P E R S P E C T I V E S

PHOENIX CENTER FOR ADVANCED LEGAL & ECONOMIC PUBLIC POLICY STUDIES

THE PUBLIC'S NETWORK?

George S. Ford, PhD*

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On April 8, 2004, the Heritage Foundation released a "Backgrounder" entitled *Are U.S. Telecom Networks Public Property?* by James Gattuso and Norbert Michel.[1] There, the authors claim that the current telephone network was paid for by the shareholders of the incumbent Bell monopolists, and not by captive ratepayers who bore the downside risks of network construction over the past century, primarily as a result of the government's use of franchised monopoly and price regulation in local telecoms (*i.e.,* guaranteed rates of return funded by consumers).

To support this position, Gattuso and Michel utilize a financial model that relies primarily on an analysis of the amount of cash the Bell companies used to increase "property, plant, and equipment" ("PP&E"). However, Gattuso and Michel's financial analysis is replete with analytical errors and data problems. After correcting these errors, Gattuso and Michel's conceptual framework implies that ratepayers bore the downside risk for the construction of 96% of the *current* Bell Company local exchange network. Thus, ratepayers have a sizeable claim regarding the policy outcomes of efforts to promote competition to the incumbent Bell monopolists' wireline networks.

The Public's Network?

Gattuso and Michel argue that the local exchange network is not "public property" because the total capital expenditures by the Bell Companies since 1996 equals 76.91% of gross plant in that same year (175.4% of net plant). Thus, according to Gattuso and Michel, "today's ILEC networks are overwhelmingly the product of recent private investment." The authors conclude that the public's claim on the network is no longer valid since the majority of the "network" was constructed during a period where consumers were not responsible for insuring an adequate rate of return for the Bell Companies. In essence, Gattuso and Michel propose that the ratepayers' claim on the local network can be no more than the ratio of "rate-of-return protected" plant to total plant. According to their financial analysis, this ratio is small (about 23% using net plant).

Gattuso and Michel's financial analysis is flawed in (at least) two respects.

First, under most state price-cap plans (controlled by state regulatory commissions), consumers still bear the burden of protecting the

> ***"[I]t is clear that captive ratepayers, not shareholders, bore the downside risk on 96% of the current local exchange plant and, consequently, 96% of the network has the nature of "public property." So, today's Bell Company networks are overwhelmingly the product of past and current investments protected from downside financial risk by captive ratepayers."***

Bell Companies from low rates of return. Modern price-cap proceedings nearly always include evidence regarding the rate of return with the explicit purpose of justifying price increases or upward pricing flexibility.[2] At the interstate level (FCC jurisdiction), it was only after the FCC's *Special Access Pricing Flexibility Order* in 1999 that ratepayers were relieved of the formal obligation to ensure a minimum rate-of-return for the Bell Companies. Specifically, a provision in the *Special Access Order* allowed the Bell Companies to trade the *low-end adjustment* of price-cap regulation (which insured a minimum rate of return) for pricing flexibility in the special access market.[3] The trade-off was entirely voluntary.

Thus, price-caps (as implemented) have not eliminated the consumer-funded protection plan from low rates of return for the vast majority of the Bells' business (intrastate), and such protection was eliminated for interstate services until late year 2000 when the Bells began filing for pricing flexibility for special access services.[4] So, the relevant date for evaluating the extent to which the local exchange network is "public property" is year 2000 for interstate investment, not 1996 when the Telecommunications Act was passed. Intrastate investment remains, to a large degree, protected from downside risks through state-level price-cap plans.

