

Title: The Impact of Broadband Speed and Price on Small Business

Description:

Local competition in telecommunications markets was enabled by provisions in the Telecommunications Act of 1996 (P.L. 104-104). Title 1, Part II, of the Telecom Act defines “development of competitive markets.” Following the enactment of the law and the ensuing regulations at the Federal Communications Commission (FCC) implementing its intent, thousands of competitive local exchange carriers (CLECs) and Internet service providers (ISPs) came into being and began providing Internet services that were innovative and competitively priced. Ensuing developments culminating in the “Brand X” decision for the cable industry and related regulations at the FCC, turned back the clock on competitive providers, as the infrastructure was no longer for lease.

The status quo in the industry has prevailed since 2001-2002. In 2008, Congress enacted the Broadband Data Services Improvement Act of 2008 (P.L. 110-385) to “improve the quality of Federal and State data regarding the availability and quality of broadband services and to promote the deployment of affordable broadband services to all parts of the Nation.” As part of this effort, Congress sought to gather information on how small businesses were faring in the status quo. This study is in response to this mandate.

Purpose/Objective:

Public Law 110-385 Section 105 directed the Office of Advocacy to conduct a study evaluating the impact of broadband speed and price on small businesses. The study was to include (1) a survey of broadband speeds available to small businesses, (2) a survey of the cost of broadband speeds available to small businesses, (3) a survey of the type of broadband technology used by small businesses, and (4) any policy recommendations that may improve small businesses’ access to comparable broadband services at comparable rates in all regions of the nation.

OMB Category: Influential

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Program Office: Office of Advocacy

External Reviewer:

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Comments:

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I have looked at the draft paper. I think the paper has a clear bias that makes the results seem suspicious – it jumps to conclusions without providing any supporting evidence, selectively picks citations that mislead the reader, asserts opinions and, in a few instances, makes false statements. This strong tone is not needed to convince the reader or Congress. The authors do not have to “take a side” or be advocates. I think the paper would be much better if it simply would concentrate on the survey and its results, particularly as they pertain to the specific question asked by Congress. They should present themselves as independent researchers, not advocates for a cause. Once the research is in the public domain, there will be plenty of time for advocates and policy wonks to interpret their results and debate

public policies. As it stands now, the paper is just a lot of rhetoric and it raises concern about data bias. That would be an unfortunate outcome for this important study.

Because there is a deadline approaching, I think the easiest change the paper would be to take out all of the opinion, and anything that does not deal with their survey and its analysis. For example, after describing the survey (on page 7), I would skip directly to Section 4 (page 32). It's mostly streamlining, not rewriting, although some segueing may need needed.

I have some specific points to make about the study. Some points may not be quite as important as others, but they try to illustrate the "general problem." Please assume that there are more examples and the authors should look for them; I just ran out of time. With the right mindset, the authors could quickly go through the paper and cut out unnecessary and controversial comments and focus on the research facts. There is a lot of good stuff that will remain.

Now here are some specific examples of problems than could be fixed by simply changing the tone of the paper:

- Congress asked that the study address the speeds and cost to small businesses, the type and technology used by small businesses, and policies to improve access to small businesses – all having to do with small businesses as consumers, not producers of broadband services. Somewhere, the authors have expanded the scope of the paper into small businesses as ISPs. While the authors suggest policies to encourage small businesses as ISPs, they offer no new data to support these findings.
- The executive summary concludes that having more competitors to choose from is the most important factor. Actually, the data shows the exact opposite. Only 61 respondents selected this as "very important," making it the lowest number of any other category. In fact, only 164 even answered the question.
- The executive summary concludes that consumers are dissatisfied with price, but the footnote clarifies that businesses are generally satisfied with pricing, except satellite and leased lines. The sample size for both satellite and leased lines are too small, so the statement is not supported by the data.
- The executive summary points out that metro-based small businesses pay more than rural small businesses. However, this is likely because metro small businesses are larger (have more employees) than rural.
- This study focuses on spending, not price. Both could be important.
- On page 8, mentioning the undeliverable surveys to explain the low response rates does not make sense, since these were excluded from the calculation.
- On page 8 and 11 and at many other pages of the paper, there is a notion that more firms is better, which ignores the reality of minimal optimal scale. Michigan once had nearly 200 auto makers. It is subjective to assume that more producers was good for car shoppers. The notion of atomistic competition does not always fit well with technical change, and industries with economies of scale and scope.
- The term "enjoyed a competitive marketplace" is rhetoric. See Page 10, where the authors imply that consumers "enjoyed" dialup services more than broadband services.
- Page 11 states that "through regulations" competitive ISPs were kept out of the market. That is a stretch.
- Also, the paper seems to draw conclusions about the survey data without providing the results. I think they should give a literature review, give the methodology, give the results and some analysis and THEN provide conclusions. Otherwise, these statements (like on page 11 and early in the study) are given as fact without showing the evidence. It seems misleading.
- Page 12, DSL is served out of DSLAMs, not Central Offices They don't require switching.

