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Defining relevant markets for mergers and acquisitions involving communications services

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I. Introduction and Background

monopolist increases prices for the product and customers substitute away from it. The test usually involves measuring both own-price elasticities and cross-price elasticities of demand or diversion indexes.[5] The examples given by the DoJ and FTC in the *Horizontal Merger Guidelines* are quantitative, not qualitative, analyses.[6] If raising prices of the product would be profitable, the product is potentially a relevant market. If raising prices by a hypothetical monopolist would be unprofitable, as customers would curtail purchases and substitute other products, the product is too narrow to be a relevant market. Only with a relevant market definition can the FCC or any government agency meaningfully address concepts useful in evaluating the competitive effect of a merger or acquisition such as the following: concentration, market power, entry, coordinated effects, unilateral effects, and diversion.

Given the large number of mergers in various communications industries in recent years, a reasonable observer might assume that the FCC and the DoJ have conducted many quantitative analyses for "hypothetical monopolist tests" to define with some precision the boundaries of relevant markets for various communications services. Perhaps such quantification studies have been conducted informally and internally by agencies. Surprisingly, such quantitative analyses, particularly involving wireless services, are not publicly released or cited by either the FCC or the DoJ in merger-related decisions. Even in a publication partly directed at examining competition in various communications industries, DoJ does not rely on a specific analysis to conclude that wireline and wireless

[5] Ibid.
[6] Ibid. It does not necessarily follow that DoJ and the FTC use quantitative analyses in public documents for actual cases.

services are not substitutes or in the same antitrust market.[7] The FCC has also encountered relevant market issues with respect to forbearance petitions, but has not offered specific analyses to support decisions to treat wireline and wireless markets as separate.[8] Stated differently, these agencies have not conducted a quantitative analysis, at least publicly, of the effects of a hypothetical monopolist raising prices for any combination of services—such as segments of wireless services, wireline services, or satellite services. The agencies have no quantitative foundation to determine whether the relevant market consists of a single service, or multiple services, possible within a differentiated service market.[9]

Since 2004 in a series of mergers involving wireless companies the FCC has qualitatively—but not quantitatively—defined a relevant market only twice. In the first instance, the FCC defined a market consisting of "mobile telephony services"[10] in the merger of AT&T Wireless and Cingular; in the second instance, the FCC defined the combined "mobile telephony/broadband services"[11] in the merger of Verizon Wireless and Alltel. In both instances the FCC examined only mobile services offered directly by commercial carriers as part of the relevant market. The FCC did not provide any empirical evidence to support these or any other product market definition.

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[7] U.S. Department of Justice, Voice, Video and Broadband: The Changing Competitive Landscape and Its Impact on Consumers (November 2008), at 66 and 88.
[8] See, e.g., FCC, 10-113, Memorandum Opinion and Order, Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Phoenix, Arizona Metropolitan Statistical Area, Released June 22, 2010.
[9] 2010 *Horizontal Merger Guidelines* at 6.1.
[10] This term was used in merger reviews between 2004 and 2008. See FCC, 04-255, WT Docket 04-70, WT Docket 04-254, WT Docket 04-04-323, Memorandum, Opinion, and Order, released October 26, 2004, at 57 – 94, at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-04-255A1.doc.
[11] This term has been used in merger reviews since 2008. See FCC, 08-258, WT Docket 08-95,

2. The FCC then opens a public proceeding in which anyone can offer comments about the proposed merger and the FCC's role in the proposed merger. Parties

Commission provides little or no analysis, empirical or qualitative, to determine whether any of these or similar narrower concepts supports a hypothetical monopolist test.

The examination of each of these potential market definitions is important for many reasons. The antitrust analysis is in the context of a specific proposed merger or acquisition involving two firms. In some potential relevant markets, the two firms may each have substantial market positions; in others, their positions may be far less pronounced or non-existent. Although the DoJ can review mergers for any of these potential relevant market definitions, the FCC's regulatory authority varies substantially. The FCC, for example, has little authority over local area networks or handsets.

Similarly, rarely is the possibility of a combined wireline and wireless market even considered. For instance, the FCC only once considered the notion of a combined wireless and wireline market, in its discussion of the 2004 AT&T/Cingular case. The FCC concluded that, although consumers might substitute wireless services for wireline, they would not do the opposite, at least in voice services.[26] This untested claim established a precedent for defining wireless and wireline markets separately that remains standard practice in most recent cases.[27] The FCC provided no empirical evidence for the conclusions it reached about market definitions in its analysis.

