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Competitive Implications of the Proposed Acquisition of T-Mobile by AT&T Mobility

By Roger G. Noll and Gregory L. Rosston

AT&T's announced acquisition of T-Mobile's U.S. wireless communications business raises important competition policy issues that require careful analysis by the agencies that must approve the acquisition, the Federal Communications Commission (FCC) and the Antitrust Division of the U.S. Department of Justice. The United States currently has one of the most competitive and best-performing wireless communications industries in the world. Four carriers (AT&T Mobility, Verizon Wireless, Sprint, and T-Mobile) provide service to almost the entire nation, and several smaller carriers provide regional service, at least one of which operates in each of the major metropolitan areas. American consumers benefit from competition as prices in the United States are substantially below prices

for comparable services in other nations. As a result, American consumers are among the world's most intensive users of broadband wireless communications.

Superficially, the proposed acquisition appears to run seriously afoul of the merger policy of the antitrust enforcement agencies. The first step in merger analysis is typically to measure concentration—an indicator of the extent of competition. The standard measure of concentration is the Hirschman-Herfindahl Index (HHI), which is the sum of the squares of the market shares of the sellers in the market. According to the Federal Trade Commission and Antitrust Division *Merger Guidelines*, if the post-acquisition HHI exceeds 2500, an acquisition that causes the HHI to increase by more than *continued on inside...*

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200 is likely to cause a significant reduction in competition if the market also has substantial barriers to entry.

At present, nationwide concentration in wireless telecommunications services is roughly equal to the 2500 threshold, and the acquisition would increase the HHI by more than 600. These numbers probably understate the effective concentration in the industry for two reasons. First, only the four major carriers can serve customers who seek mobile access in most of the nation. For connections outside their service territories, smaller carriers often resell Sprint's service. Second, the available data do not distinguish between mobile *voice* service, which is more competitive, and high-speed *data* service, which is more concentrated.

Based on the high concentration of the industry, the Antitrust Division will try to determine if the merger would cause an increase in consumer prices. Agency staff will examine the degree of competition between AT&T and T-Mobile. T-Mobile generally charges lower prices than the other major carriers. Whether T-Mobile's low-price strategy is disciplining the prices and service offerings of the other major carriers is an empirical question. For example, if AT&T serves mostly high-end consumers and competes

most intensively with Verizon, while T-Mobile serves low-end consumers and competes most intensively with Metro PCS and other smaller carriers, the merger would not be viewed as having the same anticompetitive effects as it would if AT&T and T-Mobile compete intensively for the same customers.

Because wireless carriers provide numerous products, determining how and why customers switch from one provider to another seemingly is difficult; however, due to number portability, most customers who switch providers keep their wireless numbers. As a result, it may be possible to estimate empirically and precisely the competition between AT&T and T-Mobile because the Antitrust Division will have access to data about customer switching behavior between carriers.

Another concern of the Antitrust Division will be the effect of acquisition on competition in specific local markets. While several carriers operate in major metropolitan areas, smaller cities generally have fewer carriers. The nationwide concentration of the industry reflects an average between less concentrated major markets and more concentrated small towns and rural areas.

In the past, the Antitrust Division has approved some

wireless mergers only after requiring divestiture of one party's assets in local markets where the merging firms have high market shares. For example, in its acquisition of Alltel, Verizon agreed to spin off assets in 85 markets in which the two companies overlapped. This kind of compromise is less likely for the AT&T/T-Mobile deal because, as discussed elsewhere, the principal rationale for the deal is to enable AT&T to obtain more spectrum in areas where it currently has capacity constraints.

Entry and Expansion to Discipline Price Increases

The next question for competition policy will be the possibility that new entry or expansion by existing providers could thwart an attempt by the combined companies to raise prices. Scarcity of the best spectrum for wireless communications, already a problem in large metropolitan areas, is becoming worse as more consumers acquire smart phones and tablet computers that access the Internet using wireless connections. Spectrum scarcity is an immutable barrier to entry and expansion if no additional spectrum becomes available. Although Sprint is less capacity constrained than the other carriers, in a growing number of cities, Sprint and smaller regional carriers do not have sufficient



spectrum to increase substantially the number of customers that they serve in response to a price increase by post-acquisition AT&T/T-Mobile.

