireless provider and are therefore accounted for as a capital expenditure. Sprint provides the most pronounced example: it initiated its handset leasing program in late 2014 and accelerated the program in by an additional $2 billion in 2015.

Recently, wireless carriers have employed installment plans instead of either traditional subsidy plans or leasing programs. Under installment plans, consumers also own the devices and payback the cost in installments over time. There are differences in accounting for installment plans and subsidy plans, but those are beyond the scope of this analysis. The important point is that, like subsidy programs, and unlike leasing programs, devices sold under installment plans are not held as assets by wireless providers and are not reported capital expenditures. Therefore, they do not affect our capital investment time series.

From the perspective of USTelecom's capital expenditures time series, it is appropriate to exclude capital expenditures resulting from the acceleration of handset leasing programs in 2015 for a couple of reasons. First, shifting handsets from a cost of goods sold to a capital expenditure on financial statements is merely an accounting change with no impact on the capital stock of the economy. In other words, U.S. wireless consumers would have had roughly the same quantity and quality of handsets in 2014 and 2015 – lease customers would have simply purchased handsets instead from the multiple providers in the marketplace. This allows, of course, for potential marginal impacts on wireless handset adoption and market share resulting from the availability less expensive leased handsets and shorter commitment periods.

Second, USTelecom's capital expenditures series measures change over time and it is therefore essential to measure the same thing from one period to the next. Excluding handsets that existed in 2014 but were not reported as capital expenditures in 2014, while including handsets in 2015 that would have existed anyway but are now reported as capital expenditures because they are leased would artificially skew the *change* capital expenditures from 2014 to 2015. In other words, including the handsets would falsely show at least a $2 billion augmentation to the national capital stock when, in fact, there was none.

The analysis of Sprint's handset leasing presented here is not to single out or criticize Sprint; it not a criticism of handset leasing; nor is it to suggest that Sprint is trying to influence reported industry capital expenditures. Other wireless providers are engaged in leasing, as well, e.g., T-Mobile JUMP! On Demand, but they do not break out reported capex for handsets. It is important to note that, even if USTelecom were able to account for all wireless providers' handset leasing programs, which grew in popularity in 2015, it would imply only a greater downward impact on aggregate industry capital expenditures in 2015 relative to 2014.