[26] See FCC, 04-255, WT Docket 04-70, WT Docket 04-254, WT Docket 04-04-323, Memorandum, Opinion, and Order, released October 26, 2004, at 72-74 and at Footnote 267, at

In its wireless competition reports, the FCC claims to present measures of market concentration such as the Herfindahl-Hirschman Index as if it has already determined exactly the relevant product market on which to measure concentration.[28] That relevant market, without any quantitative analysis much less a hypothetical monopolist test, is "facilities-based mobile wireless providers,"[29] a concept that again is different from that used in each FCC merger analysis. The FCC HHI index is based on the raw number of customers allocated in an unclear manner across economic areas (EAs). In brief, the FCC provides no empirical or analytical explanation of market definition, and no foundation for its specific measure of concentration even if the market definition were correct.

Why are there few if any quantitative measures of the market definition in FCC dockets? Below we give some possible explanations.

Incentives of outside parties

whether that definition once was accurate and whether that definition remains accurate. To have the FCC change the precedent of market definition will require the FCC to document its decision carefully to avoid challenges, a time-consuming exercise. For the FCC to adopt the market definition in a prior decision requires little more than a footnote. Parties to a merger also have an incentive to disclose as little sensitive company-specific information as possible, particularly to the FCC which is primarily a transparent agency, with its documents subject either to immediate disclosure or the possibility of future disclosure under Freedom of Information Act ("FOIA") requests. To support prior FCC market definitions usually requires the release of no new company-specific information.

Parties opposed to a merger might seem more inclined, at least facially, to dispute market definitions, yet such disputes are rare. Here's why. First, if one party is supporting FCC precedent in a market definition, it is difficult for a different par 364.2.24 90 377.76 cm BT 50 0 0 50 0 (

information providers, electronic games, newspapers and other publications, motion picture studios, or even delivery services such as the U.S. Postal system. A finding of a relevant product market that extends beyond the FCC’s jurisdiction would reveal the frailty of the entire FCC merger review process.“Sassa(ke) 0.2 utI(nt) 0.2 (e) 0.2 ro(a) 0.2 ut(na) 0.2(l) 0.

Fifth, the FCC is also sensitive to jurisdictional lines within its administrative structure. For example, the FCC has separate wireless, wireline, and international bureaus. Perhaps not coincidentally, the FCC has maintained market definitions for mergers involving wireless carriers that remain largely within the jurisdiction of the Wireless Bureau. Market definitions that span different bureaus could require additional staff, lengthier review, and more complicated coordination within the Commission.

Market definitions that make little sense

The FCC, and even the DoJ, sometimes uses market definitions in the communications sector that are out-of-date, if they ever made any sense. The consequences of bad market definitions can be severe. As but one of many possible examples, in 2000 the DoJ blocked the merger of WorldCom and Sprint beca.2 (ons) -0.2“(onsT .2 (s) -0.2 (i) 0b(nc)0.2 (e) 0.2 rn(a

The terms, “mobile telephony services” and “mobile telephony/broadband services” are not ordinarily used by the FCC, except for the specific purpose of merger reviews. In its annual wireless competition reports, the FCC applies an entirely different set of terms to describe markets, regulation.[36] The DoJ market definition using the term "telecommunications" is narrower and inconsistent with the FCC market definition in antitrust reviews.

III. Although not employed in FCC merger reviews, much empirical evidence suggests the possibility of a broader market definition than wireless services

Some empirical studies find substantial own-price elasticities of demand for wireless services

The first step in determining whether the relevant product market is broader than wireless services only is to examine whether a hypothetical monopolist could profitably raise the prices of wireless services. Economists examine two components: (1) the shift in consumer demand for wireless services in response to a non-transitory higher price, usually measured with the own-price elasticity of demand for wireless services; and (2) the change in cost structure as a result of lower demand resulting from higher prices. If the elasticity of demand is small, a hypothetical monopolist could, and presumably would, profitably raise prices. Some empirical studies, including those of Ingraham and Sidak[37] and Caves,[38] over the past decade have found relatively large own-price elasticities of demand. Although additional information on cost structure would be necessary to determine whether wireless services and wireline services together form an antitrust market, the high own-price elasticity of demand is suggestive of wireless not being a separate antitrust market.

[36] See, e.g., *National Cable & Telecommunications Association et al. v. Brand X Internet Services et al.*, 545 U.S. 967 (2005). *Comcast Corporation v. FCC and USA*, No. 08-1291, D.C. Circ, (2010).
[37] A. Ingraham & J. G. Sidak find an elasticity from -1.12 and 1.29, at "Do States Tax Wireless Services Inefficiently? Evidence on the Price Elasticity Of Demand," *Virginia Tax Review* 23 (2003), at 249-261.
[38] K.W. Caves finds an elasticity of -2.11, "Quantifying price-driven wireless substitution in telephony," *Telecommunications Policy*, Volume 35 Issue 11, December, 2011, Pages 984-998.

