the primary role of sunk costs in economic theory is to serve an entry barrier [41] Entry is the driving force of competition, and impediments to entry are not usually (or legitimately) associated with the prospects for effective competition While the Commission recognizes this fact in other contexts, the entry deterring aspects of sunk costs were completely ignored in its *Pricing Flexibility Order* [42]

In its *Pricing Flexibility Order*, the Commission adopted a collocation-based trigger for granting pricing flexibility for Special Access service because collocations required "irreversible, or 'sunk' investment in facilities used to provide competitive services "[43]

> collocation usually represents a financial investment by a competitor to establish facilities within a wire center . . [T]he investment in transmission facilities associated with collocation arrangements is largely specific to a location; the competitive LEC's facilities cannot, for the most part, easily be removed and used elsewhere if entry does not succeed [44]

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[41] *See* Tirole, *supra* n 39, Ch 8, John Sutton, SUNK COST AND MARKET STRUCTURE (1995)

[42] *See, e g , In re Implementation of Local Competition in Telecommunications Act of 1996*, 11 FCC Rcd 15499, 15857 ¶ 704 (1996) (*Section 251 First Report and Order*), *In re Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, Third Report and Order and Fourth Further Notice of Proposed Rulemaking, __ FCC Rcd __, FCC No 99-238 (rel Nov 5, 1999) (*UNE Remand Order*), *Triennial Review*, *supra* n 3, *In re Implementation of Section 19 of the Cable Television Consumer Protection and Competition Act of 1992*, Annual Assessment of the Status of Competition in the Market for Delivery of Video Programming, 9 FCC Rcd 7442, Appendix H (1994) (*Appendix H*)

[43] *Id* at ¶ 79 *See also id* at ¶ 94 ("we conclude that it is appropriate to give incumbent LECs pricing flexibility when competitors have made irreversible, sunk investment in facilities")

[44] *Id* at ¶ 81 The Commission did note, however, that while the presence of an operational collocation arrangement in a wire center almost always implied that a competitor has installed transmission facilities to compete with the incumbent in the past, this correlation between operational collocation arrangements and competitive transport facilities is somewhat attenuated by the advent of services such as digital subscriber line (DSL) services - *i e* , competitors providing these services usually collocate in order to gain access to the incumbent's copper loops, a necessary input for DSL service, not to compete with the incumbent for the provision of transport services As such, to ensure that its triggers provide a "clear picture" of competitive conditions on a going-forward basis, the FCC required incumbent LECs to show that at least one competitor relies on transport facilities provided by a transport provider other than the incumbent at each wire center listed in the incumbent's pricing flexibility petition as the site of an operational collocation arrangement *Id* at ¶ 82

As an initial matter, the FCC reasoned that it is appropriate to focus on the sunk investments because

> An incumbent monopolist will engage in exclusionary pricing behavior only if it believes that it will succeed in driving rivals from the market or deterring their entry altogether . Once multiple rivals have entered the market and cannot be driven out, rules to prevent exclusionary pricing behavior are no longer necessary Investment in facilities, particularly those that cannot be used for another purpose, is an important indicator of such irreversible entry . [T]he presence of facilities-based competition with significant sunk investment makes exclusionary pricing behavior costly and highly unlikely to succeed.[45]

Note that the Commission's logic addresses only the effect of sunk costs on *exit*, not entry This selective use of economic theory produced an important analytical conflict in the Commission's decision Specifically, the Commission recognized the potential for its broadly defined markets to allow the ILEC to exploit market power in non-competitive segments of the MSA, stating: ". *such relief might lead to higher rates for access to some parts of an MSA that lack a competitive alternative* "[46] Yet, the Commission dismisses the importance of the non-competitive segments by contending "unreasonably high rates . . will induce competitive entry "[47] This expectation contradicts the fundamental premise of the Commission's deregulatory paradigm, however. Sunk costs deter entry and may allow market power to be exercised without fear of entry[48] Because entry requires sunk costs, it is obviously unreasonable for the Commission to rely heavily on entry to remedy problems with an overly broad market definition Ignorance is no defense Despite ignoring the entry deterring effects of sunk costs in its *Pricing Flexibility Order*, the Commission has in many

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[45] *Id* at ¶ 80

[46] *Id* at ¶ 142 (emphasis supplied)

[47] *Id* at ¶ 144

[48] Entry deterrence is even more likely when the ILEC can signal to entrants that post-entry competition will be tough This signal is easily sent to entrants because the deregulatory paradigm allows the incumbent to cut price in contested segments

other cases relied heavily on these very effects to justify its other regulatory efforts [49]

There are other problems with the Commission's reasoning First, while the Commission averred that its collocation triggers were "sufficient to preclude the incumbent from exploiting any monopoly power over a sustained period," the Commission engaged in no market power analysis to affirm its position [50] Without evidence, the Commission's expectations are nothing more than assertions, and while expert agencies have substantial deference, there must be "rational connection between the facts found and the choice made "[51] The Commission presented no evidence in support of its assertion that its collocation triggers represented sufficient competition to check ILEC market power

