Insight

Breaking Down Sanders' Broadband Plan

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Executive Summary

Presidential hopeful and Senator Bernie Sanders has a new plan for getting broadband to every household in the United States, which includes $150 billion in new spending, rate regulation, and a commitment to break up broadband companies. The plan misfires because

- Government-owned networks have struggled with deploying broadband;
- Past efforts to regulate telecom rates have hardly been a success; and
- Broadband prices aren't as comparably high as many critics think.

To truly help consumers, it is imperative that policymakers understand that achieving universal broadband deployment is both expensive and technically challenging. They should craft policy that works with economic principles, not against them.

The Basics of the Plan

Sanders' plan includes a range of actions intended to "take this critical 21st century utility out of the hands of monopolies and conglomerates and bring it to the people." Among other provisions, the plan would

- "Provide $150 billion through the Green New Deal in infrastructure grants and technical assistance for municipalities and/or states to build publicly owned and democratically controlled, co-operative, or open access broadband networks;
- Preempt the 19 state laws, largely written and lobbied for by internet service provider monopolies, that limit or bar municipal and publicly owned broadband;
- Require that all internet service providers offer a Basic Internet Plan that provides quality broadband speeds at an affordable price;
- Increase the FCC definition of minimum broadband speeds to 100mbps download speeds and 10mbps upload speeds;
- Instruct the FCC to regulate broadband internet rates so households and small businesses are connected affordably;
- Eliminate data caps and ban throttling; and
- Use existing antitrust authority to break up internet service provider and cable monopolies."

The Cost of Broadband Expansion

In the final days of the Obama presidency in 2017, the Federal Communications Commission (FCC) estimated that about $80 billion would be needed to get every home connected to a fiber or cable connection. Half of that,

$40 billion, would be needed to get the last 2 percent connected. Most broadband spending plans have followed this estimate. In 2017, Democrats used this estimate to offer a $40 billion broadband plan. Senator Warren's plan for broadband is also in line with the FCC projection since she would spend $85 billion to get everyone connected.

The Sanders plan is nearly double the FCC figure because he wants to create a new fiber network run by nonprofit institutions and state governments. While Sanders claims he isn't a capitalist, he is clearly working within a market framework because his plan assumes that this new entrant will add competitive pressure on firms. But there are limits to the effectiveness, as economists Mo Xiao and Peter Orazem explained: "Once the market has one to three incumbent firms, the fourth entrant has little effect on competitive conduct." Since 93 percent of Americans have access to three Internet providers, it isn't clear that another player will dramatically change consumer prices.[1]

Moreover, it is a misstep to think that government agencies have a unique advantage in solving the broadband-deployment problem. In Australia, the National Broadband Network has been a boondoggle. It faces cost overruns, and competition from other companies has left the effort with far fewer subscribers than originally projected. The Scottish government's commitment to get every household in Scotland connected to high speed Internet is behind schedule as well. In the United States, KentuckyWired, the 3,000-mile state-owned fiber network project, finally will be operational by the end of 2020 after countless cost overruns and a four year delay in rollout.

As AAF noted previously, both for-profit and nonprofit institutions can play an important role in expanding broadband coverage everywhere, but the distinction between enterprises and nonprofit institutions masks the real problem: Broadband deployment in rural areas where people are sparse is expensive. Attacking businesses while failing to acknowledge the fundamental market dynamics does little to solve the real challenge of broadband deployment.

Sanders' plan lacks nuance in other areas, as well. Take, for example, his desire to overturn state laws on municipal broadband. While many critics deride these statues, each differ greatly in what they accomplish. In Arkansas, government entities cannot get into the telecommunication business. Municipal electric companies, however, can offer Internet service as long as they don't get involved in "basic exchange services," which is a kind of telephone service. Texas prohibits municipalities and public power utilities from offering telecommunications services to the public, but since the state doesn't consider the Internet to be a telecom service, there are municipal fiber networks.

Past Troubles in Rate Regulation

Still, if the government spent $150 billion to bring prices down through competition and broke up the largest broadband companies, then it stands to reason that other regulation wouldn't be needed. And yet, according to the plan,

> Bernie will regulate these providers like a utility. The FCC will review prices and regulate rates where necessary, ensuring areas without competition aren't able to run up prices. We will also require providers to offer a basic plan for a regulated rate to all customers, ensuring everyone will be able to affordably connect to the internet.

Sanders' plan would also give the FCC the ability to regulate the service packages that broadband companies

offer. The recent history of regulation, seen in the cable and telephone industries, does not inspire confidence that this plan will meet with success. In 1972, the FCC required cable to carry all local broadcast signals, banned premium programming and sporting events, and set aside channels for government, education, and public access, all of which increased the entry barriers and limited content. In 1977, the courts got rid of the premium channel restrictions and then in 1979 many of the other rules were vacated by the FCC. It was only after a court decision in 1979 that HBO was able to deliver content, which helped to spark the explosive growth in content in the 1980s. It is important to remember that cable, and indeed all transmission services, are complements to the content that they serve. The value of cable, like the Internet, comes from what can be put across its wires.