Second, Gattuso and Michel's calculations are based on financial information provided to the Securities and Exchange Commission by the Bell Companies. As the authors recognize, the use of this data is problematic since it is adjusted for accounting depreciation and consequently does not measure a company's productive plant. Even more problematic, though ignored by Gattuso and Michel, is the fact that *consolidated* financial data also include plant and investments for non-wireline Bell operations (*e.g.,* wireless, international, information services).[5] For example, Verizon's wireless, international, and information services accounted for 39%, 3%, and 1% respectively of their total capital expenditures in 2003. None of these investments are subject to the unbundling obligations of the 1996 Act. Clearly, therefore, the Bells' large capital expenditures on wireless telecom plant over the last few years are not relevant to the ratepayers claim on the wireline network constructed over the last century.

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Total Plant in Service (TPIS)

Year	Intra-State TPIS	Inter-State TPIS	Protected Share of TPIS
2003	$220.4	$89.6	96%
2002	$216.9	$87.4	96%
2001	$207.0	$83.4	98%
2000	$193.2	$76.2	100%
1999	$181.5	$68.1	100%
1998	$174.3	$64.2	100%
1997	$168.6	$60.6	100%
1996	$163.4	$58.6	100%

To avoid the problems with the consolidated financial data, Gattuso and Michel's financial analysis is reconstructed using the ARMIS data filed with the FCC by the Bell Companies. This data includes plant and investment data related only to the *wireline* network. Critically, ARMIS also includes a measure of productive plant ("Total Plant in Service" or "TPIS"), so accounting conventions related to depreciation do not affect our analysis.

The table summarizes data for *real* TPIS over the period 1996 through 2003, which is divided between intra and interstate categories.[6] The share of plant protected from low returns ("Protected Share of TPIS") is provided in the last column of the table.

As shown in the table, 96% of the current wireline telecommunications network remains protected from low rates of return through frequent regulatory proceedings adjusting pricing to reflect, in part, the realized rate of return of the Bell Company. *Thus, using the framework set forth by Gattuso and Michel, it is clear that captive ratepayers, not shareholders, bore the downside risk on 96% of the current local exchange plant and, consequently, 96% of the network has the nature of "public property." So, today's Bell Company networks are overwhelmingly the product of past and current investments protected from downside financial risk by captive ratepayers.*

Ignoring the existing low-end protection provided the Bell Companies by state regulatory commissions, the vast majority of the current network was constructed during periods of consumer-funded protection. The figures in Table 1 show that 73% of the existing local telecommunications network was already in place in 1996. About 87% of the existing network was already constructed at the end of year 2000. Accordingly, even if the remaining financial protections are ignored, then the bulk of the wireline network has the nature of "public property."

Investment Deterrence?

Finally, Gattuso and Michel assert, without more, that unbundling mandates "discourage [] investment (at 4)." This particular claim is just one more in a long string of unsupported assertions regarding unbundling and investment. In contrast to the unsupported claim, econometric research has shown consistently that the unbundling obligations have increased investment by both CLECs and ILECs.[7] There are no econometric studies (of even marginal credibility) suggesting otherwise.[8]

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More peculiar is the fact that Gattuso and Michel's claims about investment conflict directly with their own (albeit flawed) financial analysis. Indeed, it is difficult to assert that unbundling has deterred investment while also claiming that 77% to 175% of the Bell network has been replaced over seven years. Considering the average life of telecommunications plant is about 16 years,[9] Gattuso and Michel's own financial analysis suggests that the unbundling obligations have greatly increased the investment incentives of the Bell Companies.

Conclusion

After resolving some glaring defects, the analytical framework proposed by James Gattuso and Norbert Michel (on behalf of the Heritage Foundation) implies that 96% of the Bell Company wireline local exchange network is "public property." Gattuso and Michel's financial analysis also suggests that unbundling has had no negative impact on Bell Company capital expenditures since 1996. Thus, while captive ratepayers technically do not "own" the local exchange wireline network, they certainly paid for it and therefore have a sizeable claim regarding the policy outcomes of efforts to promote competition to the incumbent Bell monopolists' wireline networks.