Second, collocation is a necessary but not sufficient condition for Special Access competition [52] The presence of a collocator that uses its own transport to carry traffic from a LEC serving wire center shows at most some competition for entrance facilities – *i e*, the connection between the ILEC's and IXC's or CLEC's networks It is in no way probative of competition for interoffice transport or channel terminations The only competitive presence that any ILEC relied upon to gain pricing flexibility for special access was for entrance facilities Yet, under the FCC's "bright line" test some competition for this one component of special access was sufficient to allow deregulation of interoffice transport and channel terminations as well

Moreover, apart from this overriding flaw, the presence of collocation in a central office only indicates that an entrant *may* have *tried* to enter the Special Access (or some other) market at some point in the past requiring collocation. Collocation triggers ignore what market the collocator actually served or serve, the success of such entry, or the entrant's continued presence in the market Continuing to ignore the profitability and continued success of collocations is

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[49] *See, e g , Triennial Review, supra* n 3, *Section 251 First Report and Order, supra* n 42 at ¶ 377, *UNE Remand Order, supra* n 42, ¶¶ 75, 77 ("It is generally recognized that the need to incur sunk costs can constitute a barrier to entry")

[50] *Pricing Flexibility Order* at ¶ 141

[51] *Burlington Truck Lines, Inc v United States*, 371 U S 156, 168 (1962)

[52] Even the Commission recognizes the dubious link (" correlation between operational collocation arrangements and competitive transport facilities is somewhat attenuated) *Pricing Flexibility Order* at ¶ 82

odd, given that most facilities-based CLECs operating in 1999 are now either bankrupt or out of business altogether [53]

C. *D C Circuit Review*

The D C Circuit reviewed the Commission's *Pricing Flexibility Order* on appeal in *WorldCom v FCC* [54] As a general rule of administrative law, a reviewing court is required to accord the FCC, as the "expert agency", great deference when it administers its own statute, provided that it shows the "whys and wherefores" of its reasoning [55] For this reason, the D C Circuit stated that it was not their role "to second guess the FCC's policy judgment, so long as it comports with established standards of administrative practice"[56] and, accordingly, reviewed the FCC's *Pricing Flexibility Order* in this light

For example, several petitioners challenged the FCC's use of collocation as a proxy for competition as arbitrary and capricious Although the court repeatedly found that "[I]t may well be that collocation is a poor market share as petitioners attest"[57] and may indeed have "faults as a measure of competition",[58] the fact that that "the FCC chose to rely upon an admittedly imperfect measure of competition does not render its use arbitrary and capricious." In the court's

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[53] A similar error was made in the Commission's unbundled switching restriction for the top 50 MSAs In its UNE Remand Order, the Commission removed from the minimum list of unbundled elements switching services in the top 50 MSAs for customers with more than three access lines at a single location The decision was based on the number of CLEC switches deployed in large markets Since the Commission's Order, nearly every CLEC that deployed switches has declared bankruptcy *See, e g , UNE Remand Order, supra* n 42, Mitchell Pacelle and Dennis K Berman, *Allegiance Telecom Seeks Bankruptcy Protection,* WALL STREET JOURNAL (May 15, 2003)

[54] *See supra* n 13

[55] Specifically, a reviewing court must consider whether the FCC's actions are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law " 5 U S C § 706(2)(A) This is a "deferential standard" that "presume[s] the validity of agency action " *Southwestern Bell Tel Co v FCC,* 168 F 3d 1344, 1352 (D C Cir 1999), *accord Jersey Shore Broadcasting Corp v FCC,* 37 F 3d 1531, 1537 (D C Cir 1994), *City of Holyoke Gas & Electric Dept v FERC,* 954 F 2d 740, 743 (D C Cir 1992) ("Since it is already doing the relevant calculation, it is a small matter to abide by the injunction of the arithmetic teacher Show your work! For the Commission to do less deprives the [consumer] of a rational explanation of its decision ")

[56] *WorldCom supra* n 13 at 457-58

[57] *Id* at 458

[58] *Id*

view, even though the FCC "readily admit[ed] that its decision to adopt the thresholds contained in the *Pricing Flexibility Order* was dependent, at least in part, on the agency's predictive forecasts", there is "no statutory requirement that the FCC be confident to a metaphysical certainty of its predictions about the future of competition in a given market before it may modify its regulatory scheme "[59] According to the D C Circuit

> The FCC readily admits that its decision to adopt the thresholds contained in the *Pricing Flexibility Order* was dependent, at least in part, on the agency's predictive forecasts Despite their inherent uncertainty, there is little question that agency prognostications of this sort may be used in the formulation of policy, "it is within the scope of the agency's expertise to make such a prediction about the market it regulates, and a reasonable prediction deserves our deference notwithstanding that there might also be another reasonable view." *Environmental Action, Inc v FERC*, 939 F.2d 1057, 1064 (D C Cir 1991) There is no statutory requirement that the FCC be confident to a metaphysical certainty of its predictions about the future of competition in a given market before it may modify its regulatory scheme [60]