Most wireless communication uses low-frequency spectrum (700 MHz and 800 MHz), which is well-suited for ubiquitous coverage, especially in densely populated areas with large buildings. Several carriers, including Sprint, Clearwire, and Light Squared, have substantial high-frequency spectrum that is not fully utilized. High-frequency spectrum is not a good substitute for low-frequency spectrum because of signal attenuation problems. Because high-frequency signals have smaller coverage areas for the same signal power, a high-quality ubiquitous network based on high-frequency spectrum is substantially more expensive than the low-frequency networks that AT&T, Verizon, and other carriers already have.

For this reason, networks based on high-frequency spectrum impose a weaker competitive price constraint on operators of low-frequency networks.

Justifications

If the acquisition substantially increases concentration in an already concentrated industry

with substantial barriers to entry, what other factors might cause government watchdogs nevertheless to approve it? AT&T executives offer three arguments in favor of the acquisition: economies of scale, nationalism, and rural buildout.¹ In addition, a fourth issue is how the acquisition is likely to affect the political prospects of allocating more spectrum to wireless communications.

Efficiencies

If a price increase seems to be a plausible consequence of greater concentration, the parties will argue that efficiencies from joint operation of their networks will reduce costs so dramatically that the net effect of the acquisition will be to reduce prices to consumers regardless of the anticompetitive effect.

The claimed efficiency benefit would arise from combining the spectrum assets of AT&T and T-Mobile to provide more advanced wireless services at lower cost. AT&T General Counsel Wayne Watts summarized the argument as follows. “For different reasons both AT&T and T-Mobile are facing impending spectrum shortages in major markets. AT&T has been at the leading edge of mobile data growth

on our network as a result of supporting more smart phones, more tablets and more eReaders than anyone else in the country. This has created an urgent need — an ongoing need for significantly more spectrum to support this explosive demand. T-Mobile is also limited in its spectrum capacity, so much so that T-Mobile has no spectrum to build out an LTE network.” According to AT&T CEO Randall Stephenson, the acquisition “will improve network quality, it will get more customers access to more services, it will bring advanced LTE capabilities to virtually every community across the United States, and it will create substantial value for our shareowners.” This statement makes economic sense if combining the networks of AT&T Mobility and T-Mobile captures economies of scale.

The FCC and the Antitrust Division must determine the validity of the claim that a very large company is more efficient than two already large companies in managing a fixed amount of spectrum. Because wireless carriers are not subject to price and profit regulation, little public information exists about their costs. Consequently, little scholarly research has addressed the effects of scale on the cost of wireless

¹ Extensive quotations from AT&T executives are contained in Larry Dignan, “AT&T Makes Its T-Mobile Case,” March 21, 2011, at <http://seekingalpha.com/article/259292-at-t-makes-its-t-mobile-case>.

networks, and none on the cost of fourth-generation networks that can support broadband data at speeds of several megabits per second. The work that has been done focuses on other nations, where more cost data are publicly available, and concludes that scale economies in wireless networks exist but are exhausted at smaller scale than the size of the wireless networks in the most populous metropolitan areas.

The FCC and the Antitrust Division can test this proposition by requiring that AT&T and T-Mobile produce the data that are needed to measure the significance of scale economies in wireless networks. Here AT&T faces a major hurdle because, regardless of the presence of economies of scale, the low prices and high quality of the U.S. wireless industry indicates that the benefits of competition exceed the benefits of cost reduction through economies of scale.

Spectrum Allocation

The relevance of economies of scale also hinges on whether additional spectrum will be made available for wireless communications. In principle, more spectrum could be made available to wireless by reallocation from existing uses. One potential source of spectrum is the large allocation to government, especially

national security agencies; however, for decades these entities have successfully resisted re-assigning some of their spectrum for private use.

Another attractive target is over-the-air TV. The National Broadband Plan proposes re-allocating 120 MHz of spectrum from TV to wireless communications. The switch to digital TV enables existing television broadcasters to use much less spectrum in providing an over-the-air channel, so spectrum could be reallocated to wireless without reducing the number of over-the-air TV stations.