- At page 12 and ten other places are references to the Berkman study. Berkman has been thoroughly discredited. After the Berkman's analysis and regression were found to be faulty, another version of the report was issued with the same conclusions, albeit without the data! I would drop these cites and conclusions. If you want an analysis of the Berkman study, read Eisenach (GMU), Crandall et al. Can send it to you. They should not be cherry-picking cites.
- The comments about the U.S. lagging the world are overblown and not needed, other than the comment like "some claim the US is behind Europe" with a citation. First, there are a couple international studies showing the US to be at the top. Another problem with all of these studies is that they measure and compare countries differently. So, Slovakia may include business in their household data and other country may have a different definition of broadband speed. The fact is that if you take into account that the US has half the density of Western Europe, you fix the problem (low density means high costs and that influences consumption). Also, most international studies use "broadband connections per pop," but U.S. households have a greater household size. Therefore, if every household in the US and Europe had a 1 gigabit fiber connection, US would still lag the world by these comparisons.
- At page 19, the reference to producer surplus in the Willig paper is misleading. The Willig paper measures consumer surplus, and then goes on to point out that social welfare is even greater due to producer surplus. The Willig paper then uses booked values to make an "illustration" about producer surplus. This draft study takes the "illustration" and uses it as a "fact" about profits. It's completely unnecessary and beyond the scope of Congresses charge.
- Michael Porter discussion may be interesting but it's not needed to explain the survey results required by Congress.
- Page 72 uses the phrase "dominated by self-interest industries." This is an unnecessarily hyped phrase.
- Page 77 -- How does USF get into the recommendations without any earlier discussion? Maybe I missed it. But, the discussion is absolutely needed.
- The paper refers to "tens of thousands of ISPs" in three sections. The figure cites SBA, but the SBA says the figure is 7,000.
- The paper says the DSL providers were "common carriers." That has never happened, although the FCC has an open proceeding (GN Docket No. 10-127).
- The paper never mentions "reciprocal compensation" in the discussion of the transition to dialup to broadband. As you might recall, there was a loop-hole in the CLEC rules – telephone competition was encouraged by letting firms originate calls and only pay access for terminating them. When dialup Internet services grew, this CLEC rule encouraged a cottage industry to terminate calls for dialup access. These firms would then charge access rates to ILECs. These ISPs did not originate calls, but they terminated the ILECs. So some firms existed only because of regulatory arbitrage. I think they would be better off toning down this rhetoric or just tell the entire story.
- There are nearly dozen citations of Mark Cooper. I am not sure how these citations add to the credibility of the draft paper. If these points are worth making, try finding a real economic study or statistical report to cite, instead advocacy pieces.

Here are some things that may be problems with the study, but are not be fixable given the short timeframe:

- The response rate is very low and suggests a problem with the sample design. For one, the questionnaire is too long, hard to read.
- The questionnaire uses complex IT terms (like desktop web-based). Many consumers have not idea that their cable provider is probably using VoIP for their telephone services.
- On page 8, Table 1, shows only 6 million small businesses, not 21+ million. In other words, the universe is InfoUSA.com's mailing list. These mailing lists are often bias toward larger small businesses, so they under-report home businesses and those with no employees. It

would have been helpful to show that InfoUSA.com or the sample is representative of firms by size and industry. The results measure broadband use for InfoUSA.com's list, not American small businesses. That is not Congresses charge.

- In identifying firm size, the questionnaire did not have an option for zero employees, the most common size for small businesses. Around 60-70% of businesses may have not employees.
- The survey results are generally based on location (establishment), not company. So it is possible that a company with more than 500 employees is included (banks, store chain, etc). This could explain the somewhat higher incidence of special access lines and it could mean that the study includes more than small businesses.
- The survey does not collect price. It would be nice to see expenditure per unit or per line.
- The survey should have collected the exact price. Bill Harvest data could have been used to do this. As a result, the survey expenditure ranges are very large. For example, if someone pays \$55 for a broadband line, they are lumped into a group between "\$50 to \$99." The ranges increase \$10 to \$240 and \$250 to \$499 and \$500 to \$749. Had the actually amount been collected, I would wager that the average or median expenditure would be less than the midpoint of these ranges, because of the frequency distribution. So the results very likely have some skewness.
- I am not sure that the industries conform to NAIC designation. I did not check.
- How did they deal with bundled services? Say a business buys a bundle of phone, video, telecom, emails and storage, how do we know that the reported expenditure is just broadband?
- I think there are so many questions on the survey that go outside the scope of the study – business goals, posture, emphasis, appetite, competitive relationship. Sounds like a future paper to me. Unfortunately, the extra questions added to the length and sharply reduced the response rate. In some cases, the rural and metro responses have well over 8% confidence intervals. This is another reason why the authors should present the data, stay high-level in their analysis and be focused on the FCC's charge.

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