Equally as significant, the court also found that the FCC's decision to make ease of administration and enforceability a consideration in setting its standard for regulatory relief was not arbitrary and capricious In the court's view, "[s]o long as the FCC's proxy is reasonable, as it is here, we have no basis upon which to require the FCC to engage in a more searching analysis of competition before granting pricing flexibility "[61]

The court also gave the FCC great deference as to its choice of MSA's as the appropriate relevant market for analysis In the court's opinion:

> At bottom, petitioners' objection to the FCC's decision to offer pricing flexibility on an MSA-wide basis amounts to a difference

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[59] *Id*

[60] *Id* at 459

[61] *Id*

> in policy preferences This is not a sufficient basis upon which to upset the FCC's determination The FCC considered alternatives to MSA-wide relief and determined that, on balance, these alternatives would be less beneficial to consumers and regulated entities As the FCC provided an adequate explanation for this conclusion, we uphold the Commission's conclusion [62]

The court rejected petitioners' claims that the trigger-mechanisms adopted by the Commission on similar grounds

> Petitioners' objections to the specific collocation thresholds established by the FCC are no more than policy differences with the Commission Like any agency, the FCC must provide a rational basis when setting a number for a standard, but it is not held to a standard of perfection [63]

In the court's view, the "FCC is not required to identify the optimal threshold with pinpoint precision It is only required to identify the standard and explain its relationship to the underlying regulatory concerns " As such, the court held that the Commission's approach in the *Pricing Flexibility Order* was "precisely the sort of 'rational legislative-type judgment' the FCC is empowered to exercise and we are required to respect "[64]

III. Empirical Analysis

As noted above, the Commission believed that the combination of its collocation triggers and MSA market definition were "sufficient to preclude the incumbent from exploiting any monopoly power over a sustained period"[65] and the D C Circuit, according the FCC great deference as the "expert agency" upheld the Commission's overall policy approach, even though it expressed reservations as to the Commission's underlying methodologies Now that the deregulatory paradigm has been implemented, it is worthwhile to evaluate the accuracy of the Commission's expectation and the court's caveats If an

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62 *Id* at 461

63 *Id*

64 *Id*

65 *Pricing Flexibility Order* at 141

increased exercise of market power is observed in Special Access markets, then either the Commission's triggers are inadequate indicators of competition, its market boundaries are too wide, or the sunk costs of entry prohibit an entry response to higher prices in uncompetitive segments of the deregulated market (or some combination of these)

Deregulated tariffed prices for special access services are nearly ubiquitously higher than regulated prices (see Table 1 for examples), and for the data we collected, very few price reductions were observed over time for deregulated prices (*i e*, only 12 of 135 prices fell with about a 5% reduction on average) Thus, the price increases have been sustained over no less than an 18-month period Simply observing higher prices for Special Access services *may* not necessarily be reliable evidence of the exercise of market power According to the Commission, price increases for deregulated special access services may arise from two sources (1) costs differences within an MSA and (2) market power exercised in the non-competitive segments of the MSA By incorporating data on costs and demand, the unique contributions of cost and market power can be approximated. The potential for cost differences also is minimized purposefully by comparing prices from identical pricing zones (which are defined by the ILEC) Further, it is probably *not* the case that marginal (incremental) costs vary substantially across markets, even though average fixed costs may The Commission noted, "variable costs are a small fraction of total costs " Without much variation in marginal cost, optimal prices will not vary either Given that the ILECs do very little de-averaging within states, and in some cases across states, cost-based explanations for price differentials in deregulated markets lack force

Though faced with a number of data limitations (*e g*, quantities consumed of Special Access services are not available), an exploratory empirical analysis of the effects of the Commission's deregulatory experiment is possible This empirical analysis is based on the following simple conceptual framework Let the regulated price be represented as a markup over incremental cost (λ), such that $P_R = \lambda C$, where C is incremental (marginal/variable) cost The regulated markup λ can vary by jurisdiction In the absence of regulation, the markup over cost will be a function of the own-price elasticity of demand (η), where profit maximization renders a deregulated price equal to $P_D = [\eta/(1 + \eta)]C$ [66] The own-

[66] The term $[\eta/(1 + \eta)]$ is the profit-maximizing markup without regulatory constraint *See* M Waterson, ECONOMIC THEORY OF THE INDUSTRY (1984), p. 3

price elasticity of demand may vary by jurisdiction, but this variability need not directly be related to those factors causing λ to vary Assuming there is some known set of factors that determine η and λ, it is possible to estimate both parameters