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* **George S. Ford, Ph.D. (Economics),** ***is an Adjunct Fellow with the Phoenix Center. Dr. Ford presently serves as Chief Economist of Z-Tel Communications, Inc. Over his career, he has written and published numerous papers on the communications industries and on other economic and econometric subjects. His website is*** www.telepolicy.com. ***The views expressed in this* PERSPECTIVE *do not represent the views of the Phoenix Center, its Adjunct Follows, or any if its individual Editorial Advisory Board Members.***

1 The Heritage report can be downloaded at: http://www.heritage.org/Research/InternetandTechnology/bg1745.cfm. Gattuso and Michel's piece was in response to an article authored by Laurence J. Kotlikoff entitled *A Telecom Tutorial for George Gilder* published with TECH CENTRAL STATION on March 15, 2004 (http://www.techcentralstation.com/031504I.html) where Koltlikoff argued that:

> The local phone system is not only a public good, as defined by economists, it's also a public good as in who paid for it – the definition understood by everyday folk. Whether the regional Bell companies and their lobbyists want to hear this or not, the local phone system is not their property. It belongs to the public, having been built over the last century at enormous public expense. True, the federal government never directly paid for the phone system. Instead, it licensed a single company – the Bell Telephone System – to construct this network by charging the public phone rates far above the actual marginal costs of transmitting calls and guaranteeing the Bells an essentially risk-free return.

Koltlikoff published is own response, *A Telecom Tutorial for the Heritage Foundation*, with TECH CENTRAL STATION on April 23, 2004 (http://www.techcentralstation.com/042304F.html). Professor Koltlikoff was not consulted in the preparation of this PERSPECTIVE.

2 *See, e.g.*, *Order Instituting Verizon Incentive Plan*, New York Public Service Commission Case 00-C-1945 and 00-C-1357 (February 27, 2002).

3 Access Charge Reform, CC Docket No. 96-262, Fifth Report and Order, 14 FCC Rcd. 14221 (1999) (Pricing Flexibility Order), *aff'd, WorldCom, Inc. v. FCC*, 238 F.3d 449 (D.C. Cir. 2001). An analysis of the deregulation of special access in provided in G. S. Ford and L. J. Spiwak, *Set It and Forget It? Market Power and the Consequences of Premature Deregulation in Telecommunications Markets*, PHOENIX CENTER POLICY PAPER NO. 18 (July 2003) (http://www.phoenix-center.org/pcpp/PCPP18.pdf).

4 *See, e.g.,* BellSouth Petition for Pricing Flexibility for Special Access and Dedicated Transport Services, CCB/CPD No. 00-20, Memorandum Opinion and Order, DA 00-2793 (Com. Car. Bur. Dec.15, 2000), 2000 WL 1838992 (F.C.C.).; Verizon, Pacific Bell, Ameritech, and Southwestern Bell File Pricing Flexibility Petitions, Pleading Cycle Established, Public Notice, DA 00-2617 (rel. Nov. 20, 2000).

5 In 2003, about 39% of capital expenditures were in the wireless segment, 3% were in the international segment, and 1% in the information services segment (none of these services is provided on an unbundled basis). *See* Verizon 10-K (2003).

6 For purposes of this analysis, the nominal series is converted to real using the Producer Price Index for Capital Equipment (http://research.stlouisfed.org/fred2/categories/31). TPIS includes only plant that is "Subject to Separations."