The FCC has proposed using an “incentive auction” for the TV spectrum in which broadcasters would keep their assignments only if they are the winning bidders. Otherwise, TV stations would receive a share of the proceeds. But broadcasters oppose the incentive auction. They prefer to keep the spectrum they have without paying for it in order to provide new services, including multichannel pay-TV as an adjunct to existing TV.

The outcome of the political battle over future spectrum allocation is uncertain, but AT&T’s acquisition of T-Mobile is likely to shift the odds. At present, all wireless carriers favor expanding the spectrum for wireless and using an auction to assign this spectrum to

carriers. The ultimate decision is uncertain because it pits two strong industries (wireless communications and television broadcasting) against each other.

If the acquisition allows AT&T to relieve congestion on its wireless broadband service, AT&T will gain a competitive advantage over its rivals in providing nationwide wireless broadband access. Thus, the acquisition may cause two advocates of allocating more spectrum to wireless to be replaced by one opponent. AT&T already supports reallocating 10 MHz of 700 MHz spectrum from commercial use to public safety, which would prevent a rival from acquiring that spectrum. A major concern of both the FCC and the Antitrust Division must be whether the acquisition reduces the likelihood that more wireless spectrum will be made available, thereby eroding the prospects for long-term competition in wireless broadband services.

Nationalism

AT&T’s second argument to justify the acquisition is an appeal to nationalism. The principal owner of T-Mobile is Deutsche-Telekom, the largest telecommunications company in Germany. AT&T CEO Stephenson claims that a reason to support

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the acquisition is that “above all else, this transaction represents a major investment and a major commitment by a US company to advance America’s leadership in mobile broadband. And that’s very important because we’re at the very beginning of a major industry shift here to build powerful LTE networks which will prove to be the critical infrastructure in the United States economy.” This statement implies that standard competition policy concerns should be more relaxed for American-owned carriers.

T-Mobile is not the only wireless carrier with foreign ownership. Verizon Wireless is a joint venture between Verizon (55 percent) and the British firm Vodafone (45 percent). Both the FCC and the Antitrust Division historically have been unwilling to sacrifice competition policy objectives to protect American-owned firms. In addition, the track records of the four national wireless carriers do not seem to support the conclusion that wireless carriers with foreign ownership are less interested in advancing the use of mobile broadband. Indeed, today T-Mobile has the largest operating 4G network in the United States, serving 100 cities. Regardless of ownership, there is no reason to believe that the goal of any wireless carrier, regardless of whether the owners are American, German,

or British, is anything other than expanding service as long as it is profitable to do so.

Rural Buildout

AT&T states that it will provide 4G service to 95 percent of the country if the deal is approved. The Antitrust Division is unlikely to give this commitment much weight, as it is not germane to its competition policy mandate. The FCC may consider the promise of coverage extension in its broader mandate to assess whether the acquisition is in the public interest. In order to assess AT&T’s promise, the FCC needs to determine how much 4G coverage is likely to occur in the absence of the merger, and whether AT&T’s promise is believable or enforceable.

Spectrum is not scarce in the vast majority of rural areas, so spectrum scarcity is not likely a major factor in decisions to introduce 4G service there. Instead, this decision is likely to be driven by whether the service is profitable. Because cost, not spectrum scarcity, is the primary barrier to rural 4G service, the acquisition is not likely to produce incremental coverage unless AT&T’s promise amounts to a commitment to provide unprofitable service. If so, the promise raises interesting questions about the credibility of the promise

and the ability of the FCC to force compliance with the commitment if it is not fulfilled.

Conclusion

Although the justifications for the acquisition do not seem particularly strong, and anticompetitive effects appear to be plausible, the deal still may be approved. In recent years, the antitrust agencies have approved mergers that took an industry from four to three firms. This acquisition may not be as bad as other four-to-three mergers because of the presence of small carriers that are significant in many markets. While the Obama administration is publicly committed to stricter antitrust enforcement, it also is committed to substantially increasing the national penetration of broadband service. Consequently, AT&T’s promise to produce both more and cheaper 4G service after the acquisition may find sympathetic ears, especially at the FCC and the Department of Commerce.

Because of the potential for conflicting views, the process for evaluating the acquisition could drag on for a year or more. By itself, a long review can be costly if both firms temper their investments in advances in wireless communications until uncertainty about the deal is resolved.

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A publication of the
Stanford Institute for
Economic Policy Research

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