Because $C = P_R/\lambda$, the deregulated price can be written as

$$P_D = \eta/(1 + \eta) \quad (1/\lambda) \quad P_R \tag{1}$$

Substituting into Equation (1) specific functional forms and determining factors for the parameters of interest, Equation (1) can be rewritten as the regression equation,

$$P_D = \exp(\alpha_1 Y + \alpha_2 Z + \alpha_3 R) \quad (\beta_0 + \beta_1 \mu_L + \beta_2 \sigma_L + \beta_3 \mu_T + \beta_4 \sigma_T) \quad P_R + \varepsilon \tag{2}$$

where Y is per-capita income, Z is the percentage of the population living in cities, R is the share of non-business to total access lines, the variables μ_i and σ_i are the averages and standard deviations of loop (subscript L) and transport costs in the state (subscript T), and ε is the econometric disturbance term Because the profit maximizing markup $[(\eta/(1 + \eta)]$ is a non-linear function [as is its proxy $\exp(\alpha x)$], Equation (2) is estimated by non-linear least squares The linear function $\beta\lambda$ proxies the term $1/\lambda$ in Equation (1) The profit-maximizing markup is assumed to be a function of market income, density, and customer type From the estimates of Equation (2), we can compare three different prices First, we observe in tariffs the regulated and deregulated prices P_R and P_D Second, the competitive price will equal cost, and cost can be estimated using $(P_R\ \beta x)$, where $\beta x = 1/\lambda$ (and is computed using the estimated β coefficients from Equation (2) and the sample means of the relevant x's)

The HAI Cost Model, Version 5 0, provides the cost data The HAI model is designed primarily to compute the cost of DS0 loop plant and supporting facilities, so we limit our empirical analysis to DS0 digital special access circuits Income and population data are from the Census Bureau, and the share of non-business lines is from ARMIS [67] Further research should consider larger Special

[67] ARMIS data are available (at no charge) from the FCC website (www fcc gov) Census data are available at www census gov

Access circuits (DS1, DS3, and OC-N circuits) that represent a greater share of market revenues

Prices are computed for 10-mile circuits and include two channel terminations, a fixed mileage charge for transport, and a per-mile charge for transport (multiplied by 10) [68] Prices are interstate tariff rates effective as of May 1, 2002, August 1, 2002, December 31, 2002, and January 31, 2003. Prices for both a month-to-month service ("DS0-M") and an optional pricing plan ("DS0-OPP") were computed, where the optional pricing plan is based on a five-year term (or, if unavailable at that term, the longest term under five years). There were a total of 188 observations for each regression (*i e*, four sets of prices from 47 states) [69]

The results of regression equation (2) are summarized in Table 2, along with the summary statistics For both regressions, 99% of the variation in prices is explained and all estimates are statistically significant at the 5% level or better. The average of the dependent variable (P_D) is $260 89 for DS0-M and $181 54 for DS0-OPP On the other hand, regulated prices are $230.69 for DS0-M and $158 80 for DS0-OPP Deregulated prices across all states, therefore, are about 13-14% higher than regulated prices, though increases for particular BOCs are often much larger (see Table 1)

The empirical model provides two sanity tests for its reasonableness First, from the estimated β coefficients of Equation (2), cost per line can be estimated and compared to other measures of cost At the sample means, cost per DS0 line is estimated to be about $76 per circuit/month [70] Across a number of states for which we had data, the TELRIC of DS0-Digital circuits ranged from a low of $48 to a high of $138 The average TELRIC for the sample was $69 Thus, our estimated cost figure is reasonable The cost calculation also provides an estimate of the competitive price (on average), because competition drives prices to cost Second, the model provides a means by which to "back into" an estimate of the own-price elasticity of demand [71] Since a monopolist is expected to price in the

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[68] In states with prices for multiple zones, the Zone 1 rate is used

[69] Only the traditional Bell Company states are evaluated, so states excluded include Alaska, Connecticut, Hawaii, and Nevada

[70] Cost is computed as $P_R/\beta x$ for both regressions using sample means The cost estimates are nearly identical across regressions, with a month-to-month cost of $78 50 and an optional pricing plan cost of $76 16 The similarity is encouraging

[71] The own-price elasticity is computed as $\exp(\alpha x)/(1 - \exp(\alpha x))$

elastic region of demand, our estimate of the elasticity should be elastic We discuss the estimated elasticities later in the text

The regulatory markup (at the sample means) for the DS0-M circuit is about 2 90, and the deregulated markup is about 3.30 In other words, the price for Special Access service is priced at about three times its incremental cost [72] The deregulated margin is about 14% above the regulated markup over cost Thus, it appears as if the increase in the markup accounts for the observed price increase. From the deregulated markup, the implied own-price elasticity of demand is about -1 40, which is elastic ($\eta < -1$) as would be expected.