7 PHOENIX CENTER POLICY BULLETIN NO. 5: *Competition and Bell Company Investment in Telecommunications Plant: The Effects of UNE-P* (Originally released 9 July 2003, updated 17 September 2003) (available at http://www.phoenix-center.org/PolicyBulletin/PolicyBulletin5.pdf); PHOENIX CENTER POLICY BULLETIN NO. 6: *UNE-P Drives Bell Investment - A Synthesis Model* (17 September 2003) (available at: http://www.phoenix-center.org/PolicyBulletin/PolicyBulletin6Final.pdf); G. S. Ford and M. D. Pelcovits, *Unbundling and Facilities-Based Entry by CLECs: Two Empirical Tests* (July 2002): www.telepolicy.com; T. R. Beard, R. B. Ekelund Jr., and G.S. Ford, *Pursuing Competition in Local Telephony: The Law and Economics of Unbundling and Impairment* (November 2002)(www.telepolicy.com); T. R. Beard, G. S. Ford, and T.M. Koutsky, *Mandated Access and the Make-or-Buy Decision: The Case of Local Telecommunications Competition* (December 2002) (www.telepolicy.com); R. D. Willig, W. H. Lehr, J. P. Bigelow, and S. B. Levinson, *Stimulating Investment and the Telecommunications Act of 1996*, Unpublished Manuscript (October 2002); K A. Hassett and L. J. Kotlikoff, *The Role of Competition in Stimulating Telecom Investment*, AEI PUBLICATIOn (October 2, 2002) (www.aei.org/publications/pubID.14873/pub_detail.asp). Hassett *et al.* (2002) perform a simulation rather than using actual

NOTES CONTINUED:

data. *See also, Does Unbundling Really Discourage Facilities-Based Entry? An Econometric Examination of the Unbundled Local Switching Restriction*, Z-TEL POLICY PAPER NO. 4 (February 2002)(www.telepolicy.com); *Competition at the Crossroads: Can Public Utility Commissions Save Local Telephone Competition?*, Consumer Federation of America (October 2003) (http://www.consumerfed.org/pr10.07.03.html).

8 R. B. Ekelund Jr. and G. S. Ford, *Innovation, Investment, and Unbundling: An Empirical Update*, 20 YALE JOURNAL ON REGULATION 383-388 (2003); G. S. Ford, *Do Unbundling Policies Discourage CLEC Facilities-Based Investment?* (Commenting on R. W. Crandall, A. T. Ingraham, and H. J. Singer, *Do Unbundling Policies Discourage CLEC Facilities-Based Investment*?) (available at www.telepolicy.com). *See also* Phoenix Center POLICY BULLETIN NO. 6 and No. 7, *supra* n. 7; Comments of Robert W. Crandall and Hal J. Singer to PHOENIX CENTER POLICY BULLETIN No. 7 (http://www.phoenix-center.org/critiques/CrandallSinger.pdf); A Response to Drs. Crandall and Singer (http://www.phoenix-center.org/critiques/CrandallResponse.pdf); Comments of Drs. Thomas Hazlett (the Manhattan Institute), Arthur Havenner (Univ. California - Davis), and Coleman Bazelon (HHB I) to Phoenix Center POLICY BULLETIN No. 5 (http://www.phoenix-center.org/PolicyBulletin/HazlettetalComments.pdf); R. Carter Hill Comments PHOENIX CENTER POLICY BULLETIN No. 5 (http://www.phoenix-center.org/PolicyBulletin/HillComments.pdf); Further Comments of Drs. Thomas Hazlett (the Manhattan Institute), Arthur Havenner (Univ. California - Davis), and Coleman Bazelon (Analysis Group) PHOENIX CENTER POLICY BULLETIN No. 6 (HHB II) (http://www.phoenix-center.org/critiques/HHBII.pdf); A Response to Drs. Hazlett, Havenner and Bazelon (http://www.phoenix-center.org/critiques/ReplytoHHBII.pdf).

9 Based on the investment weighted average depreciation lives in the FCC's Hybrid Cost Proxy Model: http://www.fcc.gov/wcb/universal_service/welcome.html.

PHOENIX CENTER FOR ADVANCED LEGAL & ECONOMIC PUBLIC POLICY STUDIES
5335 Wisconsin Avenue, NW, Suite 440
Washington, D.C. 20015
Tel: (+1) (202) 274-0235
Fax: (+1) (202) 244-8257//9342 • e-Fax: (+1) (202) 318-4909
www.phoenix-center.org