Other studies focus on whether wireless services discipline prices for wireline services, but few of these studies address whether wireline services discipline prices for wireless services.[39] Still other studies find smaller own-price elasticities of demand.[40] A survey of econometric demand analyses for communications services over the past decade, many rather dated, does not necessarily find high own-price elasticities of demand.[41]

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wireless market definition, it has for more than a decade repeatedly presented evidence of such a broader market. In each of its wireless competition reports, the FCC reports on "Intermodal competition" and consumer migration from wireline to wireless services.[47] For years, the FCC has documented the persistent migration from wireline to wireless services for millions of Americans. In its most recent report, the FCC found that more than one third of American households were wireless only.[48] The Centers for Disease Control has been monitoring the migration of consumers from wireline to wireless in an appropriately titled survey, "Wireless Substitution."[49] The results show that 38.2% of American homes had wireless phones only and an additional 15.9 percent of American home received all or almost all phone calls on wireless telephones despite having landline phones.[50] Thus, according to the CDC, well over half of American homes rely primarily or exclusively on wireless phones.

The Bureau of Labor Statistics maintains information on the prices of communications services. Over the past ten years, the overall price index for telecommunications services has been relatively flat.[51] In contrast, the producer price index for wireless services has declined by approximately 33% over the same period.[52] The substitution of wireless for wireline services has paralleled price declines for the former relative to the latter. This

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[47] Ibid., at 25-26.
[48] Ibid.
[49] Stephen J. Blumberg and Julian V. Luke, *Wireless Substitution: Early Release of Estimates from the National health Interview Survey, July- December 2012,* National Center for Health Statistics, Centers for Disease Control, June 2013, *available at* http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201306.pdf.
[50] Ibid.
[51] See Producer Price Index for telecommunications services, NAICS 517, at http://data.bls.gov/timeseries/PCU517---517---?data_tool=XGtable

result strongly suggests that the two are substitutes for one another and reasonably belong in the same market. Yet in its merger reviews, the FCC has never determined that the two are in the same market.

FCC reports also reveal rapidly falling prices and rapidly expanding services, even in the presence of substantial mergers and acquisitions over the past two decades. The FCC reports do not document either the substantial number of bankruptcies and other market exits. Nor do the FCC reports capture the uncountable number of small startups that never get off the ground. The broader communications industry is constantly churning with businesses entering and exiting. These are signs of a competitive market, not one beset with substantial exercise of market power.

IV. Even if the FCC and the antitrust agencies had in the past presented empirical analyses to support narrow definitions of separate wireless and wireline markets, recent changes in the market for various services might render prior studies obsolete

In the past, the FCC has argued that wireless services are a separate market, and that wireline services could not discipline wireless prices. A hypothetical monopolist of wireless services, according to the FCC and DoJ, could profitably raise prices. However, in the 2004 AT&T/Cingular merger review, the FCC argued that, although consumers might substitute wireless services for wireline, they would not do the opposite, at least in voice services.[53] No empirical evidence was cited. In subsequent mergers, the FCC

[53] The FCC concurred with the merger applicants' claim that wireline-wireless substitution would be unlikely, especially in voice services. However, it did not provide any evidence from its hypothetical monopolist test to support its claim. See FCC, 04-255, WT Docket 04-70, WT Docket 04-254, WT Docket

accepted separate markets for wireline and wireless without further discussion, instead citing the 2004 definition.

ranging from laptops to TVs, digital cameras, and printers.[55] WiFi has also become a regular feature in handheld mobile devices, providing consumers with alternative means for accessing the Internet on smartphones and tablets, in addition to cellular data plans.

Furthermore, while initially only available for private home and workplace networks, WiFi access has become prevalent in public areas via free public hotspots.[56] Many companies, from coffee shops to grocery stores, have incorporated hotspot provision into their businesses models to satisfy increasing WiFi demand from customers.

to access no-fee communication services, which function as alternatives to conventional voice conversations. Skype, Snapchat, and texting are but a few examples of communication apps increasingly u new wireless services are even commercially relying primarily on WiFi services.[62] IP traffic is growing rapidly both on fixed networks and on mobile networks, but some of the fastest growth is on WiFi networks, often used to offload data from mobile networks.[63]

The presence of WiFi disciplines the prices for which wireless carriers can offer service. Any effort by a wireless carrier in isolation, or even in coordination with another carrier, to raise data rates would lead some consumers to substitute WiFi services. Even a hypothetical monopolist of all wireless services would have substantial limitations in price increases.

WiFi is but one example of rapidly changing technologies that likely render past market the contours of product markets. The contours of those markets are likely changing rapidly with expanded use of WiFi and other services. Those contours, at least for services that include wireless services, are likely to be broader than the “mobile telephony/broadband” service the FCC has adopted since the Verizon Wireless – Alltel merger. The relevant market likely includes both wireless and wireline services. The consequences of defining the wrong product market are substantial.