Prices (and thus margins) are lower for DS0-OPP circuits, with price being set at about twice cost The regulatory markup for the DS0-OPP circuit is about 2.1, and the deregulated markup is about 2 3 (a 10% increase in markup), which is slightly below the 14% price increase Again, the majority of the price increase for DS0-OPP circuits is accounted for by the increased ability of the ILEC to exercise its market power The implied own-price elasticity of demand is about -1 8, which is elastic ($\eta < -1$) Given the long contract term for DS0-OPP relative to the DS0-M, the larger elasticity is not surprising

Our implied elasticities of demand for DS0 circuits compare favorably to those estimated by Rappaport, *et al* (2003) using an entirely different estimation methodology In that study, demand elasticities for DS1 and DS3 special access services are estimated to be -1 31 and -1.91, respectively. While the elasticities are not directly comparable because of differences in services, they are all elastic and in the general vicinity of -1 5 Note that the computation of the elasticity depends explicitly on the ILEC charging its theoretical (and naive) profit-maximizing price If the price for special access is constrained by some factor, such as the potential for regulation, then the elasticity estimates will be biased (they will be too elastic)

What is important about this empirical analysis is threefold First, it is the first empirical assessment (to our knowledge) of the Commission's deregulatory framework for Special Access services Given the weaknesses in the

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[72] *Cf*, Paul N Rappoport, Lester D Taylor *et al*, *Macroeconomic Benefits from a Reduction in Special Access Prices* (2003) (available at http://www.comptel.org/press/sparc_june12_2003_study.pdf) (showing Bells receive a rate of return of nearly 40 percent on Special Access on total revenues of $13 3 billion)

Commission's deregulatory approach, a review of its deregulatory action seems prudent (not just by us, but by the Commission itself or the Government Accounting Office or "GAO") Second, the price increases for Special Access services where pricing flexibility is granted appear to be predominately driven by market power and not costs Consequently, it appears that the wide geographic markets and collocation triggers of the Commission's deregulatory paradigm have led to an increased exercise of market power in (at least some) Special Access markets, thus placing an unnecessary drain on the U S economy [73] Third, this analysis is exploratory and limited But, the results are sensible based on sanity checks Obviously, a more thorough and rich empirical analysis of Special Access deregulation is warranted

IV. Conclusions and Policy Implications

As noted above, the Commission currently has several major initiatives pending designed to accelerate FCC Chairman Michael Powell's vision of a "digital migration "[74] These pending proceedings include, *inter alia*, the still unreleased Triennial Review[75], a decision as to whether RBOC "broadband" services should be reclassified as "information services" under Title I of the Communications Act[76], a proceeding to evaluate the appropriate regulatory framework for RBOC and ILEC in-region long-distance service outside of a separate affiliate[77], and potentially even a proceeding to revisit the appropriateness of Total Element Long-Run Incremental Costs (TELRIC) pricing altogether

Just as in the Special Access context, the central question in each of these proceedings is whether there are sufficient regulatory safeguards and/or competition to constrain the incumbents' market power Of legitimate policy concern, therefore, is whether the Commission's philosophical and analytical approach to ILEC market power in the Special Access context will be the "canary in the coal mine" for the appropriate role and purpose of the FCC's economic regulation responsibilities under the Communications Act going forward

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[73] *Id*

[74] *See supra* nn 1-2

[75] *Supra* n 3

[76] *Supra* n 4

[77] *Supra* n 5

Current Commission philosophy closely parallels the philosophy found in the Special Access decision. Like the indirect collocation triggers in the Special Access context, many of the standing Commissioners appear to place substantial reliance on "inter-modal" competition as sufficient to constrain the ILECs' market power.[78] As with collocations, however, inter-model competition has no empirical support as a meaningful constraint on ILEC market power.[79] Part of the lack of empirical evidence stems from the fact that so few individuals view wireless and wireline telephone service as substitutes, that samples large enough for empirical analysis cannot be constructed.

Indeed, a recent Census Bureau survey of over 143,000 households reveals that only 0.11% of households (155 homes) terminated their local phone service to switch to wireless.[80] Extrapolating to all households (about 107 million), there are about 125,000 households nationwide that have stopped wireline phone service and switched to wireless.[81]

Using far more limited samples, some private surveys have addressed the issue of mobile and wireline substitution. A Yankee Group survey, for example, found that 3% of mobile telephony subscribers used mobile telephony exclusively, implying 97% consumed the two products together.[82] The BOCs have used the results of this survey to support the notion of intermodal

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78 *See supra* nn. 1-2.

79 *See Editorial, Beware Media Consolidation*, BUSINESSWEEK (26 May 2003) at 126 ("[T]he FCC is seriously miscalculating the [contestable] effect of new technologies."), *but c.f.* Remarks of Michael K. Powell, Chairman Federal Communications Commission at the Associated Press Annual Meeting and General Session of the Newspaper Association of America Annual Convention (April 28, 2003) (http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-233732A1.pdf).