Until 1984, municipalities and states could regulate the rates of cable, and as a result cable was regulated at different rates in different regions. That year, Congress passed the Cable Act, which took power from local municipalities and placed it in the hands of the FCC, effectively deregulating prices. When rates were allowed to float, the value of cable rose rapidly, and content expanded. Between 1986 (when the deregulation effectively took place) and 1992, the market changed dramatically, as explained in this often-cited Government Accountability Office report. From 1986 to 1989, cable prices rose from 39 to 43 percent, while regions regulated before 1986 had prices that rose faster than those regions which didn't. These price increases reflected increased value, however. During those three years, average channel capacity grew from 34 to 40, while the average revenue per channel fell in real dollars. In other words, regulation of cable prices had limited consumption of cable channels.

Another challenge of rate regulation, on top of depressing value, is that it deters investment. After the government broke up AT&T in 1982, competition was injected into the wholesale market through the creation of competitive local exchange carriers, or CLECs, which have access to many of the backend components of the local telephone system under regulated terms. These unbundled network elements (UNE) are regulated by the FCC under the total element long-run incremental cost (TELRIC) method. One of the problems with this method is that TELRIC only allows for recovery of current costs, which under-compensates the incumbent for potentially risky investments. A lot of ink has been spilled on UNE regulation, but the entire body of empirical work on this regulation suggests it deters investment. As economists Jean-Jacques Laffont and Jean Tirole point out, ‘‘[T]here is in general a trade-off between promoting competition to increase social welfare once the infrastructure is in place and encouraging the incumbent to invest and maintain the infrastructure.’’

Broadband Prices

The plan by Sanders justifies these interventions with the claim that "Prices are as much as 25 percent higher than they would be in a competitive broadband market." But the paper on which this claim is based uses a simple trend analysis without any consideration for the quality of the product, which is a bundled broadband/video service. High-quality content in the video market has exploded in the last two decades, driven by shows such as *Mad Men*, *Game of Thrones*, and *The Wire*, as well as extensive sports programming. A failure to recognize these quality changes plagues this paper's analysis. More important, the Sanders plan focuses on broadband, but the underlying study is an assessment of the broadband and video bundle that consumers often buy.

To assess the broadband market accurately, a study would need to compare, at a minimum,

- the different costs of deploying and operating broadband networks;
- demographic differences that affect demand for broadband service;

- multiproduct bundling in broadband pricing; and
- the availability and quality of complementary content and applications.

The FCC's International Broadband Report attempts to do just this analysis in Appendix C of its International Broadband Data Report and comes to a far different conclusion than Sanders regarding the state of broadband. The table below is a reprint of FCC analysis. The first model is an unadjusted broadband price index that recognizes that deployment costs and bundling differ by country. By this simple index, the United States ranks 23, but still does better than Australia, Canada, and Iceland. When the broadband prices are adjusted for demographics as well as content quality or data usage, however, the United States ranks near the top.

Table 1: Broadband Price Indices

Country	Unadjusted		Adjusted for demographics but not quality		Adjusted for demographics and data usage		Adjusted for demographics and content quality	
	Price	Rank	Price	Rank	Price	Rank	Price	Rank
Australia	78.3	28	82.81	27	102.63	26	84.45	23
Austria	48.04	17	60.59	15	73.17	11	74.02	17
Belgium	46.82	16	66.62	21	75.29	13	81.09	22
Canada	69.66	27	74.99	25	92.73	24	76.57	19
Chile	33.42	8	73.6	23	83.81	20	88.97	25
Czech Republic	26.83	3	49.18	6	69.91	9	60.49	6
Denmark	43.46	14	52.27	8	69.37	8	63.85	8
Estonia	30.65	6	56.91	12	81.68	19	69.06	12
Finland	35	9	37.95	1	57.49	2	51.61	1
France	30.12	5	44.04	4	61.96	4	54.25	3
Germany	36	12	53.62	10	75.09	12	66.06	11
Greece	35.38	10	64.51	19	80.72	17	78.66	21
Iceland	65.78	25	73.96	24	94.85	25	90.39	26
Ireland	56.79	22	62.37	16	76.46	14	64.83	9
Italy	29.62	4	48	5	68.8	7	59	5
Japan	40.12	13	53.58	9	81.47	18	72.12	15
Latvia	20.29	1	42.78	3	63.05	5	52.2	2
Luxembourg	56.32	21	54.32	11	76.83	15	72.51	16
Mexico	35.58	11	91.29	29	120.4	29	109.64	29
Netherlands	44.39	15	63.89	18	89.51	21	77.88	20
New Zealand	59.51	24	81.42	26	90.55	22	76.25	18

Norway	88.41	29	71.77	22	103.98	27	96.95	27
Portugal	30.82	7	58.27	13	72.83	10	71.15	14
South Korea	25.45	2	42.07	2	52.01	1	56.28	4
Spain	54.95	20	87.69	28	115.51	28	106.53	28
Sweden	52.48	19	52.16	7	61.08	3	70.41	13
Switzerland	66.88	26	65.01	20	91.15	23	84.46	24
United Kingdom	50.77	18	63.75	17	79.88	16	65.44	10
United States	58	23	59.84	14	64.75	6	62.94	7

When the contextual differences around prices are accounted for, it is simply not that the case, as Sanders says, that broadband providers are "gouging customers with some of the highest prices for service in the world."

Conclusion

Sanders' broadband plan might be garnering attention, but he misdiagnoses the issues underlying broadband access. A drastic overhaul of the market isn't needed. The right way to tackle broadband is to outline a set of targeted policies that help consumers in specific localities. Already, state legislatures have passed reforms, and there have been important successes. Instead of implementing a radical change, Sanders should work to replicate what has already worked.

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[1] Since Form 477 data is notoriously inaccurate, these estimates could be wrong.