80 U.S. Census Bureau, *Computer and Internet Use Survey* (Sept. 2001).

81 STATISTICAL ABSTRACT OF THE UNITED STATES, Table No. 661 (1999).

82 Judy Sarles, *Wireless Users Hanging Up on Landline Phones*, NASHVILLE BUSINESS JOURNAL, (February 2, 2001) (Quoting Knox Bricken of Yankee Group). The percentage of mobile subscribers that use only mobile telephony will exceed, of course, the percentage of total households that use only mobile telephony. Given that only 40% of households have a mobile phone, a naive estimate of the percentage of households exclusively using mobile telephony based on the Yankee Group survey is 0.012, which is much larger than the figure estimated by the Census Bureau. Unlike the Census Bureau's survey, the Yankee Group survey is unlikely to be representative of U.S. households. *See also* James S. Granelli and Jube Shiver Jr., *Phone Rivalry as Simple as McDonalds vs. Burger King, SBC Head Says Firm Says it Shouldn't be Subsidizing Competitors with Low-Priced Lines as They Enter State Market*, LOS ANGELES TIMES (May 26, 2003).

competition, but the study's authors conclude, "we don't think people are giving up their landline phones "[83]

They are not At year-end 1999, there were approximately 1 36 wireline telephones (switched access lines) per household [84] Two years later (year-end 2001), there was virtually no change in the number of wireline phones per home (1 35 wireline phones per household) [85] Over this same two-year period, mobile telephony subscription increased from 0 76 to 1 13 lines per household [86] These quantity anecdotes can be made more relevant by considering price changes for the two products over this two-year period From 1999 to 2001, mobile telephony prices fell by about 22% (in real terms), while wireline phone prices were relatively stable, rising by about 1% (in real terms) [87] So, while the relative prices of mobile and wireline telephony changed considerably over this time period, with wireline services becoming substantially more expensive on relative terms, the quantity of wireline subscription declined by only 1% [88]

The Commission's Special Access experiment provides a textbook example of the risk to consumers and to the economy of employing abstractions rather than rigorous market power analysis [89] As the just-released work of Rappoport,

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[83] Sarles, *id*

[84] TRENDS IN TELEPHONE SERVICE, Table 11, July 2002, Stat Abstract http //www census gov/statab/www/part2 html#housing

[85] For residential access lines, the numbers are 0 92 in 1999 and 0 90 in 2001, *id*

[86] TRENDS, *id*

[87] EconOne survey CPI provided by FRED (6/99 166 2, 6/01 179 9) Wireline prices provided by Gregg (2002) The Bureau of Labor Statistic's telephone price index (including local and long distance) was roughly stable from the last quarter of 1999 to the last quarter of 2001 (falling from 100 3 to 99 7, a 0 6% reduction, or a 8% in real terms) *See* www economagic com

[88] TRENDS IN TELEPHONE SERVICE, *supra* n 84, Table 14 1, July 2001

[89] Even more hypocritical is that the FCC's blasé approach towards Special Access/leased lines on the domestic front runs completely inapposite to the U S Government's pro-competitive approach towards Special Access/leased lines in the international arena For example, the United States Trade Representative ("USTR") was appropriately quick to blast several countries in its recent Section 1377 Report for failing to make leased lines available on a competitive basis (http //www ustr gov /sectors/industry/Telecom1377/2003/2003-04-02-results pdf) In the USTR's own words

> Reasonable access to leased lines are critical for competitors in any telecommunications market - particularly for providing the "last mile" link competitors need to reach large customers An inability to obtain these

(Footnote Continued)

Taylor *et al*, (2003) indicate, the cost of this regulatory failure to the U S economy is significant [90] No doubt, market power determinations are "neither administratively simple nor easily verifiable" and "generate considerable controversy that is difficult to resolve "[91] But, this fact does not *a fortiori* mean that incumbent LECs need not demonstrate that they no longer possess market power in the provision of any services to receive pricing flexibility[92] simply because "it would be administratively burdensome to require incumbent LECs to perform and the Commission to evaluate market share or supply elasticity analyses before the LECs may obtain any regulatory relief "[93] It would seem, therefore, that while "bright-line" tests resting on naive expectations and untested correlations may make the Commission's work easier, "bright line" tests based on *things that can be readily counted* may not always be the correct analytical solution as competition becomes increasingly multi-dimensional and the issues the Commission has to resolve become more complex [94]

> connections at reasonable rates and in a timely, non-discriminatory manner can significantly slow competitive entry All countries cited have WTO commitments to ensure reasonable access to such lines * * * Unreasonably high prices of leased lines in many markets are adversely affecting U S suppliers in these markets Evidence that rates charged in these markets are multiples of rates in the U S and "best practice" markets such as Sweden indicates that competitive pressures in these markets have failed to bring users the benefits of reasonable pricing *Id* at 3-4

In addition, the U S Government has gone so far as to file a formal complaint against Mexico with the World Trade Organization *(WT/DS204)* for, *inter alia*, failing to make leased lines available to competitors at just and reasonable rates (In fact, this is the very first complaint filed under the 1997 WTO Accord on Basic Telecoms Services) Unfortunately, as before, this hypocritical "do as I say, not as I do" attitude erodes U S credibility abroad and correspondingly makes it more difficult for U S firms to compete overseas *See* Naftel and Spiwak, THE TELECOMS TRADE WAR, *supra* n 15

[90] *Supra* n 72 For example, Rappaport and Taylor *et al* estimate that a reduction in Special Access prices of 42%, commensurate with an 11 25% rate of return on total investment, would generate 64,000 new jobs and $11 6 billion in new economic activity in the first year alone, and the accumulated number of new jobs created would double to 132,000 in the second year (equaling a $14 5 billion cumulative impact on the U S economy) as the benefits of the price reduction flows through the economy

[91] *Id*

[92] *Id* at ¶ 90

[93] *Id* at ¶ 91

[94] *Accord, Gratz et al v Bollinger et al* No 02-516 539 U S ____ (Decided June 23, 2003), Slip op at 27) ("[T]he fact that the implementation of a program capable of providing individualized consideration might present administrative challenges does not render constitutional an otherwise

(Footnote Continued)

Furthermore, while regulation does impose costs of its own, such an observation does not *a fortiori* imply the "costs of delaying regulatory relief outweigh any costs associated with granting that relief before competitive alternatives have developed to the point that the incumbent lacks market power."[95] The Special Access case proves the point. Market power cannot be assumed away as the Commission did in the case of Special Access.[96] It seems that an effort at measuring the costs and benefits of regulatory or deregulatory action is required, particularly when the fruit of past decisions can be harvested

A cornerstone of economic regulation is that – contrary to the antitrust context, which takes a static, case-specific approach – the Commission, as the "expert agency", is charged with the responsibility of monitoring the dynamic U S telecommunications industry.[97] For this precise reason, the Supreme Court recognized sixty years ago that Congress, through the Communications Act, "gave the Commission not niggardly but expansive powers" to monitor the long-term health of the U S telecoms industry.[98] The courts make it crystal clear that the Commission has the legal obligation and mandate under the Communications Act to monitor the consequences of their regulatory actions.[99]

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problematic system"), *Richmond v J A Croson Co*, 488 U S 469, 508 (1989) (*citing Frontiero v Richardson*, 411 U S 677, 690 (1973) (plurality opinion of Brennan, J) (rejecting "administrative convenience" as a determinant of constitutionality in the face of a suspect classification))

[95] *Pricing Flexibility Order* at ¶ 90

[96] *See e g*, Safire, *supra* n 7, Lawrence J Spiwak, *Ideology Over Economics*, UNITED PRESS INTERNATIONAL (6 July 2002)

[97] *See, e g*, *P & R Temmer v FCC*, 743 F 2d 918, 932 n 12 (D C Cir 1984) (Bork, J), *United States v Storer Broadcasting Co*, 351 U S 192, 203 (1956), *FCC v Pottsville Broadcasting Co*, 309 U S 134, 138 (1940)

[98] *National Broadcasting Co v United States*, 319 U S 190, 219 (1943)

[99] Unfortunately, given the FCC's less than vigilant approach to enforcing the law to prevent RBOC anticompetitive conduct, the FCC's assurances that aggrieved parties may file a complaint to challenge the RBOCs' special access rates will probably not provide much comfort *Pricing Flexibility Order* at ¶ 41 Indeed, a review of recent major enforcement actions by the FCC (which are supposed to be one of the centerpieces of Chairman Michael Powell's agenda for the FCC) reveals that these are not true punitive actions, but are instead the administrative equivalent of a "no contest" plea – *i e*, there is no formal record kept of the proceeding and guilty parties are only required to make a "voluntary contribution to the U S Treasury" as part of the settlement As a result, the FCC has very deliberately refused to make an explicit finding of fact As a legal matter, therefore, these settlements have little or no probative weight in a subsequent criminal or civil

(Footnote Continued)

As the D C Circuit recognized over twenty years ago "Complex regulation must still be credible regulation" and any failure by the FCC to meaningfully enforce the Communications Act deprives "regulated entities, their competitors [and] the public of rights and economic opportunities without the due process the Constitution requires" [100] Accordingly, it should come as no surprise that both the Communications Act and the Telecommunications Act of 1996 are replete with requirements that the Commission undertake periodic reviews of its regulations and to evaluate concurrently the economic health of the various industries under its jurisdiction [101]

Indeed, the long-term sustainability of decisions vital to the health of the telecommunications sector by an administrative agency that chooses to avoid "undue administrative burdens" rather than carrying out their enabling statutes is dubious More importantly, when an administrative agency openly admits to a lackadaisical and analytically imperfect approach, then it also behooves the Commission to examine and monitor the impacts of the decisions the FCC makes today on the long-term structure of the industry as a whole[102], particularly when

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court of law Besides, if a firm perceives it will make one dollar more by deterrence than by competition, then that firm will *always* choose deterrence For a representative list of these actions, J Randolph Beard, George S Ford and Lawrence J Spiwak, *Why ADCo? Why Now? An Economic Exploration into the Future of Industry Structure for the "Last Mile" in Local Telecommunications Markets*, 54 FCLJ 421, 436 n 44 (2002) And, as per course, the FCC has not deviated from such an approach in its most recent enforcement action either *In re Qwest Communications International, Inc , Order*, FCC 03-107, __ FCC Rcd __ (rel May 7, 2003)

[100] *MCI v FCC*, 627 F 2d 322, 340-41 (D C Cir 1980), *see also Telecommunications Research and Action Center v FCC*, 750 F 2d 70 (D C Cir 1984)

[101] *See, e g ,* Section 11 - *Regulatory Reform*, 47 U S C § 161, Section 218 - *Inquiries into Management*, 47 U S C § 218, Section 219 - *Annual and Other Reports*, 47 U S C § 219, Section 257 - *Market Entry Barriers Proceeding*, 47 U S C § 257, Section 403 - *Inquiry by Commission on its Own Motion*, 47 U S C § 403, Communications Act § 628(g) - *Development of Competition and Diversity of Video Programming Distribution*, 47 U S C § 548(g), Section 706 - *Advanced Telecommunications Incentives*, 47 U S C § 157, and *c f ,* Jerry Duvall & Michael Pelcovits, *Reforming Regulatory Policy for Private Line Telecommunications Services Implications for Market Performance*, FCC OFFICE OF PLANS AND POLICY WORKING PAPER NO 4 (1980) (analysis should focus on market performance, rather than on market participants' residual market power)

[102] *See supra,* text discussion and citations in Section I

ex post analysis suggests a significant regulatory failure as that found in the Special Access context [103]

Like it or not, U S consumers deserve far more than a perfunctory "Ron Popiel - Chicken Rotisserie Oven" approach to the real problem of ILEC market power where the FCC simply "sets it and forgets it" As such, it is incumbent upon Chairman Powell and the FCC to fulfill their core function under the Communications Act- *i e*, prevent dominant firms under their jurisdiction from gouging consumers and stymieing competition via the unfettered abuse of their market power - both immediately in the Special Access context as well as in their forthcoming broadband proceedings

Equally as important, if the evidence suggests a regulatory failure to mitigate the incumbents' market power that produces clear adverse effects on U S. consumer welfare and the economy, then we come back full circle regarding the FCC's overall analytical approach towards the complex issue of how we should move from "one" to "many" - *i.e*, given the obvious fact that the ILEC's can and will seek to exercise their market power to "deny, delay and degrade" new entry, then a more thorough look at the incumbents' market power by the Commission in the first instance is in order as the FCC attempts to facilitate Chairman Powell's vision of a "Digital Migration"

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[103] *See, e g*, Separate Statement of Commissioner Michael Copps, *In re Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*

> Congress requires the Commission annually to "review competitive market conditions with respect to commercial mobile services" and "include in its annual report an analysis of those conditions," in order to perform an "analysis of whether or not there is effective competition" I believe that the Commission could do far better The Report's contains insufficient data Much of the limited data included are unverifiable and are derived from sources with a stake in the outcome of our determination And the Commission does not establish any standard for determining when "effective competition" exists or even to define what "effective competition" is These problems leave the Report vulnerable to the charge of being results-oriented, and mean that the hard and good work of the Commission's staff is underutilized

Table 1. Price Changes for Special Access Services

(DS0-Digital, DS1, and DS3, Optional Pricing Plan Only, Jan 31, 2003)

	BellSouth	SBC	Verizon	Qwest
DS0-Digital				
Average Regulated Price	$202	$126	$170	$140
Average Deregulated Price	$202	$155	$220	$158
Average Price Increase	0%	23%	29%	14%
DS1				
Average Regulated Price	$380	$338	$448	$332
Average Deregulated Price	$391	$371	$510	$399
Average Price Increase	3%	10%	14%	20%
DS3				
Average Regulated Price	$4,075	$2,562	$3,421	$2,783
Average Deregulated Price	$4,575	$2,817	$3,752	$2,783
Average Price Increase	12%	10%	10%	0%

Table 2. Summary of Regression Results

(asym t-scores in parenthesis)

	DS0, Month-to-Month	DS0, Opt Pricing Plan	Variable	Mean St Dev
α_1	0 00001	0 00001	Y	40827
	(9 00)	(7 86)		(6037 9)
α_2	0 292	0 261	Z	0 276
	(6 30)	(4 87)		(0 14)
α_3	0 9346	0 532	R	0 747
	(6 64)	(3 23)		(0 05)
β_0	0 3392	0 455	Constant	
	(7 40)	(6 38)		
β_1	-0 0014	-0 0017	μ_L	37 53
	(-2 64)	(-2 51)		(25 82)
β_2	0 00046	0 00048	σ_L	40 61
	(2 66)	(2 24)		(64 46)
β_3	0 0084	0 0121	μ_T	11 83
	(5 21)	(4 90)		(4 73)
β_4	-0 0037	-0 00488	σ_T	14 96
	(-5 25)	(4 90)		(8 08)
P_D	260 89	181 54		
	(73 38)	(30 99)		
P_K	230 69	158 80		
	(56 65)	(28 08)		
R^2	0 994	0 993		
F-Stat	4028 9	3282 4		
N	188	188		